



SOUTH NATION
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38 rue Victoria Street, Finch, ON K0C 1K0 Tel: 613-984-2948 Fax: 613-984-2872 Toll Free: 1-877-984-2948 www.nation.on.ca

Clean Water Committee

Meeting Agenda

**** PLEASE NOTE START TIME**

Date: Monday, November 25th, 2019

Time: 9:30 a.m.

Location: Watershed Room, SNC

Address: 38 Victoria Street, Finch, ON K0C 1K0



Clean Water Committee

Meeting Agenda


Monday, November 25th, 2019 at 9:30 a.m.

1. Chair's Remarks
 2. Approval of Agenda
 3. Declaration of Conflict of Interest
 4. Approval of:
 - a. Clean Water Committee Meeting Minutes, September 9th, 2019 4-10
 5. Business Arising from Minutes (if any)
 6. Staff Update: PowerPoint – EcoAction Video
 7. New Business:
 - a. Special Project – A Subsurface Flow Constructed Wetland Passive Phosphorus Filter for Goat Milk Wastewater - Final Report: Chris Kinsley 11-14
 - b. Request for Approval: Eastern Ontario Water Resources Program 2019 Financial Statement – as of October 31, 2019: Ronda 15-16
 - c. Eastern Ontario Water Resources Program Report Updates
 - i. Project Update: Enhancement of In-Land Climate Data Monitoring in Eastern Ontario: Phil Barns 17
 - ii. Update: Low Impact Development Project: Jason 18
 - iii. Vars-Winchester Esker Weather Station Project Update: Katherine 19
 - iv. GW-SW Interaction Constraint Mapping Study Update: Katherine 20
 - v. North Castor Catchment Study Update: Katherine 21
 - vi. Interim Report: BMP: Outreach and Education: Ronda 22
 - vii. Agri-Action Environmental Stewardship Tour – Final Report: Brendan Jacobs 23-24
 - d. Ottawa Rural Clean Water Program Project Application: Lorie 25
 - e. 2018-APL-CW05 – Fuel Storage Project Update: Andre 26-27
 - f. Request for Approval: 2018 Clean Water Program Grant Funds: Ronda 28
 - g. Clean Water Program Project Applications: Reps 29-33
 - h. Request for Approval: 2020 Clean Water Committee Meeting Schedule: Lorie 34
 8. Supplemental Agenda (if any)
 9. Roundtable: Community Engagement
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10. Committee Recommendation for Friends of South Nation
11. Confirm Committee Representation at November 28th, 2019 Board Meeting
12. Next Meeting
 - a. Clean Water Committee – March 5th, 2020 at 9:30 a.m., Watershed Room, SNC Office
 - b. Lunch – all Standing Committees – March 5th, 2020 at 12:00 p.m., Watershed Room, SNC Office
 - c. Joint Standing Committee – March 5th, 2020 at 1:00 p.m., Watershed Room, SNC Office
13. Adjournment



Ronda Boutz,
Team Lead, Special Projects.

/lh



CLEAN WATER COMMITTEE MEETING

Meeting No. 03/19
Monday September 9th, 2019 – 9:30 a.m.

Watershed Room, SNC

Members Present:

Jacqueline Kelly-Pemberton, Committee Chair
Ray Beauregard
Russell Bennett
Jack Hoogenboom
René Lalonde
David Lapen
Lawrence Levere
Glenn Mackey
André Pommainville
Norman Riopel
Julia Robinson
Bill Smirle, SNC Chair (ex-officio)
Norm Tinkler
Doug Thompson, SNC Past Chair (ex-officio)
Adrian Wynands

Regrets:

Elizabeth Holmes
Michel Kearney
Alan Kruszel
Marc Laflèche
Gib Patterson
Terrence Sauv  
Fran  ois St. Amour

Staff Present:

Ronda Boutz, Team Lead, Special Projects
Lorie Henderson, Administrative Assistant
Omar Kana'n, Water Resources Specialist, Engineering
Jason Symington, Environmental Technologist
Katherine Watson, Water Resources Specialist

Guests:

Brendan Jacobs, Ontario East Alternative Lands Use
Service Inc.
Tara Redpath, City of Ottawa



CHAIRS REMARKS

Jacqueline Kelly-Pemberton, Committee Chair, called the Clean Water Committee meeting to order at 9:30 a.m. and welcomed everyone. Jacqueline introduced Tara Redpath, who will be replacing Julia Robinson from the City of Ottawa.

Jacqueline asked for round of introductions.

APPROVAL OF CLEAN WATER COMMITTEE MEETING AGENDA

RESOLUTION NO. CWC-029/19

Moved by: Doug Thompson
Seconded by: Rene Lalonde

RESOLVED THAT:

The Clean Water Committee approves the
September 9th, 2019 agenda as presented.

CARRIED

DECLARATION OF CONFLICT OF INTEREST

There were no declarations of conflict of interest.

REQUEST FOR APPROVAL:

CLEAN WATER COMMITTEE MEETING MINUTES OF JUNE 10th, 2019

RESOLUTION NO. BD-030/19

Moved by: Ray Beauregard
Seconded by: Russell Bennett

RESOLVED THAT:

The Clean Water Committee approve the
meeting minutes of June 10th, 2019 as
submitted.

CARRIED

Bill Smirle joined the meeting at 9:35 a.m.

Adrian Wynands joined the meeting 9:42 a.m.

STAFF UPDATE - POWERPOINT PRESENTATION

Staff provided the Committee with a slide presentation with updates since the June meeting.

NEW BUSINESS

REQUEST FOR APPROVAL: EASTERN ONTARIO WATER RESOURCES PROGRAM 2019 FINANCIAL STATEMENT – AS OF AUGUST 31, 2019



RESOLUTION NO. BD-031/19

Moved by: Doug Thompson
Seconded by: Glenn Mackey

RESOLVED THAT:

The Clean Water Committee approve the
Eastern Ontario Water Resources Program
Financial Statement as of August 31, 2019.

CARRIED

EASTERN ONTARIO WATER RESOURCES PROGRAM INTERIM REPORT

**PROJECT UPDATE: ENHANCEMENT OF IN-LAND CLIMATE DATA MONITORING IN
EASTERN ONTARIO**

RESOLUTION NO. BD-032/19

Moved by: Andre Pommainville
Seconded by: Jack Hoogenboom

RESOLVED THAT:

The Clean Water Committee receive and file the
Project Update: Enhancement of in-land climate
data monitoring in Eastern Ontario.

CARRIED

UPDATE: LOW IMPACT DEVELOPMENT PROJECT

RESOLUTION NO. BD-033/19

Moved by: Adrian Wynands
Seconded by: Lawrence Levere

RESOLVED THAT:

The Clean Water Committee receive and file
Update: Low Impact Development Project.

CARRIED

VARS-WINCHESTER ESKER WEATHER STATION PROJECT UPDATE

RESOLUTION NO. BD-034/19

Moved by: Russell Bennett
Seconded by: Ray Beauregard

RESOLVED THAT:

The Clean Water Committee receive and file
the Vars-Winchester Esker Weather Station
Project Update.

CARRIED



NORTH CASTOR CATCHMENT STUDY UPDATE

RESOLUTION NO. BD-035/19

Moved by: Doug Thompson
Seconded by: Adrian Wynands

RESOLVED THAT:

The Clean Water Committee receive and file the North Castor Catchment Study Update.

CARRIED

INTERIM REPORT: BMP: OUTREACH AND EDUCATION

RESOLUTION NO. BD-036/19

Moved by: Andre Pommainville
Seconded by: Rene Lalonde

RESOLVED THAT:

The Clean Water Committee receive and file the Interim Report: BMP: Outreach and Education.

CARRIED

TOURNEE D'INTENDANCE ENVIRONMENTAL AGRI-ACTION ENVIRONMENTAL TOUR

RESOLUTION NO. BD-037/19

Moved by: Norm Tinkler
Seconded by: Glenn Mackey

RESOLVED THAT:

The Clean Water Committee receive and file the Tournee D'Intendance Environmental Agri-Action Environment Tour.

CARRIED

UPDATE: ECOACTION BUFFER DEMONSTRATION PROJECT

RESOLUTION NO. BD-038/19

Moved by: Rene Lalonde
Seconded by: Jack Hoogenboom

RESOLVED THAT:

The Clean Water Committee receive and file the Update: EcoAction Buffer Demonstration Project.

CARRIED



REQUEST FOR APPROVAL: EXTENSION TO PROJECT APPROVAL DEADLINES

RESOLUTION NO. BD-039/19

Moved by: Ray Beauregard
Seconded by: Doug Thompson

RESOLVED THAT:

The Clean Water Committee approve extending the deadlines for the following projects:

Special Project – A Subsurface Flow Constructed Wetland Passive Phosphorus Filter for Goat Milk Wastewater, approved up to \$6,000.00 for Special Project; Project deadline extension to November 15th, 2019 and;

FURTHER THAT:

2018-APL-CW05A – Fuel Storage, grant approved at a rate of 50% to a maximum grant of \$1,000.00; Project deadline extension to November 30, 2019 and;

FURTHER THAT:

2018-EDW-CW25B – Manure Storage, grant approved at a rate of 50% to a maximum grant of \$8,000.00; Project deadline extension to June 30, 2020.

CARRIED

The Clean Water Committee meeting recessed at 10:25 a.m.

The Committee Chair reconvened the Clean Water Committee meeting at 10:40 a.m.

SUMMARY OF CLEAN WATER PROGRAM GRANT APPLICATIONS

Ronda Boutz, Team Lead, Special Projects provided the Committee with an updated summary of the 2019 Clean Water Program Applications for information purposes only.

CLEAN WATER PROGRAM PROJECT APPLICATIONS

The Clean Water Committee reviewed all the 2019 Clean Water Program grant applications on the agenda and rated them accordingly.

RESOLUTION NO. CWC-040/19

Moved by: Julia Robinson
Seconded by: Doug Thompson

RESOLVED THAT:

The Clean Water Committee approves funding to the following projects:



Project Code	Project Type	Grant %	Grant Request	Rating
2019-SDU-CW11	Well Decommissioning	100%	\$1,000.00	25.0
2019-NAT-CW10	Well Decommissioning	100%	\$1,000.00	24.4
2019-NAT-CW15	Well Decommissioning	100%	\$1,000.00	23.2
2019-NAT-CW16A	Well Decommissioning	100%	\$1,000.00	23.1
2019-NDU-CW13A	Manure Storage	50%	\$8,000.00	23.0
2019-APL-CW12B	Well Decommissioning	100%	\$1,000.00	22.8
2019-APL-CW12A	Streambank Erosion	50%	\$5,000.00	22.5
2019-NDU-CW13B	Milkhouse Wastewater	50%	\$5,000.00	21.6
2019-NST-CW14	Well Decommissioning	100%	\$1,000.00	21.6
Total Requested			\$24,000.00	

FURTHER THAT:

The Clean Water Committee placed the following projects on a waiting list and to be re-considered at a future date if funding becomes available:

Project Code	Project Type	Grant %	Grant Request	Rating
2019-NAT-CW16B	Streambank Erosion	50%	\$5,000.00	20.6
Total			\$5,000.00	

CARRIED

ROUNDTABLE: COMMUNITY ENGAGEMENT

Julia Robinson informed the Committee Members that her presentation to the Agriculture and Rural Affairs Committee at the City of Ottawa regarding the Ottawa Rural Clean Water Program was well received.

Committee Chair, Jackie Pemberton encouraged all Committee Members to promote South Nation Conservation at various events they attend.

COMMITTEE RECOMMENDATION FOR FRIENDS OF SOUTH NATION

The Clean Water Committee will continue to forward any recommendations to staff for "Friends of the South Nation".

CORRESPONDENCE

- SNC Media Release



CONFIRM COMMITTEE REPRESENTATION AT JUNE 20th, 2019 BOARD MEETING

Jacqueline Kelly Pemberton confirmed her attendance to the September 19th, 2019 Board of Directors Meeting.

NEXT MEETING

The next Clean Water Committee meeting will be held on November 25th, 2019 at 9:00 a.m. at the South Nation Conservation office, Watershed Room.

ADJOURNMENT

RESOLUTION NO. CWC-041/19


Moved by: Doug Thompson

RESOLVED THAT:

The Clean Water Committee meeting of September 9th, 2019 be adjourned at 11:50 a.m.

CARRIED

Jacqueline Kelly-Pemberton,
Committee Chair.



Ronda Boutz,
Team Lead, Special Projects.

/lh

A Subsurface Flow Constructed Wetland and Passive Phosphorus Filter for Goat Milk Wastewater

Final Report Submitted to: South Nation Clean Water Committee

November 15th, 2019

Submitted by: Chris Kinsley, Ph.D., P.Eng.
Civil Engineering Department, University of Ottawa

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Canada

System Design and Construction

A subsurface flow constructed wetland system was designed and constructed at the goat milk farm of Mr. Gareau in St. Pascale Baylon, ON during the fall of 2018. The wetland system treats the wash waters from the goat milk operation with approximate daily flows of 800 L/d. The first rinse (which should comprise much of the milk solids) is removed and used to feed the young animals. The system is comprised of a grease trap, septic tank, subsurface flow constructed wetland cell and discharges into a conventional septic field. A photo of the wetland cell is presented below.



Figure 1. Goat Farm Subsurface Wetland Cell

The installation of the P-filter was delayed until laboratory-scale testing was completed to enable the proper sizing of the Direct-reduced Iron (DRI) filter. This research was completed this fall and the end of the wetland cell has been excavated to receive the DRI. The DRI has been ordered and we are currently waiting for delivery from the ArcelorMittal steel mill in Contrecoeur, QC.

Additionally, due to the water quality results thus far, it has been decided to add an aeration system at the inlet to the wetland cell to achieve two goals: 1) reduce organic matter (COD, BOD) concentrations to domestic wastewater levels prior to the septic field and 2) reduce total nitrogen concentrations through the conversion of NH_4^+ to NO_3^- and subsequently to $\text{N}_2(\text{g})$.

System Monitoring and Water Quality

System monitoring commenced during Spring of 2019. Grab samples have been collected periodically and analysed for COD, sCOD, TSS, TP, NH_4^+ at the University of Ottawa Environmental Engineering Laboratories. A graduate student has been assigned to continue the monitoring of the wetland system and will continue bi-weekly monitoring for the next 12 months. Water quality results are presented in Table 1.

Table 1 – Water Quality Data (Avg \pm Std. Dev.)

Sample Location	TSS	COD	sCOD	TP	$\text{NH}_4^+\text{-N}$
Grease Trap	230	3832 \pm 238	2145 \pm 1494	84.6 \pm 7.0	30.7 \pm 13.6
Septic Tank	215	2535 \pm 1568	1378 \pm 583	84.2 \pm 15.5	39.7 \pm 21.4
Wetland Inlet	198	1496 \pm 49	1050 \pm 617	65.8 \pm 8.9	40.9 \pm 19.4
Wetland Outlet	61	1251 \pm 780	1112 \pm 577	55.7 \pm 13.0	44.1 \pm 11.7

Solids

Total Suspended Solids (TSS) values were collected once and demonstrate that suspended solids are similar to domestic wastewater strength with the wetland capable of removing 74% through filtration.

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Organic Matter

Chemical Oxygen Demand (COD) and Soluble Chemical Oxygen Demand (sCOD) were reduced by 67% and 45%, respectively. While this demonstrates significant reductions, the objective is to reduce COD and sCOD to 400 and 200 mg/L, respectively. Therefore, an aeration system has been designed to be installed under the gravel at the beginning of the wetland. The gravel has been excavated, the air blower and air diffusion lines have been purchased and will be installed in the coming week.

Phosphorus

Total Phosphorus (TP) values are reduced by 34% in the wetland system. The major removal mechanism is likely sedimentation and filtration of colloidal solids. Laboratory tests of DRI media have demonstrated an excellent adsorption capacity of 21 mg P/g DRI, while a column study (conducted at 70 mg P/L to simulate the goat farm effluent) has demonstrated that a hydraulic retention time of 12h is required to achieve 80% P removal. Based on these findings, the DRI filter was sized with a conservative 24-h retention period and is expected to have a lifespan of 5 years. (Qin, 2019)

Nitrogen

The two forms of nitrogen expected in the goat milk effluent are organic N and NH_4^+ . The initial investigation has focused on NH_4^+ as it is expected that organic N will be mostly removed through sedimentation and filtration. As can be seen from Table 1, NH_4^+ increases from 31 to 44 mg $\text{NH}_4^+ \text{-N/L}$ from the inlet to outlet of the system. This is due to ammonification of organic N to NH_4^+ . The addition of an aeration system should be capable of nitrifying ammonia (microbial conversion from NH_4^+ to NO_3^-), with subsequent denitrification to $\text{N}_2(\text{g})$. This will be fully investigated as part of the Master student's research project.

Continuing Work

This research study will continue with the installation of the DRI filter and the aeration system by the end of November with sample collection continuing for the next 12 months. An updated Final Report and Fact Sheet will be provided to SNC at that time.

Reference

Qin, Hongye (2019) Investigation of Direct-Reduced Iron (DRI) as a Phosphorus Retaining Filter Media: Maximum Capacity, Media Rejuvenation and Column Removal Efficiency. M.A.Sc. Thesis (DRAFT Submitted for Defence), University of Ottawa

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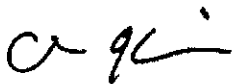
Project Expenses (SNC grant)

Item	Expense
mileage, lab supplies, installation costs	\$5454
University OH	\$546
Total	\$6,000

Recommendation to SNC Clean Water Committee

Reimburse the University of Ottawa \$6,000 for Project Expenses. The University will complete the installation of the P filter and aeration system, continue monitoring the system for 1 year and provide a revised Final Report and Technology Fact Sheet to the Clean Water Committee by November 2020.

Yours truly,



Chris Kinsley, Ph.D., P.Eng.
Assistant Professor
Civil Engineering Department
University of Ottawa

000014



To: Clean Water Committee
From: Ronda Boutz, Team Lead, Special Projects
Date: November 14, 2019
Subject: Request for Approval: Eastern Ontario Water Resources Program 2019 Financial Statement – as of October 31, 2019

RECOMMENDATION:

The Clean Water Committee approve the Eastern Ontario Water Resources Program Financial Statement as of October 31, 2019; and

FURTHER THAT the Clean Water Committee approves carrying-forward the Eastern Ontario Children's Water Festival grant of \$2,031 to the 2020 Budget for allocation upon project completion.

DISCUSSION:


The 2019 Eastern Ontario Water Resources Program Financial Statement, as of October 31, 2019, is attached.

The Financial Statement also includes an estimate for funds to be carried to the 2020 Budget for distribution to approved projects as they are completed. Requests for resolutions to carry-over these funds are included in the individual project interim reports within this Agenda. The Eastern Ontario Children's Water Festival funding request was for the 2020 Festival, as such, no interim report in 2019.

FINANCIAL IMPLICATIONS/ADHERENCE TO SNC POLICY:

Compliance with Budget: Funding for the Eastern Ontario Water Resources Program is included in the 2019 Budget under Science and Research: Stewardship: Water on pages 24-25.

SNC Policy Adherence: All expenditures for the Eastern Ontario Water Resources Program (EOWRP) adhere to the SNC Purchasing Policy and the approved EOWRP Budget.



Ronda Boutz,
Team Lead, Special Projects.

Attachments: 2019 Financial Statement – as of October 31, 2019



Eastern Ontario Water Resources Program / Programme des ressources en eau de l'Est de l'Ontario

2019 Financial Statement – as of October 31st, 2019

Revenue:

United Counties of Prescott-Russell	\$25,000.00
City of Ottawa	\$50,000.00
Carry-over of unspent 2017 dollars	\$52,392
TOTAL REVENUE	\$127,392

Expenses:	2019 Budget	Expenses as of Oct. 31, 2019	Forecast Oct.31 – Dec. 31, 2019	Estimated Carry-over to 2020 Budget ⁶
1. EOWRP Project Management ¹	\$4,590	\$2,687	\$1,903	\$0
2. EOWRP Committee ²	\$1,265	\$606	\$659	\$0
3. 2018 EOWRP Special Projects ³				
a) UCPR: Stormwater Management Project	\$6,607	\$6,607	\$0	\$0
b) North Castor Catchment Study	\$19,427	\$19,427	\$0	\$0
c) Low Impact Development Project	\$21,000	\$0	\$1,461	\$19,539
d) BMP Outreach and Education	\$4,092	\$0	\$4,092	\$0
4. 2019 EOWRP Special Projects ⁴				
a) UCPR: Floodplain Mapping	\$25,000	\$0	\$25,000	\$0
b) North Castor Catchment Study – additional deliverables	\$20,320	\$0	\$3,820	\$16,500
5. 2019 EOWRP Projects ⁵				
a) Eastern Ontario Children's Water Festival	\$2,031	\$0	\$0	\$2,031
b) Vars-esker weather station and data collection platform	\$8,801	\$0	\$8,801	\$0
c) Development of groundwater/surface water interaction constraint mapping	\$7,109	\$0	\$2,109	\$5,000
d) Enhancement of in-land climate data monitoring in Eastern Ontario	\$3,047	\$0	\$3,047	\$0
e) Tournée d'intendance environnementale Agri-Action environmental stewardship tour	\$4,103	\$0	\$4,103	\$0
TOTAL	\$127,392	\$29,327	\$54,995	\$43,070

¹ South Nation Conservation provides project management services to EOWRP to facilitate the Project Grants; this includes developing project application materials, coordinating call for proposals, administering grants to approved projects. Funding from City of Ottawa 2019 EOWRP contribution.

² EOWRP funding from previous year surplus to support meeting expenses for appointed EOWRP members on the Clean Water Committee. Surplus funds at year end are carried forward to the next year's budget for Committee support.

³ EOWRP Special Projects identified by the EOWRP funding contributor, approved in 2018 and to be completed in 2019, funds carried forward to respective projects in 2019 budget for payment.

⁴ EOWRP Special Projects in 2019 identified by the EOWRP funding contributor.

⁵ City of Ottawa earmarked \$25,000 of their \$50,000 2019 contribution for grants to be allocated through a grant proposal submission. Projects reviewed and approved at the June 10, 2019 meeting.

⁶ Funding to be carried forward to the 2020 Budget, with a resolution from the Clean Water Committee, to be paid to the approved EOWRP grant projects.



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To: Clean Water Committee
From: Phil Barnes, Project Manager
Date: November 8, 2019
Subject: Project Update: Enhancement of in-land climate data monitoring in Eastern Ontario

RECOMMENDATION:

The Clean Water Committee receive and file the project update.

DISCUSSION:

The Clean Water Committee approved \$3,047.00 in funding under the Eastern Ontario Water Resources Program for the proposed project: "Enhancement of in-land climate data monitoring in Eastern Ontario". The funding is approved until June 30, 2020.

The project will be undertaken by the Raisin Region Conservation Authority and will involve the installation of real-time rain gauge and telemetry at Loch Garry in North Glengarry.

The equipment related to the project has been ordered and arrived at the RRCA last month. We will be installing the equipment on site shortly. The RRCA has incurred invoices in the amount of \$3,048.74 from the equipment supplier.

Phil Barnes, P.Eng.
Project Manager
Raisin Region Conservation Authority

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To: Clean Water Committee
From: Jason Symington, Environmental Technologist
Date: November 11, 2019
Subject: Update: Low Impact Development Project

RECOMMENDATION:

The Clean Water Committee approve expenditures of approximately \$1,461 for the Larose LID Demonstration Site in 2019;

AND FURTHER THAT: The Committee approve to carry forward remaining funds of approximately \$19,539 to the 2020 budget for project completion.

DISCUSSION:

The City of Ottawa contributed \$50,000 to the Eastern Ontario Water Resources Program (EOWRP) in 2018 for Special Projects. Based on discussions with the City, \$21,000 of this contribution was allocated to complete a Low Impact Development (LID) project.

SNC staff approached the United Counties of Prescott and Russell (UCPR) and a site has been chosen at one of the parking areas within Larose Forest.

SNC staff used in 2019 funds to create a conceptual design plan for UCPR to use for budgeting purposes to implement the proposed project. The remaining funds will be used in 2020 to support a detailed design. The LID project will include various LID components such as permeable parking areas, bioswales and bioretention. The design will provide information regarding excavation depths, construction materials, filter medium and potential plant types as well as provide estimated Total Suspended Solids and Total Phosphorus removal rates.

To date, \$1,461 has been spent in 2019 and it is recommended to carry forward \$19,539 to 2020.

FINANCIAL IMPLICATIONS/ADHERENCE TO SNC POLICY:

Compliance with Budget: This project was not included in the 2019 Budget however it will be 100% cost recovery.

SNC Policy Adherence: Expenses related to this project adhered to SNC's Purchasing Policy



Jason Symington,
Environmental Technologist

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To: Clean Water Committee
From: Katherine Watson, Water Resources Specialist
Date: November 12, 2019
Subject: Vars-Winchester Esker Weather Station Project Update

RECOMMENDATION:

The Clean Water Committee approve the final report and expenditures of \$8,801 for the Vars-Winchester Esker Weather Station Project in 2019.

DISCUSSION:

SNC was successful in receiving \$8,801 EOWRP funds for the installation of a continuous, real-time data collection platform and weather station north of Vars, ON. Additional funds are budgeted in SNC's Water Resources Program.

This station improves both the Flood Forecasting and Warning Program and the Groundwater Monitoring Program by filling in known data gaps for precipitation and groundwater quantity and quality in the Vars-Winchester Esker. Having timely reliable climate information on the occurrence and severity of extreme precipitation events is essential to reducing the impacts of floods and droughts in Ottawa and Eastern Ontario.

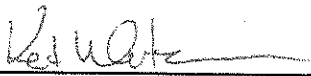
A Landowner Agreement was completed for the project and the weather station and telemetry equipment was purchased from Forest Technology Services (FTS). Installation has been initiated at the site and will be complete by month-end. Once complete data will automatically be captured in SNC's Water Integration System.

Staff will bring a photo and update of the completed weather station to the next Clean Water Committee meeting.

FINANCIAL IMPLICATIONS/ADHERENCE TO SNC POLICY:

Compliance with Budget: EOWRP \$8,801; remaining funds approved in 2019 Budget, Page No. 14, Resource Management – Water, and in deferred funds related to expenses for SNC esker wells.

SNC Policy Adherence: Purchasing Policy, Page No. 4, Section E, Non-Competitive Purchasing; Board of Directors must approve any Non-Competitive purchasing over \$10,000; when it is necessary to ensure compatibility with existing products. All field work will follow SNC's Health and Safety Policies.


Katherine Watson
Water Resources Specialist

000019



To: Clean Water Committee
From: Katherine Watson, Water Resources Specialist
Date: November 12, 2019
Subject: GW-SW Interaction Constraint Mapping Study Update

RECOMMENDATION:

The Committee approve expenditures of approximately \$2,109 for the Groundwater-Surface Water Interaction Constraint Mapping Project;

AND FURTHER THAT: The Committee approve to carry forward remaining funds of approximately \$5,000 to the 2020 budget for project completion;

DISCUSSION:

A recommendation in the 2018 North Castor Catchment Study report was to investigate methodologies for identifying important groundwater-surface water interactions throughout the study area.

An Eastern Ontario Water Resources Program grant was obtained for a modelling exercise throughout the South Nation watershed using SNC's HydroGeosphere model and a TecPlot Program for the delineation of groundwater seepage areas in watercourses. The grant also included a field validation exercise using different methodologies: Radon-222, thermal imagery, and a YSI Sonde Unit (changes in temperature and conductivity). Field validations were completed in the North Castor River in August 2019.

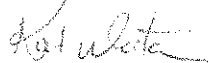
All field work has been completed related to the project. Staff will prepare a final report that delineates the potential groundwater/surface water interactions across the South Nation River watershed using output from TecPlot. Methodologies for field validations will be evaluated and recommendations for future groundwater seepage identification will be presented in the report. The final report will be provided to the Clean Water Committee in spring 2020.

FINANCIAL IMPLICATIONS/ADHERENCE TO SNC POLICY:

Compliance with Budget: North Castor Catchment Study included in the 2019 Budget under Approval: Projects: Subwatershed Studies, page 80-81.

Groundwater-Surface Water Constraints Mapping Project: EOWRP: \$7,109.

SNC Policy Adherence: All purchases will follow the SNC Purchasing Policy for purchases \$200 up to \$5,000. All field work will follow SNC's Health and Safety Policies.



Katherine Watson
Water Resources Specialist



To: Clean Water Committee
From: Katherine Watson, Water Resources Specialist
Date: November 12, 2019
Subject: North Castor Catchment Study Update

RECOMMENDATION:

Clean Water Committee approve expenditures of approximately \$3,820 for the North Castor River Catchment Study in 2019;

AND FURTHER THAT: The Committee approve to carry forward remaining funds of approximately \$16,500 to the 2020 budget for project completion;

DISCUSSION:

South Nation Conservation has undertaken several monitoring initiatives in 2018 and 2019 to assess the condition of the North Castor River. Funding is provided under the Eastern Ontario Water Resources Program as a special project with the City of Ottawa.

This study includes the collection of baseline surface water quantity and quality data to support City of Ottawa subwatershed reporting initiatives, and recommendations for best management practices to protect and enhance water resources in the North Castor River catchment. Data collected as part of this study includes:

- Headwater drainage features
- Baseflow
- Water quality
- Biological communities – benthic invertebrates and fish
- Radon-222 and thermal assessments

All field work has been completed related to the North Castor Catchment Study. Staff will analyze data, compare assessments to historical subwatershed studies, and compile all findings in a final report to be provided to the City of Ottawa. This report will be presented to the Clean Water Committee in spring 2020.

FINANCIAL IMPLICATIONS/ADHERENCE TO SNC POLICY:

Compliance with Budget: North Castor Catchment Study included in the 2019 Budget under Approval: Projects: Subwatershed Studies, page 80-81.

SNC Policy Adherence: All purchases will follow the SNC Purchasing Policy for purchases \$200 up to \$5,000. All field work will follow SNC's Health and Safety Policies.

Katherine Watson
Water Resources Specialist



To: Clean Water Committee
From: Ronda Boutz, Team Lead, Special Projects
Date: November 14, 2019
Subject: Interim Report: BMP: Outreach and Education

RECOMMENDATION:

Clean Water Committee approve the final report and 2019 expenditures, of \$4,092, for the BMP: Outreach and Education project.

DISCUSSION:

As part of the City of Ottawa's 2018 contribution to the Eastern Ontario Water Resources Program, \$4,592 was earmarked to undertake education and outreach of best management practices (BMP) promoted through the Ottawa Rural Clean Water Program.

In 2018, \$500 of this funding was used to add French subtitles to the Stoodley Buffer Demonstration video.

In 2019, a new video on the operation of Control Tile Drainage (CTD) structures was produced with the remaining \$4,092. SNC partnered with Agriculture and Agri-Food Canada (AAFC) and a local farmer (Marc Laflèche) to produce the video that will compliment the Ontario Soil and Crop Improvement Association's 2018 video which promotes the use of CTD. The video expands on how CTD structures operate and highlights the benefits of drainage management.

The video will be in English with French subtitles and posted on SNC's YouTube channel and shared through social media by end of 2019. Staff will debut the English video at the Committee meeting.

As the video and editing was produced in-house by SNC, EOWRP funding supported the staff time to complete this project.

FINANCIAL IMPLICATIONS/ADHERENCE TO SNC POLICY:

Compliance with Budget: Eastern Ontario Water Resources Project funding is included in the 2019 Budget under Science and Research: Stewardship: Water on pages 24-25.

SNC Policy Adherence: N/A

Ronda Boutz,
Team Lead, Special Projects.



To: Eastern Ontario Water Resource Program
From: Brendan Jacobs, ALUS Ontario-East Coordinator
Date: November 15, 2019
Subject: Agri-Action Environmental Stewardship Tour – Final Report

ALUS Ontario East, along with local partners, hosted a bilingual Agri-Action environmental stewardship tour on October 8, 2019 (between 09:15 – 15:00) to view local farm demonstration projects. Lunch and refreshments were also provided to tour participants.

ALUS Ontario East is a chapter of ALUS Canada who invests in farmers and ranchers producing acres of clean air, clean water, wildlife habitat and other ecosystem services in communities across Canada. ALUS works with farmers and local partners to establish projects that best suit their farming operation.

The tour showcased five farm demonstration sites in Stormont, Dundas and Glengarry and Prescott and Russell (e.g. wetland enhancement/creation, buffers/setbacks, erosion control, tree planting, wildlife corridors, and more). Project participation in the ALUS program is voluntary and ALUS participants receive an annual payment per acre in exchange for managing and maintaining the projects on their land. During the tour, additional funding opportunities were discussed, such as local tree planting subsidies administered by the South Nation and Raisin Region Conservation Authorities.

Deliverables:

One full day bilingual tour with lunch and refreshments provided	Complete
One full day bilingual tour with lunch and refreshments provided Goal of 50 participants	Complete
Bilingual participant info package with description of tour stops and program materials	Complete
Advertisements in local news papers, press release (bilingual), municipal memo (bilingual)	Complete
Guest speaker	Complete
ALUS Ontario East program brochure and banner	In-Progress
Demonstration farm gate signs	In-Progress

Budget:
 Total Budget \$8,000
 EOWRP Funding Submission \$6,000
 EOWRP Funding Approval \$4,013

Expenses	Total Cost	EOWRP
Coach Bus	\$1,356.00	\$1,356.00
Hall Rental	\$166.11	\$0.00
Catering & Refreshments	\$1,895.67	\$1,895.67
Advertisements	\$559.79	\$559.79
Vehicle	\$402.29	51.75
Communication Materials & Services (Cost of photographer, brochure, banner, signage not included)	\$558.77	\$149.79
Total	\$4,938.63	\$4,013.00

Recommendation to EOWRP Committee: That the Committee approve the final report and 2019 expenditures for the Agri-Action Environmental Stewardship Tour

Grant Request
\$ 243.00

5. Where did you hear about the Ottawa Rural Clean Water Program?

John Bels

6. Number of Livestock

☒ Not Applicable

Please indicate type (e.g. beef, dairy, poultry, hogs, etc.) and number of all livestock (e.g. # cows, # heifers, # calves, # hens, # pullets, # sows, etc.) that pertain to the proposed project

7. Additional Information

Please refer to the Project Guidelines for your proposed project and the Program Guide for additional information on project eligibility, Program requirements, and the application review process. Copies of these documents will be provided to you by Program staff.

25.12 AC

8. Existing Situation

What is the water quality impact of your current situation? Please be as specific as possible

Name of watercourse:

Distance from the watercourse:

☐ River, stream or creek

☐ Municipal drain

☐ N/A - Groundwater

9. Proposed Project

Describe the work you are planning to do. Please refer to the project guidelines for details on what is required for your project.

Total estimated cost (excluding taxes): \$ 324.00

(An itemized quote must accompany your application)

Have you applied for or received other funds for this project?

☐ Yes

☒ No

If yes, indicate source(s):

Amount: \$

other source:

Amount: \$

000025

FOR OFFICE USE:	Project Code: <u>2018-APL-CW05 A</u>	Project Type: <u>Fuel Storage</u>
	Total Project Cost: \$ <u>4,095.00</u>	Grant Rate: <u>50</u> %
	Grant Requested: \$ <u>1,000.00</u>	
	Program Representative: <u>Andre Bommerville</u>	

4. Other Sources of Funding

Have you applied for or received other funds for this project?

Yes ☐ No ☐

If yes, indicate source: _____

Amount: \$ _____

source: _____

Amount: \$ _____

5. Existing Situation

(Please ensure writing is legible)

What is the water quality impact from your current situation? Tanks (2) are sitting on
a very small pad -

Name of adjacent watercourse: _____

☐ river or stream

☐ wetland

☐ Municipal drain

☐ private ditch

6. Proposed Project

(Please ensure writing is legible)

Describe the work you are planning to do. Please refer to the project guidelines for details on what is required for your project.

To improve situation by removing existing
and pouring new concrete pad according
to standard

Total estimated cost (excluding taxes): \$ 4,095.00 (An itemized quote must accompany your application)

000026

ALFONS BOSCH



2525 Concession 1, Lefaiyre On K08 1J0
Tel: 613 679 4819 / Cell: 613 306 51 30

Lefaiyre, October 5, 2019

INVOICE

Gravel pad for fuel tank
4 safety posts

\$ 750.00

HST 13 % \$ 97.50

TOTAL \$ 847.50

PAYABLE WITHIN 30 DAYS

HST # R108452319

*paid Check # 301
6 Oct 2019*

000027



SOUTH NATION
CONSERVATION
DE LA NATION SUD

38 rue Victoria Street, Finch, ON K0C 1K0 Tel: 613-984-2948 Fax: 613-984-2872 Toll Free: 1-877-984-2948 www.nation.on.ca

To: Clean Water Committee
From: Ronda Boutz, Team Lead, Special Projects
Date: November 14, 2019
Subject: Request for Approval: 2018 Clean Water Program Grant Funds

RECOMMENDATION:

The Clean Water Committee approves the reallocation of any surplus 2018 Clean Committee Program grant funds to the 2019 Clean Water Program for 2019 applications as per the approval rating criteria.

DISCUSSION:

At 2018 year-end, a total of \$62,309 in approved grants was carried forward for disbursement in 2019. As per the Clean Water Program guidelines, approved projects have approximately twelve months from approval date to complete their projects.

Seven 2018 approved projects did not proceed, and one project was paid at a lower amount than originally approved, an amount of \$13,722 is available for reallocation to other eligible projects on the waiting list as per the approved rating criteria.

A resolution is required to reallocate any surplus funding from this 2018 carry-forward to the 2019 Clean Water Program waiting list.

FINANCIAL IMPLICATIONS/ADHERENCE TO SNC POLICY:

Compliance with Budget: No impact on the 2019 budget, this funding was carried forward from 2018 budget for allocation to approved projects.

Adherence to SNC Policy: Allocation of Grants adheres to SNC's Purchasing Policy.

Ronda Boutz,
Team Lead, Special Projects.

À L'USAGE DU BUREAU	Code du projet : 2019-NAT-CW17	Type de projet : Streambank Erosion
	Total des coûts du projet : 14,400.00 \$	Taux de subvention : 50 %
	Subvention demandée : 5000.00	
	Représentant(e) du programme : Geoff Owens	

4. Autres sources de financement

Avez-vous demandé ou reçu d'autres fonds pour ce projet? ☐ Oui ☒ Non

Si oui, de quelle(s) source(s) : _____

Montant : _____ \$

Montant : _____ \$

5. Conditions existantes

(Assurez-vous que le texte soit écrit de manière lisible)

Quel sont les effets de la qualité de l'eau dans votre situation actuelle ?

Some erosion on shore line (50' wide)

Nom du cours d'eau : NATION RIVER

☐ Rivière ou ruisseau

☐ Zone humide

☐ Drain municipal

☐ Drain privé

6. Projet proposé

(Assurez-vous que le texte soit écrit de manière lisible)

Décrivez les travaux que vous prévoyez faire. Veuillez vous reporter aux Lignes directrices de projet pour connaître en détail ce qui est exigé pour votre projet.

See details @ Finch office

Across the river, Rip Rap was done to stop erosion approx 10 yrs ago

Total des coûts estimés (taxes exclues) 14,400.00 \$ + Taxes (A.L. Blair)
 (Une soumission détaillée doit accompagner votre demande.)

FOR OFFICE USE:	Project Code: 2019-NGL-CW18	Project Type: Septic System
	Total Project Cost: \$ 19,861.00	Grant Rate: 50 %
	Grant Requested: \$ 2,000.00	
	Program Representative: Andre Pommerville	

4. Other Sources of Funding

Have you applied for or received other funds for this project?

Yes ☐ No ☒

If yes, indicate source: _____

Amount: \$ _____

source: _____

Amount: \$ _____

5. Existing Situation

(Please ensure writing is legible)

What is the water quality impact from your current situation? Don't use current septic system. Safety hazard (plywood on top no cover)

Name of adjacent watercourse: N/A

☐ river or stream

☐ wetland

☐ Municipal drain

☐ private ditch

6. Proposed Project

(Please ensure writing is legible)

Describe the work you are planning to do. Please refer to the project guidelines for details on what is required for your project.

As per estimate replace entire system with tertiary system

Total estimated cost (excluding taxes): \$ 19,861 (An itemized quote must accompany your application)

À L'USAGE DU BUREAU	Code du projet : 2019-NAT-CW19	Type de projet : Well decommissioning
	Total des coûts du projet : 2,100.00 \$	Taux de subvention : 100 %
	Subvention demandée : \$ 1,000.00	
	Représentant(e) du programme : Andre Pommainville	

4. Autres sources de financement

Avez-vous demandé ou reçu d'autres fonds pour ce projet? ☐ Oui ☒ Non

Si oui, de quelle(s) source(s) : _____

Montant : _____ \$

Montant : _____ \$

5. Conditions existantes

(Assurez-vous que le texte soit écrit de manière lisible)

Quel sont les effets de la qualité de l'eau dans votre situation actuelle ? _____

WATER QUALITY

E COLI, BROWN WATER, COLIFORM 42 INCHES DIAMETER

Nom du cours d'eau : _____

☐ Rivière ou ruisseau

☐ Zone humide

☐ Drain municipal

☐ Drain privé

6. Projet proposé

(Assurez-vous que le texte soit écrit de manière lisible)

Descrivez les travaux que vous prévoyez faire. Veuillez vous reporter aux Lignes directrices de projet pour connaître en détail ce qui est exigé pour votre projet.

DUG NEW WELL 18 TO 20 FT

Total des coûts estimés (taxes exclues) 2,100.00 (Une soumission détaillée doit accompagner votre demande.)

À L'USAGE DU BUREAU	Code du projet : 2019-NAT-CW20 ^A	Type de projet : Well decommissioning
	Total des coûts du projet : 2,100. ⁰⁰ \$	Taux de subvention : 100%
	Subvention demandée : \$ 1,000. ⁰⁰	
	Représentant(e) du programme : André Pommainville	

4. Autres sources de financement

Avez-vous demandé ou reçu d'autres fonds pour ce projet? ☐ Oui ☒ Non

Si oui, de quelle(s) source(s) : _____

Montant _____ \$

Montant _____ \$

5. Conditions existantes

(Assurez-vous que le texte soit écrit de manière lisible)

Quel sont les effets de la qualité de l'eau dans votre situation actuelle? No water, 42 inch diameter, 17 ft deep.

Nom du cours d'eau : Nation

☒ Rivière ou ruisseau

☐ Zone humide

☐ Drain municipal

☐ Drain privé

6. Projet proposé

(Assurez-vous que le texte soit écrit de manière lisible)

Décrivez les travaux que vous prévoyez faire. Veuillez vous reporter aux Lignes directrices de projet pour connaître en détail ce qui est exigé pour votre projet.

dig well 18 ft, 12 inch diameter

Total des coûts estimés (taxes exclues) : 2,100.⁰⁰ \$ (Une soumission détaillée doit accompagner votre demande.)

À L'USAGE DU BUREAU	Code du projet : 2019-NAT-CW 20B	Type de projet : Septic
	Total des coûts du projet : 7,775.00 \$	Taux de subvention : 50%
	Subvention demandée : \$ 2,100.00	
	Représentant(e) du programme : Andre Pommainville	

4. Autres sources de financement

Avez-vous demandé ou reçu d'autres fonds pour ce projet? ☐ Oui ☒ Non

Si oui, de quelle(s) source(s) : _____

Montant : _____ \$

Montant : _____ \$

5. Conditions existantes

(Assurez-vous que le texte soit écrit de manière lisible)

Quel sont les effets de la qualité de l'eau dans votre situation actuelle? Separating wall not working properly - solid goes into the liquid section - only 3 pipes working out of 4 - 2 children + parents

Nom du cours d'eau : Nation

☒ Rivière ou ruisseau

☐ Zone humide

☐ Drain municipal

☐ Drain privé

6. Projet proposé

(Assurez-vous que le texte soit écrit de manière lisible)

Décrivez les travaux que vous prévoyez faire. Veuillez vous reporter aux Lignes directrices de projet pour connaître en détail ce qui est exigé pour votre projet.

Need to be repair - waiting estimate to confirm existing conditions of system

Total des coûts estimés (taxes exclues) : 7,775.00 \$ (Une soumission détaillée doit accompagner votre demande.)



To: Clean Water Committee
From: Lorie Henderson, Administrative Assistant
Date: November 9, 2019
Subject: Request for Approval: 2020 Clean Water Committee Meeting Schedule

RECOMMENDATION:

The Clean Water Committee approves the 2020 Committee meeting schedule as presented.

DISCUSSION:

As per the Standing Committee Terms of Reference, all Standing Committees will meet at least 4 times per year, with one of these meetings being a Joint Meeting of all Standing Committees.

Staff recommend the following meeting schedule for 2020:

- March 5th (Clean Water Committee at 9:00 a.m. and Joint Standing Committees meeting at 1:00 p.m.)
- June 8th
- September 14th
- November 23rd

Meetings will be at 9:00 a.m. at the SNC office unless otherwise stated in the Agenda package. Meeting location will be indicated on the Agenda package.

The Standing Committee Terms of Reference allows for additional meetings to be called if there is 75% concurrence of the Committee at which there is quorum.

FINANCIAL IMPLICATIONS/ADHERENCE TO SNC POLICY:

Compliance with Budget: Committee expenses for the Clean Water Committee will be included in the 2020 Draft SNC Budget to an upset limit of \$7,500/Committee.

SNC Policy Adherence: The Clean Water Committee membership and meeting schedule adheres to the SNC By-laws and SNC Standing Committee Terms of Reference.

Lorie Henderson,
Administrative Assistant.