



The Regional Municipality of Durham

Works Committee Agenda

Council Chambers
Regional Headquarters Building
605 Rossland Road East, Whitby

Wednesday, December 2, 2020

9:30 AM

Please note: In an effort to help mitigate the spread of COVID-19, and to generally comply with the directions from the Government of Ontario, it is requested in the strongest terms that Members participate in the meeting electronically. Regional Headquarters is closed to the public, all members of the public may view the Committee meeting via live streaming, instead of attending the meeting in person. If you wish to register as a delegate regarding an agenda item, you may register in advance of the meeting by noon on the day prior to the meeting by emailing delegations@durham.ca and will be provided with the details to delegate electronically.

1. Roll Call

2. Declarations of Interest

3. Adoption of Minutes

A) Works Committee meeting – November 4, 2020

Pages 4 - 11

4. Statutory Public Meetings

There are no statutory public meetings

5. Delegations

5.1 George Rocoski, Energy from Waste-Waste Management Advisory Committee (EFW-WMAC) Chair, re: EFW-WMAC Annual Report

6. Presentations

- 6.1 John Presta, Director of Environmental Services re: Report #2020-W-53: Works Department – 2021 Water Supply and Sanitary Sewerage Business Plans and Budgets [Item 8.2 C)]

7. Waste

- 7.1 Correspondence
- 7.2 Reports
- There are no Waste Reports to be considered

8. Works

- 8.1 Correspondence
- 8.2 Reports
- A) Sole Source Engineering Assignment for Transition Programming of the Programmable Logic Controllers and Human Machine Interface Controls in Blower Buildings 1 and 2 at the Duffin Creek Water Pollution Control Plant, in the City of Pickering (2020-W-51) 12 - 16
- B) Approval to Enter into a Sole Source Agreement with SNF Canada Limited for the Supply and Delivery of Liquid Emulsion Polymer to the Duffin Creek Water Pollution Control Plant, in the City of Pickering (2020-W-52) 17 - 21
- C) Works Department – 2021 Water Supply and Sanitary Sewerage Business Plans and Budgets (2020-W-53) 22 - 31

[Link to the 2021 Works Department Detailed Business Plans and Budgets for the Water Supply and Sanitary Sewerage Systems](#)

9. Advisory Committee Resolutions

- 9.1 Energy From Waste – Waste Management Advisory Committee
- A) [Amendment to the Long-Term Waste Management Plan \(LWMP\) Guiding Principles](#) 32
- Recommendation: Receive For Information

- B) Suggested Actions During the Consideration of the Long-Term Waste Management Plan (LTWMP)

32

Recommendation: Receive For Information

10. Confidential Matters

There are no confidential matters to be considered

11. Other Business

12. Date of Next Meeting

Wednesday, January 6, 2021 at 9:30 AM

13. Adjournment

Notice regarding collection, use and disclosure of personal information:

Written information (either paper or electronic) that you send to Durham Regional Council or Committees, including home address, phone numbers and email addresses, will become part of the public record. This also includes oral submissions at meetings. If you have any questions about the collection of information, please contact the Regional Clerk/Director of Legislative Services.

If this information is required in an accessible format, please contact 1-800-372-1102 ext. 2097.

The Regional Municipality of Durham

MINUTES

WORKS COMMITTEE

Wednesday, November 4, 2020

A regular meeting of the Works Committee was held on Wednesday, November 4, 2020 in Council Chambers, Regional Headquarters Building, 605 Rossland Road East, Whitby, Ontario at 9:30 AM. Electronic participation was offered for this meeting.

1. Roll Call

Present: Councillor Mitchell, Chair
Councillor Marimpietri, Vice-Chair
Councillor Barton
Councillor Crawford
Councillor McLean
Councillor John Neal
Councillor Smith
Regional Chair Henry
*** all members of Committee except Councillor Mitchell and Regional Chair Henry participated electronically**

Also

Present: Councillor Collier
Councillor Dies
Councillor Foster
Councillor Highet
Councillor Kerr
Councillor Joe Neal
Councillor Mulcahy
Councillor Wotten

Absent: None

Staff

Present: E. Baxter-Trahair, Chief Administrative Officer
G. Anello, Director of Waste Management Services
J. Demanuele, Director of Business Services, Works Department
J. Hunt, Director of Legal Services, Corporate Services – Legal Services
R. Inacio, Systems Support Specialist, Corporate Services – IT
R. Jagannathan, Director of Transportation and Field Services
J. Paquette, Manager (Works), Corporate Communications
J. Presta, Director of Environmental Services
S. Siopis, Commissioner of Works
S. Glover, Committee Clerk, Corporate Services – Legislative Services

2. Declarations of Interest

Councillor Marimpietri made a declaration of interest under the Municipal Conflict of Interest Act with respect to Item 7.1 B) Report #2020-INFO-95: Mixed Waste Pre-sort and Anaerobic Digestion Update. He indicated that he has family members who own property and reside within the area described in the Report.

3. Adoption of Minutes

Moved by Councillor Marimpietri, Seconded by Councillor Barton,
(85) That the minutes of the regular Works Committee meeting held on
Wednesday, October 7, 2020, be adopted.

CARRIED

4. Statutory Public Meetings

There were no statutory public meetings.

5. Delegations

There were no delegations to be heard.

6. Presentations

6.1 Ramesh Jagannathan, Director of Transportation and Field Services, re:
Automated Enforcement – Update

R. Jagannathan, Director of Transportation and Field Services, provided a PowerPoint presentation regarding an update on automated enforcement.

Highlights from the presentation included:

- Vision Zero and Automated Enforcement
- Automated Speed Enforcement Locations
- How Does Automated Speed Enforcement (ASE) Work?
- Red Light Camera Locations
- How Do Red Light Cameras Work?
- Current Program Status
- ASE – Preliminary Results
- ASE – Preliminary Results – Before/During/After
- Lessons Learned, Looking Ahead, Next Steps

R. Jagannathan responded to questions from the Committee regarding vandalism on the ASE units and who is responsible for cleaning/maintaining those units; other municipalities that have started the process of purchasing ASE units for local roads; different locations that would benefit from having ASE and red-light cameras and what is the process of identifying those locations; whether the data

collected shows the speed lowering of those going top speeds; driving behaviours at pinch points where two lanes decrease to one lane; using more speed feedback boards instead of ASE to save costs, and comparing the effectiveness between the speed feedback boards and ASE.

6.2 G. Anello, Director of Waste Management Services, re: Draft Blue Box Regulations and Durham Concerns – Update

G. Anello, Director of Waste Management Services, provided an update regarding the draft blue box regulations and Durham concerns.

G. Anello advised that there has been a successful transition of tires and batteries to extended producer responsibility (EPR). He advised that electronics will be transitioned to EPR on January 1, 2021, and household hazardous waste materials on July 1, 2021.

G. Anello advised that staff received the draft regulations for the blue box transition program on October 19, 2020. He advised the Committee that there is a 45-day comment period and responses are due to the MECP by December 3, 2020. He further advised that the Provinces' priorities are to: expand the scope of the blue box materials collected, to establish a common collection system across Ontario and to create a common list of acceptable blue box materials. He advised that the draft regulations stated that Durham Region's transition date will be 2024. The Region requested a transition date of 2023 and will be asking the Province to reconsider their proposed transition date.

G. Anello advised that staff have prepared a report for the November 12, 2020 Committee of the Whole meeting. He advised that producers will be taking over collection, processing, and marketing of waste materials, which means that the Region of Durham will no longer be in that business. He also advised that any potential savings because of EPR will be addressed in a future report.

G. Anello advised that there are many unknowns such as the future of the Material Recovery Facility (MRF) that the Region owns and operates, and the impact on the business improvement areas because of EPR. He advised that staff will be coming to future Committee meetings and Council with several items to prepare the Region for the transition to EPR.

G. Anello advised that multi-residential buildings will transition to an EPR model unless they are not currently receiving services from the municipality. He advised that these multi-residential buildings that are not receiving services from the municipality will have to wait until 2026 and will need to request this service at that time.

7. Waste

7.1 Correspondence

- A) Memorandum from Susan Siopis, Commissioner of Works, dated October 16, 2020, re: Disposal of Waste Electrical, Electronics and Fluorescent Lightbulbs for Industrial, Commercial and Institutional (ICI) Sector

Councillor Smith thanked staff for the memorandum and advised that he would pass on this information to the individuals affected.

Moved by Councillor Smith, Seconded by Councillor McLean,

- (86) That the memorandum from Susan Siopis, Commissioner of Works, dated October 16, 2020, re: Disposal of Waste Electrical, Electronics and Fluorescent Lightbulbs for Industrial, Commercial and Institutional (ICI) Sector be received for information.

CARRIED

- B) Report #2020-INFO-95: Mixed Waste Pre-sort and Anaerobic Digestion Update

Detailed discussion ensued regarding details of the proposed development of an Anaerobic Digestion (AD) facility at 1515 Thornton Road North in the City of Oshawa, and how the outcome of this proposal might affect Durham's plans for an Anaerobic Digestion facility.

Further discussion ensued regarding any potential environmental analysis that the Region would complete for the Regional AD facility similar to the information that the Region requested for the proposed development site at 1515 Thornton Road North, in the City of Oshawa.

Moved by Councillor McLean, Seconded by Councillor Barton,

- (87) That Report #2020-INFO-95: Mixed Waste Pre-Sort and Anaerobic Digestion Update be received for information.

CARRIED

- C) Email Correspondence from Linda Gasser, Whitby resident, dated October 26, 2020, re: Durham Waste Management Annual Reports & Environmental Assessment (EA) Condition 10 and recent Third-Party Audit

In response to a question, S. Siopis advised that all correspondence submitted will be reviewed and where specific questions have been raised, staff will respond.

Moved by Councillor Crawford, Seconded by Councillor Smith,

- (88) That the email correspondence from Linda Gasser, Whitby resident, dated October 26, 2020, re: Durham Waste Management Annual Reports & Environmental Assessment (EA) Condition 10 and recent Third-Party Audit be received for information.

CARRIED

- D) Email Correspondence from Linda Gasser, Whitby resident, dated November 3, 2020, providing background information to Durham Works staff on the presentation and background information she provided to Clarington Council on November 2, 2020 regarding concerns that have not been addressed to date, including a promised Durham report on impacts of the MWP and AD on the incinerator

Moved by Councillor Barton, Seconded by Councillor Smith,

- (89) That the email Correspondence from Linda Gasser, Whitby resident, dated November 3, 2020, providing background information to Durham Works staff on the presentation and background information she provided to Clarington Council on November 2, 2020 regarding concerns that have not been addressed to date, including a promised Durham report on impacts of the MWP and AD on the incinerator be received for information.

CARRIED

- E) Email Correspondence from Linda Gasser, Whitby resident, dated November 3, 2020, re: the Region of Durham's Submission to the Ministry of the Environment, re: Durham/York Energy From Waste Project Submission of the Regional Municipality of Durham Waste Diversion Program Monitoring Plan (Environmental Assessment Conditions 10) MOE File No.: EA-08-02; and a Summary of Durham's Diversion rates for the last decade

Moved by Councillor Barton, Seconded by Councillor Smith,

- (90) That the email Correspondence from Linda Gasser, Whitby resident, dated November 3, 2020, re: the Region of Durham's Submission to the Ministry of the Environment, re: Durham/York Energy From Waste Project Submission of the Regional Municipality of Durham Waste Diversion Program Monitoring Plan (Environmental Assessment Conditions 10) MOE File No.: EA-08-02; and a Summary of Durham's Diversion rates for the last decade be received for information.

CARRIED

7.2 Reports

There were no Waste Reports to be considered.

8. **Works**

8.1 Correspondence

- A) Email Correspondence from Libby Racansky, Courtice resident, dated October 12, 2020, re: Wells on Hancock Rd., Courtice and Extension of Water Pipes

Staff responded to a question with respect to whether the issue of wells in the Municipality of Clarington, running dry due to construction work, needs to be re-

visited. Staff advised that these sites were visited, and what is currently happening was compared with historical patterns. S. Siopis advised that it does appear that the stated issue has reoccurred seasonally over the years and that Regional staff have offered Libby Racansky suggestions on how she may remedy the problem.

Moved by Councillor John Neal, Seconded by Councillor Smith,
(91) That the email Correspondence from Libby Racansky, Courtice resident, dated October 12, 2020, re: Wells on Hancock Rd., Courtice and Extension of Water Pipes be referred to staff for a response.

CARRIED

8.2 Reports

- A) Amendment and Renewal of Lease for Premises with First Capital Holdings (Ontario) Corporation and 1615 Dundas St. E. Commercial Centre Inc. at 1615 Dundas Street East in the Town of Whitby for the Regional Municipality of Durham Health Department, Dental Clinic and Breast-Feeding Clinic (2020-W-49)

Report #2020-W-49 from S. Siopis, Commissioner of Works, was received.

Moved by Councillor McLean, Seconded by Councillor Barton,
(92) That we recommend to Council:

- A) That an Amendment and Renewal of Lease for 437.84 square metres (4,713 square feet) of office space for the Dental Clinic located at 1615 Dundas Street East, in the Town of Whitby be approved with the following terms and conditions:
- i) The term is for a period of one year commencing September 1, 2020, ending August 31, 2021;
 - ii) The annual rental rate for the term of the lease is \$65,982* based on a rate of \$150.69* per square metre (\$14.00 per square foot);
- B) That an Amendment and Renewal of Lease for 128.59 square metres (1,384.2 square feet) of office space for the Breast-Feeding Clinic located at 1615 Dundas Street East, in the Town of Whitby be approved with the following terms and conditions:
- i) The term is for a period of three years commencing September 1, 2020, ending August 31, 2023;
 - ii) The annual rental rate for the three-year term of the lease is \$17,300* based on a rate of \$134.53* per square metre (\$12.50 per square foot);

- C) That in addition to the terms noted in Recommendations A and B, the following terms apply to the lease renewals:
 - i) The Regional Municipality of Durham is responsible for all operating costs for the leased premises, including janitorial services, repairs and maintenance for the premises at approximately \$6.59* per square foot and a proportionate share of property taxes;
 - ii) The Landlord is responsible for repairs and maintenance for the structure of the building, the premises and for the parking lot; and
- D) That the Regional Chair and Clerk be authorized to execute all documents associated with the Amendment and Renewal of Lease agreement.
(* before applicable taxes in all instances

CARRIED

9. **Advisory Committee Resolutions**

There were no advisory committee resolutions to be considered.

10. **Confidential Matters**

There were no confidential matters to be considered.

11. **Other Business**

11.1 Excess Soil Site Located at 3440 Wilson Road in the City of Oshawa

Councillor John Neal requested that staff investigate whether the Region of Durham is using 3440 Wilson Road, in the City of Oshawa, as an excess soil site and report back to him directly.

11.2 Infrastructure Announcements Made by the Province

Discussion ensued regarding infrastructure announcements that were made by the Province and whether the Region has any applications currently submitted to receive funding from the program.

Staff responded to questions regarding whether approvals the Region has in place for certain projects have signed agreements; and what risks are associated with beginning a project without a signed agreement. E. Baxter-Trahair advised that the primary risks relate to when the funding must be spent, for example the Beaverton Supportive Housing project where dollars have to be spent by the end of 2021. Staff will follow-up on the status of any outstanding project approvals/agreements.

12. Date of Next Meeting

The next regularly scheduled Works Committee meeting will be held on Wednesday, December 2, 2020 at 9:30 AM in Council Chambers, Regional Headquarters Building, 605 Rossland Road East, Whitby.

13. Adjournment

Moved by Regional Chair Henry, Seconded by Councillor John Neal, (93) That the meeting be adjourned.

CARRIED

The meeting adjourned at 10:52 AM

Respectfully submitted,

D. Mitchell, Chair

S. Glover, Committee Clerk

If this information is required in an accessible format, please contact 1-800-372-1102 ext. 3540.



The Regional Municipality of Durham Report

To: Works Committee
From: Commissioner of Works
Report: #2020-W-51
Date: December 2, 2020

Subject:

Sole Source Engineering Assignment for Transition Programming of the Programmable Logic Controllers and Human Machine Interface Controls in Blower Buildings 1 and 2 at the Duffin Creek Water Pollution Control Plant, in the City of Pickering

Recommendation:

That the Works Committee recommends to Regional Council:

- A) That Eramosa Engineering Incorporated be retained to provide transition programming for the Programmable Logic Controllers (PLCs) and Human Machine Interface (HMI) controls located in Blower Buildings 1 and 2 at the Duffin Creek Water Pollution Control Plant (WPCP) at an upset limit not to exceed \$204,000*;
- B) That the cost of this assignment will be funded from the approved 2020 Sanitary Sewage System Business Plan and Budget, cost shared with the Regional Municipality of York, as estimated below:

| | |
|--|-------------------------|
| Durham Region Share (18.42%) User Rate | \$37,577 |
| York Region Share (81.58%) | <u>166,423</u> |
| Total Upset Limit | <u>\$204,000</u> |

- C) That the Commissioner of Finance be authorized to execute the necessary engineering services agreement.
-

Report:**1. Purpose**

- 1.1 The purpose of this report is to obtain approval to sole source an assignment to Eramosa Engineering Incorporated (Eramosa) for the development and implementation of transition programming for the Programmable Logic Controllers (PLCs) and Human Machine Interface (HMI) controls located in Blower Buildings 1 and 2 at the Duffin Creek Water Pollution Control Plant (WPCP). Dollar amounts followed by an asterisk (*) are including disbursements and before applicable taxes.

2. Background

- 2.1 Blower Buildings 1 and 2 were constructed in 2002 as part of upgrades that replaced the original mechanical aeration systems with the current diffused air systems. Effective operation of the diffused air systems is critical to meeting the regulatory limits established for the treated wastewater.
- 2.2 The current diffused air systems have now been in service for over 18 years. The original supplier of the local control panel no longer manufactures the product. The networking hardware systems, including GE Versamax remote hardware, is no longer actively supported. The hardware systems have consumed their original stock of spare parts over the years, and additional spare components can no longer be securely supplied.

3. Previous Reports and Discussion

- 3.1 In order to address the above noted limitations, approval was previously obtained through Works Committee Report #2020-W-11 to engage Eramosa for the detailed design and construction administration services associated with the refurbishment of the networking hardware systems for Blower Buildings 1 and 2.

4. Justification for Sole Source Assignment

- 4.1 Eramosa is currently working with Regional staff to complete the detailed design and contract tender documents for the refurbishment of the networking hardware systems. The original target date for tender issuance was the fourth quarter of 2020; however, the original schedule has been compromised by the on-going COVID-19 pandemic, which has restricted site access and investigations. It is currently anticipated that the tender will be issued in the first quarter of 2021.

- 4.2 It is imperative that a tight schedule be maintained to ensure that the wastewater treatment performance can be reliably controlled and operated. A failure of the control hardware would essentially reduce the capability to reduce energy and optimize performance.
- 4.3 It is envisaged that the COVID-19 mitigation measures will remain in place through at least the second quarter of 2021. To help mitigate any further impact of these measures on project schedule, it is recommended that Eramosa be engaged at this time for the development and implementation of transition programming for the PLCs and HMI controls associated with the refurbishment of the networking hardware systems for Blower Buildings 1 and 2. Normally, this would not be initiated until the construction phase of the project; however, start-up and commissioning of the works would be delayed by several months if the normal process were to be followed.
- 4.4 By engaging Eramosa for the development of the programming concurrently with the detailed design and tendering phases, as well as for implementation of the programming during the construction phase, the project schedule can be significantly compressed.
- 4.5 The scope of the transition programming to be undertaken by Eramosa is extensive. There are eight PLCs (including two PLCs that serve as the master control for each blower building), as well as six HMI controls. The new hardware must be programmed to the Regional standards, with SCADA software on the Regional IFX standard required. Efforts include Factory Acceptance Testing, documentation, and support during the commissioning. Eramosa is thoroughly familiar with the requirements of this assignment through their involvement in the detailed design and tendering phases, as well as Eramosa having successfully completed prior assignments at the Duffin Creek WPCP.
- 4.6 The proactive development of the transition programming will also mitigate any potential delay claims that may arise from the construction contractor should they be forced to halt their work while waiting for the programming to be completed.

5. Financial Implications

- 5.1 The Regional Municipality of Durham's (Region) Purchasing By-Law 16-2020, Section 8.4.2 requires that staff submit a report to Regional Council to obtain approval to acquire consulting or professional services through a single/source negotiation where the value of the assignment is expected to be more than \$100,000.

- 5.2 The estimated value of the engineering services agreement, inclusive of construction administration services, is estimated to be \$204,000*.
- 5.3 The cost of this assignment will be funded from the approved 2020 Sanitary Sewage System Budget, Tangible Capital Assets – Replacement Item no. 266 (2020_WORKSYDSS Activity # 5211000200_R266) and Program # Y2003, Duffin Creek Water Pollution Control Plant Item # 103 which is cost shared with the Regional Municipality of York as estimated below:

| | |
|------------------------------|-------------------------|
| Durham Region Share (18.42%) | \$37,577 |
| York Region Share (81.58%) | <u>\$166,423</u> |
| Total Upset Limit | <u>\$204,000</u> |

6. Relationship to Strategic Plan

- 6.1 This report aligns with/addresses the following strategic goals and priorities in the Durham Region Strategic Plan:
- Service Excellence: Optimization of resources and partnerships to deliver exceptional quality service and value
 - Service Excellence: Collaborate and ensure a seamless service experience

7. Conclusion

- 7.1 It is recommended that Eramosa Engineering Incorporated be retained to provide transition programming for the Programmable Logic Controllers and Human Machine Interface controls located in Blower Buildings 1 and 2 at the Duffin Creek Water Pollution Control Plant at an upset limit not to exceed \$204,000*.
- 7.2 This report has been reviewed by the Finance Department and the Commissioner of Finance concurs with the recommendation.

7.3 For additional information, please contact Brad Dobson, Project Manager, Plant Operations Division, at 905-668-7711 ext. 4297.

Respectfully submitted,

Original signed by:

Susan Siopis, P.Eng.
Commissioner of Works

Recommended for Presentation to Committee

Original signed by:

Elaine C. Baxter-Trahair
Chief Administrative Officer

If this information is required in an accessible format, please contact 1-800-372-1102 ext. 3540.



The Regional Municipality of Durham Report

To: Works Committee
From: Commissioner of Works
Report: #2020-W-52
Date: December 2, 2020

Subject:

Approval to Enter into a Sole Source Agreement with SNF Canada Limited for the Supply and Delivery of Liquid Emulsion Polymer to the Duffin Creek Water Pollution Control Plant, in the City of Pickering

Recommendation:

That the Works Committee recommends to Regional Council:

- A) That the Regional Municipality of Durham enter into a sole source agreement with SNF Canada Limited for the supply and delivery of liquid emulsion polymer to the Duffin Creek Water Pollution Control Plant for a six-month term at an estimated maximum contract value of \$1,000,000*;
- B) That the sole source agreement be funded from the annual Sanitary Sewerage Business Plans and Budget, with costs shared proportionally between the Regional Municipalities of Durham and York based on the estimated utilization as follows:

| | |
|--|--------------------|
| Durham Region Share (18.67%) User Rate | \$186,700 |
| York Region Share (81.33%) | <u>\$813,300</u> |
| Total Upset Limit | <u>\$1,000,000</u> |

- C) That the Commissioner of Finance be authorized to execute the necessary documents related to the sole source agreement.

Report:**1. Purpose**

- 1.1 The purpose of this report is to obtain authorization to enter into a sole source agreement with SNF Canada Limited (SNF) for the supply and delivery of liquid emulsion polymer to the Duffin Creek Water Pollution Control Plant (WPCP). Dollar amounts followed by an asterisk (*) are before applicable taxes.

2. Background

- 2.1 An emulsion polymer must be added to the biosolids managed at the Duffin Creek WPCP to mitigate the risk of significant operational impacts. The polymer is currently supplied and delivered to the plant under an existing standing agreement with SNF Canada Limited (SNF).
- 2.2 In early 2020, staff began preparing a Request for Tender (RFT) to identify a vendor for the supply and delivery of polymer beyond the current standing agreement. As part of the RFT process, a prospective vendor must demonstrate that their polymer is compatible with the unique composition of the biosolids managed at the Duffin Creek WPCP. This process normally includes a full-scale trial, which must take place on-site at the plant.
- 2.3 To undertake a full-scale trial, a prospective vendor is typically on-site for approximately four days with a crew of about four people, some of whom may be from out of province or country. Since several prospective vendors may respond to an RFT, this can result in numerous external parties being on-site for extended periods.
- 2.4 The emergence of the COVID-19 pandemic in March delayed the finalization and issuance of the RFT since a series of full-scale trials by external parties would have subjected plant personnel to an undue potential risk of exposure.
- 2.5 As COVID-19 gradually became better understood, mitigation measures were developed and implemented at the Duffin Creek WPCP to minimize the risk of plant personnel being exposed to COVID-19 by external parties.
- 2.6 Staff have also been able to modify the RFT process such that prospective vendors can demonstrate the compatibility of their polymer with the plant's biosolids and follow established protocols for plant operations. The key modifications to the RFT process are outlined as follows:

- a. During the RFT process, each prospective vendor will complete a bench-scale test (rather than a full-scale trial), which will only require a single person from each vendor to be on-site for less than 2 hours. The bench-scale test will provide a reasonable indication of compatibility; and
 - b. Upon identification of a recommended vendor, award will be contingent upon that sole vendor first completing a full-scale trial to verify the compatibility of their polymer.
- 2.7 Under this modified RFT process, only a single vendor will need to bring a crew on-site to complete a full-scale trial.
- 2.8 The final RFT is scheduled to be released by the end of November, and it is anticipated that the bids, requisite bench-scale tests, evaluations, full-scale trial, and award of a new standing agreement can be completed by April 30, 2021.

3. Previous Reports and Decisions

- 3.1 To ensure the continued supply of polymer until such time that Council is able to authorize a sole source agreement with SNF Canada Limited for the supply and delivery of liquid emulsion polymer to the Duffin Creek Water Pollution Control Plant for a six-month term, the Commissioner of Finance approved the initial month of the sole source agreement with SNF to a maximum value of \$166,667*.

4. Sole Source Justification

- 4.1 It is not possible to manage biosolids effectively at the Duffin Creek WPCP without utilizing an emulsion polymer since that could result in significant process disruptions, increased costs, equipment breakdowns, and risk of non-compliance.
- 4.2 The existing standing agreement with SNF for the supply and delivery of emulsion polymer expired on October 31, 2020; therefore, a six-month sole source assignment is required to ensure the continued supply and delivery of emulsion polymer until such time that the RFT is completed and a new standing agreement awarded.
- 4.3 As the current supplier, SNF is the only vendor who can ensure that their emulsion polymer is compatible with the biosolids at the Duffin Creek WPCP until such time that other prospective vendors are able to verify compatibility by completing bench-scale testing and a full-scale trial.
- 4.4 The service by SNF under the existing standing agreement has been excellent.

- 4.5 In order to maintain the supply and delivery of polymer to the Duffin Creek WPCP while the RFT is completed, it is recommended that the Region enter into a sole source agreement with SNF Canada Limited for the supply and delivery of liquid emulsion polymer to the Duffin Creek WPCP for a six-month term at an estimated maximum contract value of \$1,000,000*.

5. Financial Implications

- 5.1 Under the Region's Purchasing Bylaw 16-2020, Regional Council approval is required enter into a sole source agreement with SNF for a six-month term at an estimated maximum contract value of \$1,000,000*.
- 5.2 The sole source agreement will be funded from the annual Sanitary Sewerage Business Plans and Budget, with costs shared proportionally between the Regional Municipalities of Durham and York based on the estimated utilization as follows:

| | |
|--|--------------------|
| Durham Region Share (18.67%) User Rate | \$186,700 |
| York Region Share (81.33%) | <u>\$813,300</u> |
| Total Upset Limit | <u>\$1,000,000</u> |

6. Relationship to Strategic Plan

- 6.1 This report aligns with/addresses the following strategic goals and priorities in the Durham Region Strategic Plan:
- Goal 1: Environmental Sustainability: Protect, Preserve and Restore the Natural Environment
 - Goal 5: Service Excellence: Collaborate and ensure a seamless service experience

7. Conclusion

- 7.1 It is recommended the Regional Municipality of Durham enter into a sole source agreement with SNF Canada Limited for the supply and delivery of liquid emulsion polymer to the Duffin Creek Water Pollution Control Plant for a six-month term at an estimated maximum contract value of \$1,000,000*.
- 7.2 This report has been reviewed by the Finance Department.

7.3 For additional information, contact Rich Tindall, Manager, Plant Operations Division at 905-668-7711 ext. 3537.

Respectfully submitted,

Original signed by:

Susan Siopis, P.Eng.
Commissioner of Works

Recommended for Presentation to Committee

Original signed by:

Elaine C. Baxter-Trahair
Chief Administrative Officer

If this information is required in an accessible format, please contact 1-800-372-1102 ext. 3540.



The Regional Municipality of Durham

Report

To: Works Committee
From: Commissioner of Works
Report: #2020-W-53
Date: December 2, 2020

Subject:

Works Department – 2021 Water Supply and Sanitary Sewerage Systems Business Plans and Budgets

Recommendation:

That the Works Committee recommends to the Finance and Administration Committee for subsequent recommendation to Regional Council that the Works Department's portion of the 2021 Water Supply System and Sanitary Sewerage System Business Plans and Budgets be approved.

Report:

1. Purpose

- 1.1 The purpose of this report is to obtain Works Committee concurrence of the 2021 Business Plans and Budgets for the Works Department's portion of the Water Supply System and Sanitary Sewerage System. The Works Department's 2021 Business Plans and Budgets will be referred to the Finance and Administration Committee for consideration during deliberations of the 2021 Consolidated Business Plans and Budgets for the Water Supply and the Sanitary Sewerage Systems.

2. Overview

- 2.1 The Works Department's portion of the 2021 Water Supply System and Sanitary Sewerage System Business Plans and Budgets supports and advances the goals of the Regional Municipality of Durham's (Region) Strategic Plan, namely:
- a. Goal 1: Environmental Sustainability
 - b. Goal 2: Community Vitality
 - c. Goal 3: Economic Prosperity
 - d. Goal 4: Social Investment
 - e. Goal 5: Service Excellence
- 2.2 The recommended Works Department's portion of the 2021 Water Supply System and Sanitary Sewerage System Business Plans and Budget includes \$326.3 million in gross expenditures (Water Supply System \$136.3 million and Sanitary Sewerage System \$190.0 million) requiring \$187.2 million in user rate revenue (\$99.3 million Water Supply System and \$87.9 million Sanitary Sewerage System) with remaining funded by program fees, development charges, recovery from the Regional Municipality of York and reserve funds.
- 2.3 The recommended Works Department's portion of the 2021 Water Supply System and Sanitary Sewerage System Business Plans and Budgets provides operating and capital funding for the following items:
- a. Water Supply:
 - Maintenance Operations
 - (a) Watermain Cleaning and Repairs
 - (b) Valve and Hydrant Maintenance
 - (c) Water Connection Maintenance
 - (d) Water Meter Repair and Testing
 - (e) Depot Operations
 - Water Supply Plant Operations:
 - (a) Plants East
 - (b) Plants Central
 - (c) Plants North

- (d) Sunvalley Private Water System
- (e) Supervisory Control and Data Acquisition (SCADA) Systems
 - Engineering and Staff Support
 - Facilities Management
 - Administration
 - Water Supply System portion of Headquarters Shared Costs
- b. Sanitary Sewerage:
 - Maintenance Operations
 - (a) Sewer Cleaning and Repairs
 - (b) Sewer Connection Maintenance
 - (c) Depot Operations
 - Water Pollution Control Plant Operations:
 - (a) Plants and Pumping Stations
 - (b) Duffin Creek Water Pollution Control Plant
 - Regional Environmental Laboratory
 - Engineering and Staff Support
 - Facilities Management
 - Administration
 - Sanitary Sewerage portion of Headquarters Shared Costs

3. Previous Reports and Decisions

- 3.1 Report #2020-COW-23, approved by Regional Council in September 30, 2020, approved the following pre-servicing of employment lands components impacting the Works Department's Water Supply and Sanitary Sewerage Business Plans and Budgets:
- a. The advancement of the environmental assessment, detailed design and approval of four Regional water supply and sanitary sewerage infrastructure projects;
 - b. The prioritization in the appropriate year for Regional Council's consideration during the annual business planning and budget process of 10 Regional water supply and sanitary sewerage infrastructure projects; and

- c. The approval in principle and inclusion in the 2021 Business Plans and Budgets of one additional Project Manager in the Works Department's Environmental Services Branch to deliver employment lands servicing projects.
- 3.2 At the Committee of the Whole meeting on September 16, 2020, the following motions were referred to the 2021 Water Supply System and Sanitary Sewerage System Budget process:
- a. Detailed design and construction of an extension of the Zone 3 watermain and sanitary sewer north along Thornton Road from Conlin Road (conceptual estimate \$5.1 million) within the Northwood Employment Area, in the City of Oshawa, so that it occurs concurrently with the construction of the road;
 - b. Detailed design and construction of the following infrastructure to service the Port Perry Employment Area (conceptual estimate \$16.8 million):
 - A new sanitary sewage pumping station near Reach Street and North Port Road;
 - A forcemain from the new sanitary sewage pumping station to the Nonquon Water Pollution Control Plant;
 - A new gravity sanitary sewer along Reach Street draining into the new sanitary sewage pumping station; and
 - A watermain from approximately 500 m east of the future water storage facility connection, along Reach Street to the existing water supply system.
 - c. Detailed design and construction of a sanitary sewer extension along the Hunt Street extension (conceptual estimate \$5.75 million), upon completion of the Central Ajax Intensification Servicing and Transportation Study and concurrent with the construction of the road extension by the Town of Ajax.
- 3.3 City of Oshawa staff have confirmed the potential of proceeding with the detailed design of the reconstruction of Thornton Road in 2021. The proposed 2021 Water Supply System and Sanitary Sewerage System Budgets include an allowance to proceed with the detailed design for the extension of services on Thornton Road with project construction in the capital forecast in 2023 which is subject to future budget approval.
- 3.4 The servicing of the employment lands in Port Perry requires the Environmental Assessment (EA) to determine the location of the proposed sanitary sewage

pumping station to finalize servicing strategy. Once the conceptual servicing strategy has been determined then the scope for the project can be better defined. The proposed 2021 Water Supply System and Sanitary Sewerage System Budgets include the initiation of the EA with detailed design and construction allowances in the capital forecast in 2024 and 2027 respectively which is subject to future budget approval. Implementation would be contingent on the timing of end users within the employment lands.

- 3.5 Staff from the Town of Ajax have indicated that the extension of Hunt Street is likely beyond the five-year timeframe or more. The Region has made an allowance for engineering related to the watermain and sanitary sewer extensions for Hunt Street. The proposed 2021 Water Supply System and Sanitary Sewerage System budgets include potential construction allowance in 2025 which is subject to future budget approval.

4. 2020 Accomplishments

- 4.1 Regional water supply and sanitary sewerage systems continue to provide safe drinking water and protect the water environment. Quality and environmental management systems support and integrate operations to meet regulatory performance requirements. The following metrics provide a demonstration of the system performance objectives in 2020:

- No Boil Water Advisory days
- 99.97 per cent compliance of drinking water test results
- No sanitary sewage by-pass events
- 100 per cent compliance of wastewater effluent results to protect water environment

- 4.2 The capital water supply and sanitary sewerage programs support the Region's Strategic Plan goals. The following highlights the detailed design and construction of some of the major projects completed in 2020:

- 19 water supply and sanitary sewerage projects;
- Total project value implemented of approximately \$152.2 million;
- Newcastle Water Supply Plant and Sanitary Sewage Pumping Station - construction commenced with completion target of 2023;

- Seaton Zone 4 Reservoir and Zone 5 Water Pumping Station including Bulk Water Filling Station-construction commenced with completion target of 2022;
- Restoration of Sludge Blending Tank at the Duffin Creek Water Pollution Control Plant;
- Bayly Street Sanitary Sewage Pumping Station Mechanical Screen - construction commenced with completion target of April 2021; and
- Regional Environmental Laboratory Upgrades - construction commenced with completion target of 2022.

4.3 The modernization of data management continues at the Duffin Creek Water Pollution Control Plant. A similar data management modernization was initiated in the Plant Operations division for water supply and sanitary sewerage service areas.

5. 2021 Priorities and Highlights

5.1 In order to maintain sustainable and compliant water supply and sanitary sewerage systems, the 2021 capital program includes items with a total estimated project value for implementation of approximately \$178.1 million such as:

- Planning, detailed design and construction of 12 kilometres (km) of linear pipe and four vertical facilities as identified within the Asset Management Plan;
- Planning, detailed design and construction of 14 km of linear pipe in co-ordination with Regional and Municipal road programs; and
- Phases 2, 3 and 4 regulatory works to continue related to Technical Standards and Safety Authority (TSSA) fuel tank replacement/upgrades.

5.2 A total of 7.956 new full-time equivalent employees (FTEs) are proposed in 2021. These positions represent new permanent resources to support the delivery of capital projects and operating activities. The cost of some of these positions is allocated at varying levels to capital projects or maintenance activities:

- Project Manager in Engineering Planning and Studies to advance the pre-servicing of employment lands. This position was approved in principle by Regional Council through Report #2020-COW-23 1.000 FTE
- Project Supervisor in Environmental Services Design 1.000 FTE

- | | |
|--|-----------|
| • Two Supervisors, Development Approvals | 2.000 FTE |
| • Two Maintenance Operator-Control Room positions in Water Supply Plants - Central | 2.000 FTE |
| • Senior Project Coordinator in Construction (costs are shared with Water Supply, Sanitary Sewerage and Works General Tax) | 0.642 FTE |
| • Project Manager in Facilities Design, Construction and Asset Management (costs are shared with Water Supply, Sanitary Sewerage and Works General Tax) | 0.657 FTE |
| • Works Technician 4 in Facilities Design, Construction and Asset Management (costs are shared with Water Supply, Sanitary Sewerage and Works General Tax) | 0.657 FTE |

6. 2021 Risks and Uncertainties

6.1 Areas of potential risks that could impact the operating and capital budgets of the Works Department include:

- a. Changes related to legislative changes and regulations from provincial and federal approval agencies.
- b. Revenue/Funding pressures (e.g. provincial/federal infrastructure programs which require matching Regional investment).
- c. Operating Pressures, such as:
 - Growth across the Region, which includes development of several new communities in Seaton, West Whitby, North Oshawa, Bowmanville and Newcastle Village, will increase the demand for services to support residents and businesses as well as the operational and maintenance requirements for Regional infrastructure;
 - Ensuring sufficient staff resources to deliver a growing capital program is necessary to avoid impacts to the delivery schedules of projects or delays in response times for reactive maintenance activities;
 - Changing and unpredictable weather patterns impact treatment operations as well as preventative and reactive maintenance activities for the Regional Water Supply and Sanitary Sewerage linear infrastructure network;

- Inflation and commodity price fluctuations may place increased pressure on operating programs, particularly those delivered with contracted services; and
- Changes in local market demands for engineering and construction services can impact industry capacity for infrastructure projects.

7. Future Budget Pressures

7.1 Items proposed in the 2021 Works Department Water Supply System and Sanitary Sewerage System Budgets will result in impacts to the 2022 budget, including:

a. Annualization of new positions proposed in 2021

- Water Supply \$264,500
- Sanitary Sewerage \$145,786

7.2 Looking forward over the next four years, the following significant budget pressures include:

a. Growth Requirements:

- Increased demands for infrastructure maintenance;
- Operating costs related to major facility expansions including:
 - (a) Newcastle Water Pollution Control Plant and Sanitary Sewage Pumping Station;
 - (b) Newcastle Water Supply Plant;
 - (c) Zone 4 (Seaton) Reservoir and Water Pumping Station;
 - (d) Zone 1 (Bowmanville) Reservoir and Water Pumping Station;
 - (e) New Well and Treatment in Port Perry;
 - (f) Whitby Water Supply Plant expansion;
 - (g) Zone 4 (Whitby) Reservoir and Water Pumping Station;
 - (h) New water pollution control plants in Sunderland and Cannington; and
 - (i) Zone 4 (Oshawa) Reservoir and Water Pumping Station;
- Increased equipment requirements to service and maintain growing infrastructure; and

- Increased capital infrastructure including pre-servicing of employment lands and new or expanding facilities to accommodate and service growth and development.
- b. Asset Management and Infrastructure Requirements:
- Refurbishment of existing Water Supply and Water Pollution Control Plants and Maintenance Operations Depots;
 - Replacement of fuel dispensing and tank monitoring systems; and
 - Rehabilitation and replacement of linear water and sanitary sewerage infrastructure.
- c. Legislative and Regulatory Requirements:
- The Ministry of the Environment, Conservation and Parks (MECP) is planning to initiate a review of the Lake Simcoe Protection Plan in 2021-2022 which may require future capital or operational changes to water pollution control plants in the Lake Simcoe watershed.
 - The MECP has undertaken a modernization of the Environmental Compliance Approval process which may impact capital and operating costs for Regional facilities.
 - Perfluoroalkyl (PFAS) substances are an emerging regulatory issue in Canada and the United States of America. The sources of PFAS substances can originate from fire-fighting foams, consumer products, packaging, landfills and industrial processes. The regulatory requirements for drinking water are developing and emerging as there is limited data on the substances. There is currently considerable variation in the magnitude of guidelines between regulatory agencies.
 - Innovation, Science and Economic Development Canada (ISED) - Spectrum Management and Telecommunications is reviewing the potential of making adjustments to the radio frequencies that the Region currently uses for the SCADA communications. If the proposed adjustments are made it would require modification to the Region's Wide Area Network base to a new frequency which would require significant changes to equipment at Regional facilities.

8. Conclusion

- 8.1 The recommended Works Department's portion of the 2021 Water Supply System and Sanitary Sewerage System Business Plans and Budgets can be financed from

the proposed combined water and sanitary sewer user rate increase as detailed in Report #2020-F-25 – Recommended 2021 Water and Sanitary Sewer User Rates.

- 8.2 It is recommended that the Works Committee approve the Works Department's portion of the 2021 Water Supply System and Sanitary Sewerage System Business Plans and Budgets and forward this report to the Finance and Administration Committee for consideration during the budget deliberations of the 2021 Consolidated Business Plans and Budgets for the Water Supply System and the Sanitary Sewerage System.
- 8.3 This report has been reviewed by the Finance Department and the Commissioner of Finance concurs with the recommendation.
- 8.4 For additional information, contact: Jenni Demanuele, Director, Business Services, at 905-668-7711, extension 3456.

9. Attachments

- 9.1 Detailed 2021 Business Plans and Budgets for the Works Water Supply and Sanitary Sewerage Systems are available on-line through the link provided on the December 2, 2020 Works Committee agenda.

Respectfully submitted,

Original signed by:

Susan Siopis, P.Eng.
Commissioner of Works

Recommended for Presentation to Committee

Original signed by:

Elaine C. Baxter-Trahair
Chief Administrative Officer

Resolutions from Advisory Committees

Energy From Waste – Waste Management Advisory Committee

1. Amendment to the Long-Term Waste Management Plan (LTWMP) Guiding Principles

That the Energy from Waste – Waste Management Advisory Committee recommends to the Works Committee for approval:

That the Long-Term Waste Management Plan (LTWMP) guiding principles be amended as follows:

- A) That an additional guiding principle be added as the first principle that states that the priority of the plan is to improve reduction and reuse; and
 - B) That a sixth guiding principle be added to set as a priority the reduction of toxic load on the environment.
2. Suggested Actions During the Consideration of the Long-Term Waste Management Plan (LTWMP)
-

That the Energy from Waste – Waste Management Advisory Committee recommend to the Works Committee for approval:

That the following list of suggested actions be forwarded to Works staff during the consideration of the Long-Term Waste Management Plan (LTWMP):

- Clear bag policy
- Single use plastics
- Increased enforcement
- Increased education (including a list of pros and cons for every kind of waste management decision)
- Providing details on cost
- Benefits of mulching
- Setting reduction targets and making those widely known to the public.