The Corporation of the City of Stratford
Infrastructure, Transportation and Safety Committee
Open Session
AGENDA

Date: Monday, July 24, 2017

Time: 6:45 P.M.

Location: Council Chamber, City Hall

Committee Present: Councillor McManus - Chair Presiding, Councillor Brown - Vice Chair, Mayor Daniel Mathieson, Councillor Beatty, Councillor Bunting, Councillor Clifford, Councillor Henderson, Councillor Ingram, Councillor Mark, Councillor Ritsma, Councillor Vassilakos

Staff Present: Ed Dujlovic - Acting CAO/Director of Infrastructure and Development Services, Andre Morin - Director of Corporate Services, David St. Louis - Director of Community Services, John Paradis - Fire Chief, Joan Thomson - City Clerk, Carole Desmeules - Director of Social Services, Jeff Leunissen - Manager of Development Services, Jacqueline Mockler - Director of Human Resources, Tatiana Dafoe - Deputy Clerk

Pages

1. Call to Order

The Chair to call the Meeting to Order.

2. Disclosure of Pecuniary Interest and the General Nature Thereof

The *Municipal Conflict of Interest Act* requires any member of Council declaring a pecuniary interest and the general nature thereof, where the interest of a member of Council has not been disclosed by reason of the member's absence from the meeting, to disclose the interest at the first open meeting attended by the member of Council and otherwise comply with the *Act.*

Name, Item and General Nature of Pecuniary Interest

3. Sub-committee Minutes 6 - 14

Sub-committee minutes are provided for background regarding the discussion held at the June 28, 2017 Sub-committee meeting.

4. Delegations

4.1 Derek Barr regarding 55 George Street West

Motion by _____

THAT the presentation of Derek Barr regarding the possibility of leasing or purchasing the municipal property next to 55 George Street West, be heard.

5. Report of the Project Engineer

5.1 Romeo Street Bridge Widening Project – Open House and Design Approval (ITS17-037) 15 - 20

*this item is also listed for consideration at the July 24, 2017 reconvene Council meeting.

Staff Recommendation: THAT Council approve the preferred design for bridge reconstruction of widening the Romeo Street Bridge to accommodate 1.8 m sidewalks on both sides of the street in addition to 4.7 m lane widths for vehicle and cycling traffic.

Motion by _____

Sub-committee Recommendation: THAT Council approve the preferred design for bridge reconstruction of widening the Romeo Street Bridge to accommodate 1.8m sidewalks on both sides of the street in addition to 4.7 m lane widths for vehicle and cycling traffic.

6. Report of the Fire Chief

6.1 Stratford Municipal Airport Operation And Management Agreement (ITS17-035) 21 - 23

*this item is also listed for consideration at the July 24, 2017 reconvene Council meeting.

Staff Recommendation: THAT Council authorize staff to negotiate a five year extension for services and terminal leasing with Stratford Air Services Ltd.

AND THAT the agreements be brought back to Council for consideration.

Motion by _____

Sub-committee Recommendation: THAT Council authorize staff to negotiate a five year extension for services and terminal leasing with Stratford Air Services Ltd.

AND THAT the agreements be brought back to Council for consideration.

7. Report of the Manager of Environmental Services

7.1 Drinking Water Quality Management Standard 2017 Management Review (ITS17-040) 24 - 33

Motion by _____

Staff Recommendation: THAT the summary report entitled Council Report – 2017 Top Management Review for Drinking Water Quality Management System be received for information.

7.2 2016 Stratford Water Pollution Control Plant Annual Report (ITS17-034) 34 - 81

Staff Recommendation: THAT the 2016 Stratford Water Pollution Control Plant Annual Report be received for information.

Motion by _____

Sub-committee Recommendation: THAT the 2016 Stratford Water Pollution Control Plant Annual Report be received for information.

8. Report of the Deputy Clerk

8.1 Parking Action Plan Update (ITS17-038) 82 - 94

Staff Recommendations: THAT the report entitled "Parking Action Plan Update" be received for information.

Motion by _____

Sub-committee Recommendation: THAT the report entitled "Parking Action Plan Update" be received for information.

8.2 Refreshment Vehicle Downtown Locations (ITS17-039) 95 - 98

Staff Recommendations: THAT the property located at 39 George Street West, be considered as the location for a second refreshment vehicle in the downtown City of Stratford;

THAT a Request for Quotation be prepared and issued in 2017;

THAT direction be given on the length of time of the lease agreement to be entered into with the successful bidder;

AND THAT the Business Licensing By-law 187-2004, be amended to include the location of the second refreshment vehicle to be located at 39 George Street West.

Sub-committee Decision: THAT the Refreshment Vehicle Downtown Location report (ITS17-039) be referred to the Infrastructure, Transportation and Safety Committee with no Sub-committee recommendation.

Motion by _____

THAT the property located at 39 George Street West, be considered as the location for a second refreshment vehicle in the downtown City of Stratford;

THAT a Request for Quotation be prepared and issued in 2017;

THAT direction be given on the length of time of the lease agreement to be entered into with the successful bidder;

AND THAT the Business Licensing By-law 187-2004, be amended to include the location of the second refreshment vehicle to be located at 39 George Street West.

9. For the Information of Committee

9.1 Request to repeal By-law 51-91 with respect to licencing bicycles (ITS17-036) 99 - 110

Motion by _____

Sub-committee Decision: THAT the matter of Bicycle Licencing By-law 51-91 be referred to the Stratford Police Services Board to provide information on how many bikes come in to the Police Department, how many are returned to their owners and how much the fine is for not having a bicycle licence;

AND THAT the Clerks Office provide information on how many bicycles are registered and at what age children are required to obtain a bicycle

licence.

9.2 Capital Project Update 111 - 112

Sub-committee Discussion: The Director of Infrastructure and Development Services reviewed the Capital Project Update included with the agenda.

In response to how staff are dealing with the chairs and tables in Market Square, the Director advised that staff are meeting to discuss those issues. It was noted that the benches are always available.

An update was requested on the sale of cats and dogs. The Director stated that the Animal Control Working group has been meeting and has made a number of recommendations. When they are complete, staff will bring them all to Council. There was an online survey recently requesting some public feedback.

9.3 Next Sub-committee Meeting

Due to conflicts, the July Infrastructure, Transportation and Safety Sub-committee meeting was moved to Monday, July 24 at noon.

10. Advisory Committee/Outside Board Minutes 113 - 138

The following Advisory Committee/Outside Board minutes are provided for Committee's information:

ATAC minutes dated April 26, 2017

Accessibility Advisory Committee Minutes dated April 4 and May 2, 2017

Energy and Environment Advisory Committee Minutes dated April 13 and May 11, 2017

Town and Gown Advisory Committee Minutes dated April 20, 2017

11. Adjournment

Meeting Start Time:
Meeting End Time:

Motion by _____

Committee Decision: THAT the Infrastructure, Transportation and Safety Committee meeting adjourn.

The Corporation of the City of Stratford
Infrastructure, Transportation and Safety Sub-committee
MINUTES

Date:	June 28, 2017
Time:	4:30 P.M.
Location:	Council Chamber, City Hall
Sub-committee Present:	Councillor McManus - Chair Presiding, Councillor Brown - Vice Chair, Councillor Beatty, Councillor Bunting, Councillor Henderson
Staff Present:	Ed Dujlovic - Director of Infrastructure and Development Services, Jodi Akins - Council Clerk Secretary, Joan Thomson - City Clerk, Michael Mortimer - Manager of Environmental Services, Tatiana Dafoe - Deputy Clerk, Neil Anderson – Deputy Fire Chief, Mike Beitz – Corporate Communications Lead
Also present:	Jay Hunt (Item 3.1), Media

1. Call to Order

The Chair called the Meeting to Order.

2. Disclosure of Pecuniary Interest and the General Nature Thereof

The *Municipal Conflict of Interest Act* requires any member of Council declaring a pecuniary interest and the general nature thereof, where the interest of a member of Council has not been disclosed by reason of the member's absence from the meeting, to disclose the interest at the first open meeting attended by the member of Council and otherwise comply with the *Act.*

Name, Item and General Nature of Pecuniary Interest

Councillor Beatty declared an interest in Item 7.2 as he is the owner of a business that operates a food truck.

3. Delegations

3.1 Request to repeal By-law 51-91 with respect to licencing bicycles (ITS17-036)

Sub-committee Discussion: Jay Hunt introduced himself and provided some of his background. Reading from a statement, he advised that he has reviewed the information on the City's website regarding the bicycle licencing by-law. He raised several concerns with the by-law, specifically that the by-law does nothing to ensure that a bike is recoverable if it is disassembled and resold in another jurisdiction. He challenged the City to provide evidence that the licence database assisted with returning a bike.

He believes the by-law is unfair and unenforceable and is concerned that it will be damaging to tourism. He asked how the City informs residents about by-laws, as the bike shops he visited did not know about it.

He respectfully suggested that the bicycle licencing by-law be struck. He provided information from the City of Toronto advising that they ruled such a by-law unenforceable.

Councillor Bunting provided some history on the introduction of the by-law, stating that the police garage was full of bicycles and the police could not connect them with their owners.

Mr. Hunt noted additional concerns, including fines for not having a bicycle licence and not many people even have one.

Discussion took place about an invisible coding system that can be used for bikes, at what age a child is required to have their bikes licenced and how many bikes are registered in the database.

Motion by Councillor Brown
Sub-committee Decision: THAT the matter of Bicycle Licencing By-law 51-91 be referred to the Stratford Police Services Board to provide information on how many bikes come in to the Police Department, how many are returned to their owners and how much the fine is for not having a bicycle licence;

AND THAT the Clerk's Office provide information on how many bicycles are registered and at what age children are required to obtain a bicycle licence.

Carried

4. Report of the Project Engineer

4.1 Romeo Street Bridge Widening Project – Open House and Design Approval (ITS17-037)

Staff Recommendation: THAT Council approve the preferred design for bridge reconstruction of widening the Romeo Street Bridge to accommodate 1.8 m sidewalks on both sides of the street in addition to 4.7 m lane widths for vehicle and cycling traffic.

Sub-committee Discussion: The Director of Infrastructure and Development Services stated that this is a rehabilitation project is regarding the bridge on Romeo Street by the golf course. At the recent open house, they received comments, mostly from ATAC and as a result they made some modifications to widen out the bridge as much as they could within the existing footings. Staff are recommending 1.8 m wide sidewalks on both sides and 4.7 m lane widths to give bikes a bit more room.

In response to questions, the Director advised staff are looking to tender the project in July or August, and start construction in September. They are expecting lane reductions but are also exploring detours if they need to close the whole road.

Discussion took place regarding the usual width of sidewalks and multiuse trails.

Motion by Councillor Brown
Sub-committee Recommendation: THAT Council approve the preferred design for bridge reconstruction of widening the Romeo Street Bridge to accommodate 1.8 m sidewalks on both sides of the street in addition to 4.7 m lane widths for vehicle and cycling traffic.

Carried

5. Report of the Manager of Environmental Services

5.1 2016 Stratford Water Pollution Control Plant Annual Report (ITS17-034)

Staff Recommendation: THAT the 2016 Stratford Water Pollution Control Plant Annual Report be received for information.

Sub-committee Discussion: The Director of Infrastructure and Development Services advised that this is the annual report and they are running just under 60% of capacity. There was an MOE inspection last year and all identified issues have been addressed.

They continue to have some overflows, mostly during spring floods, however, the water is chlorinated before being released to the river.

In response to a question about capacity as a result of new subdivisions, the Director noted that there is sufficient capacity. They are also looking at construction early next year for the Quinlan pumping station.

Staff were thanked for keeping things in order at the Water Pollution Control Plant.

Motion by Councillor Henderson
Sub-committee Recommendation: THAT the 2016 Stratford Water Pollution Control Plant Annual Report be received for information.

Carried

6. Report of the Fire Chief

6.1 Stratford Municipal Airport Operation And Management Agreement (ITS17-035)

Staff Recommendation: THAT Council authorize staff to negotiate a five year extension for services and terminal leasing with Stratford Air Services Ltd.

AND THAT the agreements be brought back to Council for consideration.

Sub-committee Discussion: The Deputy Fire Chief stated that the contract with Stratford Air Services is expiring August 1, 2017. There are two agreements, operations management and leasing of the terminal. Council previously granted an exemption from the Procurement of Goods and Services policy for the current contracts and the contracts provide for a one time five year extension.

In response to a question regarding $1,500/ month for rental of snow removal equipment, the Deputy Chief advised that it would be much more to purchase the equipment.

Motion by Councillor Brown
Sub-committee Recommendation: THAT Council authorize staff to negotiate a five year extension for services and terminal leasing with Stratford Air Services Ltd.

AND THAT the agreements be brought back to Council for consideration.

Carried

7. Report of the Deputy Clerk

7.1 Parking Action Plan Update (ITS17-038)

Staff Recommendations: THAT the report entitled "Parking Action Plan Update" be received for information.

Sub-committee Discussion: The Deputy Clerk advised that this report is an update on the parking action plan. Staff are working through the short and mid term parking initiatives that are outlined in the report,

which the Deputy Clerk reviewed for Sub-committee. Some other items staff are working on include: where some 30 minute spaces can be added on Wellington and Downie Streets, wayfinding, tiered pricing and a potential parking structure, which is dependent on the transit hub and Cooper Site development and how they may affect parking.

Staff responded to several questions, noting that the Pay by Licence machines do take all denominations of coin, pole mounted signs will be installed for the four accessible parking spots on Market Place and that there is $15,000 in the budget for wayfinding signs and a report will be coming later this year.

Concern was raised that transit user are feeling that they have to compete with parking spots in their hopes of having the buses moved back to Market Square.

Motion by Councillor Beatty
Sub-committee Recommendation: THAT the report entitled "Parking Action Plan Update" be received for information.

Carried

7.2 Refreshment Vehicle Downtown Locations (ITS17-039)

Staff Recommendations: THAT the property located at 39 George Street West, be considered as the location for a second refreshment vehicle in the downtown City of Stratford;

THAT a Request for Quotation be prepared and issued in 2017;

THAT direction be given on the length of time of the lease agreement to be entered into with the successful bidder;

AND THAT the Business Licensing By-law 187-2004, be amended to include the location of the second refreshment vehicle to be located at 39 George Street West.

Sub-committee Discussion: The Deputy Clerk advised that in 2011, review was done on alternate locations for a food vendor and the two locations recommended then are being recommended now, and the

preferred location is 39 George Street.

Concerns were raised by Sub-committee, including Ken's Fries not being located downtown anymore, whether they could get anyone to lease 39 George Street, why they couldn't locate a food vendor on Brunswick or Wellington Streets and whether Chocolate Barr's had requested to rent that space for parking.

Staff responded to questions, advising that the blocks at 39 George Street could be moved and the City does own that space. The City Clerk noted that the agreement with Ken's expired last year.

Discussion took place about whether the Police Department has tried to buy 39 George Street for their use and whether it could be used for parking. Staff advised that it would be quite expensive to create parking here for not many additional spaces.

In response to how many food truck vendors have inquired, the Deputy Clerk stated she has had three inquiries and four people picked up the bid package for the hot dog cart.

Motion by Councillor Henderson
THAT the property located at 39 George Street West, be considered as the location for a second refreshment vehicle in the downtown City of Stratford;

THAT a Request for Quotation be prepared and issued in 2017;

THAT direction be given on the length of time of the lease agreement to be entered into with the successful bidder;

AND THAT the Business Licensing By-law 187-2004, be amended to include the location of the second refreshment vehicle to be located at 39 George Street West.

Defeated

Councillor Beatty abstained from voting in the motion.

Motion by Councillor Henderson
Sub-committee Decision: THAT the Refreshment Vehicle Downtown Location report (ITS17-039) be referred to the Infrastructure, Transportation and Safety Committee with no Sub-committee recommendation.

Carried

Discussion took place regarding how locating food trucks on City streets would affect sightlines for people crossing the roads and why there are no crosswalks downtown. The Director of Infrastructure and Development Services stated that it is not legal and the concern is that it creates a false sense of security for pedestrians when there is no requirement for cars to stop. There are legal ways of doing it, however, it would involve the removal of parking spots to ensure proper sightlines. Suggestions were made, including painting lines and signs. The Director advised that he could not recommend them. It was noted that there are signs and lines at the Erie/Ontario Street intersection and many people still feel it is unsafe. It was suggested that the bump outs downtown will improve safety.

8. Capital Project Update

Sub-committee Discussion: The Director of Infrastructure and Development Services reviewed the Capital Project Update included with the agenda.

In response to how staff are dealing with the chairs and tables in Market Square, the Director advised that staff are meeting to discuss those issues. It was noted that the benches are always available.

An update was requested on the sale of cats and dogs. The Director stated that the Animal Control Working Group has been meeting and has made a number of recommendations. When they are complete, staff will bring them all to Council. There was an online survey recently requesting some public feedback.

9. Advisory Committee/Outside Board Minutes

The following Advisory Committee/Outside Board minutes were provided for Sub-committee's information:

ATAC minutes dated April 26, 2017

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Town and Gown Advisory Committee Minutes dated April 20, 2017

10. Next Sub-committee Meeting

Due to conflicts, the July Infrastructure, Transportation and Safety Sub-committee meeting was moved to Monday, July 24 at noon.

11. Adjournment

Motion by Councillor Beatty
Sub-committee Decision: That the Infrastructure, Transportation and Safety Sub-committee meeting adjourn.

Carried

Meeting Start Time: 4:30 p.m.
Meeting End Time: 5:36 p.m.

Infrastructure and Development Services Department

MANAGEMENT REPORT

Date:	June 5, 2017
To:	Infrastructure, Transportation and Safety Sub-committee
From:	Taylor Crinklaw, Project Engineer
Report#:	ITS17-037
Attachments:	Ministry of Transportation Book 18 Wide Signed Bicycle Route with Sharrow

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Title: Romeo Street Bridge Widening Project – Open House and Design Approval

Objective: To review and take into account the findings from the Open House, and to confirm acceptance of the design.

Background: The findings from the bi-annual visual inspections of bridge structures and the subsequent Detailed Bridge Condition Survey report identified the Romeo Street Bridge as requiring rehabilitation. Rehabilitation may extend the serviceability of the bridge for another 30 plus years. The City engaged R.J. Burnside and Associates Limited (Burnside) in August 2016 to design the bridge rehabilitation work.

In all capital construction projects, the Engineering Division reviews and implements where possible, current standards, policies, regulations, and updates to respective master plans. For this project, the Engineering Division reviewed and strived to implement the Bike and Pedestrian Master Plan (2014) recommendations to the fullest extent practical. The Master Plan designates this section of road as having bike lanes on both sides of the street before 2019. Burnside prepared conceptual designs with preliminary cost estimates to evaluate a multitude of options that accounted for civic aspirations while being financially sensible.

Analysis: The conceptual recommendation in the City of Stratford Bike and Pedestrian Master Plan (2014) for this section of road recommends that designated bike lanes be provided. The interpretation for this recommendation is that the street standard lane widths be applied for a truck route arterial road with a minimum additional 1.5 m on each side of the street for dedicated bike lanes.

In an attempt to provide a satisfactory option to the cycling community, Burnside generated eight conceptual options with cost estimates for review. The Engineering Division presented the two following options at the open house:

- Option 1 Preferred: Widen the bridge to accommodate 2.0 m wide sidewalks on both sides, with 4.5 m lane widths; and
- Option 2: Widen the bridge slightly to achieve 1.8 m sidewalks on both sides, and 4.7 m lane widths.

The ideal lane widths for this truck route arterial road is 5.4 m, however, it would be cost prohibitive to achieve this width for the rehabilitation of the bridge. The minimum recommended lane width for a bridge is 3.75 m. A total sidewalk width of 1.8 m is required to achieve Accessibility for Ontarians with Disabilities Act (AODA) requirements and to meet City of Stratford standards for curb face sidewalks.

On April 20, 2017, a notification was posted to the City Website regarding the Open House. On May 3, 2017, a notice of Open House containing project information was emailed to The Stratford Golf and Country Club and River Gardens Retirement Residence, in addition to representatives of Cycle Stratford and Active Transportation Advisory Committee. No residents were directly contacted as no residences are anticipated to be in the limits of the construction zone.

The Open House was held on Monday, May 8, 2017, in the City Hall Auditorium from 5:00 p.m. to 7:00 p.m. City Staff and Councillors on route to the Council meeting dropped by briefly to the Open House. There were an additional 10 residents in attendance at the Open House, consisting primarily of Cycle Stratford club members. The local representative from Burnside was in attendance at the meeting to aid answering questions.

The following design objectives were discussed by the Engineering Division in the Open House for the Romeo Bridge Widening Project:

- The main objective of this project is to cost effectively rehabilitate the Romeo Street Bridge.
- The secondary objective is to incorporate the Bike and Pedestrian Master Plan to the fullest extent reasonable.
- Since there will be structural adjustments to the bridge there is an opportunity to slightly widen the bridge to better accommodate the Bike and Pedestrian Master Plan.

When preparing the request for proposal for this project, it was the Engineering Division's understanding that cost effective structural adjustments could be made to allow the bridge to be slightly widened to better accommodate pedestrian and cycling traffic. Two of the eight proposed bridge layouts, including structural adjustments generated by Burnside, were presented at the Open House to illustrate potential practical design accommodations for cyclists.

The focus of comments from the Open House was on the Bike and Pedestrian Master Plan. The main recommendation from the Open House was to maximize the road platform to best accommodate cyclists. As a result, the Engineering Division requested that Burnside

investigate the option of providing 1.8 m sidewalks on both sides of the street and 4.7 m lane widths as opposed to the recommendation provided at the Open House of 2.0 m sidewalk on both sides of the street and 4.5 m lane width. Burnside confirmed that the revised layout could be accommodated without significant structural adjustments. The public recommendation of 1.8 m sidewalks on both sides and a 4.7 m lane width is selected as the preferred option to be continued with in design. At this time, this will allow the implementation of the Ministry of Transportation Book 18 Wide Signed Bicycle Route with Sharrow (attached). The sharrow will be placed 1.0 m from the curb to indicate sufficient space for a cyclist and vehicle. The minimum recommended dedicated bike lane width of 1.5 m is unachievable with the proposed layout, however, adjustments are being proposed to consider fitting in a 1.2 m bike lane. The implemented option will be based on future resurfacing design.

The majority of discussions with the public revolved around the future resurfacing of Romeo Street. It was noted that resurfacing of the road is likely to occur in the next 5 to 10 years and that those separate resurfacing projects will look into implementing the Bike and Pedestrian Plan further. Based on the preliminary design layout generated by the Engineering Division, the likelihood of completing the recommendations of the Bike and Pedestrian Master Plan in its entirety of providing dedicated bikes lanes from Vivian Line to Douro Street is low. Based on the preliminary design prepared by the Engineering Division, the feasibility of each section of road is as follows:

Section of Romeo Street	**Costs Beyond to Resurfacing Work**	**Social Implications and Logistics***	**Feasibility of Dedicated Bike Lanes**
Vivian Line to Delamere Avenue	Low	Low	High
Delamere Avenue to Romeo Bridge	Moderate	Low	Low to Moderate
Romeo Bridge to Christopher Plummer	Moderate	Low	Moderate to High
Christopher Plummer to Viola Street	Moderate	Low to Moderate	Moderate to High
Viola Street to Ontario Street	Moderate	Moderate	Moderate
Ontario Street to Douro Street	High	High	Low

*Social Implications and Logistics accounts for obstacles such as close proximity of houses to existing street, expropriation for road widening, utility relocations, etc.

In summary, preferred implementation of dedicated bike lanes and the use of sharrows where required, the implementation of the Bike and Pedestrian Master Plan is reasonably feasible from Vivian Line to Ontario Street. South of Ontario Street is significantly less

feasible and would require rethinking of how the Bike and Pedestrian Master Plan could be implemented.

It was further reiterated that resurfacing of Romeo Street was not planned anytime in the near future and that detailed design will investigate and confirm the viability of achieving dedicated bike lanes as per the Bike and Pedestrian Master Plan.

The general first comment regarding the project was the proposed extent of road resurfacing. It was noted that conceptual design was considered for Romeo Street from Vivian Line to Douro Street, but the resurfacing work would only be conducted to satisfactorily transition into what is existing. For this project, resurfacing is anticipated to extend for 50 m north and 50 m south of the bridge.

The resident that lived in the vicinity of the proposed construction project requested that complete closure of the bridge be minimized. It was noted detour plans are still to be finalized as they are based on reconstruction staging. Complete closure of the bridge for the entire reconstruction project is being considered, as it may reduce the cost of rehabilitation work.
Other comments raised at the Open House not related to the project include:

- A part-time staff should be dedicated to active transportation.
- There should be a ring road of bike paths for the City, which includes the link along Lorne Avenue.
- The City should provide updated bike and pedestrian plan mapping.

Following approval, the project will proceed to the completion of the design and tender. The anticipated schedule will then be tender closing and award in August, and tentative start of construction September.

Financial Impact: A total of $820,000 of the 2017 Capital Budget funds has been set aside for this project as part of the Federal Gas Tax funding.

Staff Recommendation: THAT Council approve the preferred design for bridge reconstruction of widening the Romeo Street Bridge to accommodate 1.8 m sidewalks on both sides of the street in addition to 4.7 m lane widths for vehicle and cycling traffic.

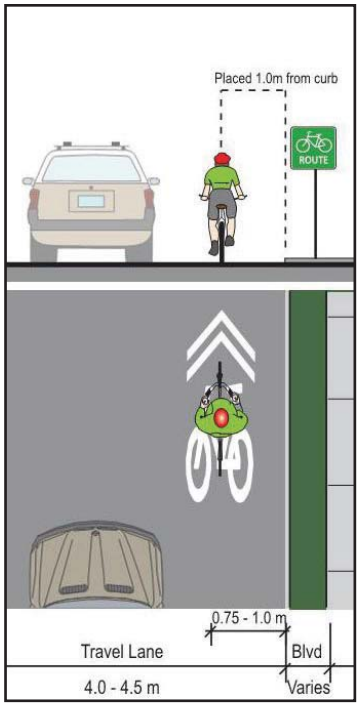
_____
Taylor Crinklaw, Project Engineer

_____
Ed Dujlovic, Director of Infrastructure and Development Services

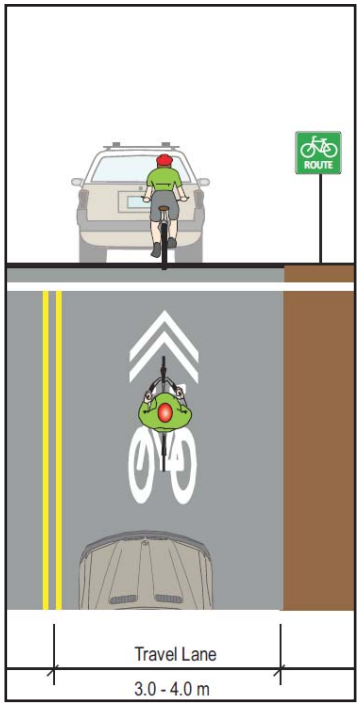
_____
Rob Horne, Chief Administrative Officer

Figure 4.2 – Cross-Sections of Shared Roadways and Signed Bicycle Routes

(See Table 4.1 for more details)



Wide Signed Bicycle Route (with optional sharrow)



Narrow Signed Bicycle Route (with optional sharrow)

Source: MMM, 2013

4.1.1.2 Signs

All signs used for shared roadways and signed bicycle routes should be sized appropriately for interpretation by both motorists and cyclists, and should conform to the TAC *Bikeway Traffic Control Guidelines for Canada* – 2nd Edition (January 2012).

Bicycle Route Marker Sign

The Bicycle Route Marker sign M511 (OTM), illustrated in **Figure 4.3,** should be used on segments of a shared roadway that are designated as a bicycle route within a bikeway network. Green is the standard colour for standard bicycle route signs; however, alternative sign designs and colours to brand a trail or bike route can be implemented by a municipality or partner organization. The frequency of the signs should be determined through engineering judgement based on the speed of bicycles and other traffic, as well the distances between intersections, such that the signs guide cyclists and inform them of any designated route changes. Typical sign frequency on a rural roadway is at least one every 2.0 kilometres. On an urban roadway in a built up area, the suggested sign frequency is at least one every 400 to 800 metres. This sign should be also located on the far side of major intersections and other major decision points to assist in wayfinding.

Fire Department

MANAGEMENT REPORT

Date: June 16, 2017
To: Infrastructure, Transportation and Safety Sub-committee
From: Fire Chief John Paradis
Report#: ITS17-035
Attachments: None

Title: Stratford Municipal Airport Operation And Management Agreement

Objective: To consider renewing the Stratford Municipal Airport Operation and Management Agreement.

Background: Stratford Air Services Ltd. has been providing Airport Management Services to the City of Stratford since 1987. It is a private-public partnership. The current five year agreements between the City of Stratford and Stratford Air Services Ltd. will be expiring August 1, 2017.

Analysis: There are two agreements tied to this private-public partnership. First is for operations management and second is for leasing the terminal to manage operations from.

Staff reached out to comparator municipal airports of similar size and scope of services to determine how their operations are managed and funded. In discussions with other municipalities, it is evident that they are paying higher costs for similar services currently provided to the City of Stratford by Stratford Air Services Ltd.

As noted above, the City of Stratford has successfully contracted with Stratford Air Services Ltd. for operations management and terminal leasing for the last thirty (30) years.

Historically, these contracts were sole sourced for services based on quality of service and significantly lower costs. The current contracts were granted an exemption from the Procurement of Goods and Services Policy by Council and were not subject to a Request for Proposal (RFP) process. The current agreements allow for a one time five year extension.

In view of these contracts origin as a sole source exemption to the Procurement of Goods and Services Policy and the existence of an extension within the contracts, it is recommended that Council approve the extension of the contracts. Upon approval, negotiations will commence for the renewal of the five year terms. The outcome of negotiations will be provided to Council for approval.

Financial Impact: The cost would be determined through negotiations.

Previous Contract Costs:
- Management Fee 2012: $65,500.00 (end contract cost) with a 2.0% increase per annum;
- Rental of Snow Equipment: $1500.00 per month;
- Snow Removal Equipment Operator Fee: $18.00/hr; and
- Aviation Fuel Dispensing Fee: 0.04¢/litre

Previous revenue from terminal building space lease: $9,000.00/year

Current Contract Costs
- Management Fee 2017: $76,417.00 (end contract) with a 1.5% increase per annum;
- Rental of Snow Equipment: $1500.00/month;
- Snow Removal Equipment Operator Fee: $20.00/hr; and
- Aviation Fuel Dispensing Fee: 0.04¢/litre

Previous revenue from terminal building space lease: $9,000.00/year

Current Operation Management Cost Comparison

Municipal Airport	**Operation Management Comparator Costs**
City of Stratford	$76,417.00 (2017)
Municipality 1	53.12% higher
Municipality 2	70.12% higher
Municipality 3	83.2% higher

Staff Recommendation: THAT Council authorize staff to negotiate a five year extension for services and terminal leasing with Stratford Air Services Ltd.

AND THAT the agreements be brought back to Council for consideration.

_____
John Paradis, Fire Chief

_____
Rob Horne, Chief Administrative Officer

Infrastructure and Development Services Department

MANAGEMENT REPORT

Date: June 28, 2017

To: Infrastructure, Transportation and Safety Committee

From: Mike Mortimer, Manager of Environmental Services

Report#: ITS17-040

Attachments: Council Report – 2017 Top Management Review for Drinking Water Quality Management System

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Title: Drinking Water Quality Management Standard 2017 Management Review

Objective: A requirement of the Ontario Drinking Water Quality Management Standard (DWQMS) Operational Plan is for the Quality Management System (QMS) representative to ensure annual management review results are conveyed to Top Management and the Owner (Council). This report fulfills that requirement.

This report contains a summary of information that Top Management must review annually in accordance with the DWQMS.

Background: The DWQMS is mandated through the Safe Drinking Water Act, 2002 and promotes transparency between the Owner and the Water Operating Authority (Water Division).

Analysis: The 2017 Management Review was conducted on June 1, 2017. The review allowed for a comprehensive evaluation of the City of Stratford's Drinking Water Quality Management System. It was a prescriptive review and identified action items and the corrective actions required to address. The attached report contains a summary of information that Top Management reviewed and includes, but is not limited to, findings from the 2016 Ministry of Environment and Climate Change inspection, third party and internal audit findings, and operational performance. The review period was from June 11, 2016 to June 1, 2017.

Financial Impact: Failure to meet the requirements of the DWQMS can ultimately lead to the retraction of the Municipal Drinking Water License. The License is a requirement to legally operate a drinking water system.

Staff Recommendation: THAT the summary report entitled Council Report – 2017 Top Management Review for Drinking Water Quality Management System be received for information.

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Mike Mortimer, Manager of Environmental Services

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Ed Dujlovic, Director of Infrastructure and Development Services

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Rob Horne, Chief Administrative Officer

Council Report – 2017 Top Management Review

As required annually by the Quality Management System (QMS), regulatory compliance and quality management audit findings were reviewed with Top Management to identify non-compliances and non-conformances. Prescribed items, as per Element 20 of the Operational Plan, were also reviewed as required by the QMS. This review took place on June 1, 2017. The review period was from June 10, 2016 to June 1, 2017.

RESULTS OF MANAGEMENT REVIEW	REVIEW FINDINGS
Non-Compliances The Ministry of Environment and Climate Change (MOECC) Inspection was conducted on February 9, 2017 with **two issues** identified. Outside of the inspection, two non -compliances occurred in **May of 2017.**	**The operations and maintenance manuals (O&M) did not meet the requirements of the Drinking Water Works Permit and Municipal Drinking Water License issued under Part V of the SDWA.** **Inspection Issue 1**: The O&M manual as provided at the inspection failed to fully meet the requirements as prescribed by Municipal Drinking Water License Number: 074-101 **Inspection Issue 2:** Schedule B section 16. Specifically, disinfection calculations for various operating conditions (i.e. various flows, temperatures, levels, plant configuration with/without specific chlorine contact units). **May 2017:** Testing for Haloacetic Acids (HAAs) not conducted in accordance with Schedules 13-6 and 13-6.1 of O. Reg. 170/03. Testing was missed in the first quarter of 2017. **May 2017:** Testing for lead not conducted in the period of December 2016 to April 2017. The City of Stratford is reduced sampling/plumbing exempt. Therefore, there was only the requirement to test for pH and alkalinity during this period.
Non-Compliances Corrective Actions	**Inspection Issue 1:** An inspection occurred in November 2016 but due to an MOECC administrative error, was later deemed to be unofficial and another inspection was required in February 2017. The same non-compliance from December was identified in February but the corrective actions had already been completed. Therefore, although the non-compliance was officially noted in February of 2017, the O&M Manual was updated in December 2016 and no further action is required. **Inspection Issue 2:** Immediate Corrective Action - increased chlorine dose and changed pumping flows. Long Term Corrective Action – consultant to conduct a tracer study to confirm disinfection

RESULTS OF MANAGEMENT REVIEW	REVIEW FINDINGS
	calculations with possible clearwell design modification, if required. The immediate actions have satisfied all operating conditions as per drinking water regulations and the MOECC is not concerned with past practice. The requirement is confirmation of the clearwell so that more accurate disinfection calculations can be obtained which will result in more operational flexibility. **May 2017:** A root cause analysis was conducted through the Quality Management System processes. The MOECC was notified and these findings will appear in the 2017 Annual Summary Report. There was no health risk associated with these non-compliances as these can be considered an isolated event. The repeated absence of these tests could potentially pose a health risk and therefore the root cause analysis was performed.

RESULTS OF MANAGEMENT REVIEW	REVIEW FINDINGS
Non-Conformances and Opportunities for Improvements The external audit, which was conducted by SAI Global, was performed on April 7, 2017 and the internal audit, which was conducted by City of Stratford water staff, was carried out between May 1 and May 4, 2017. Outside the normal internal and external audits, one non-conformance occurred on May 26, 2017.	There were no deficiencies identified during the internal and external audits. **Element 16 – (Non-Conformance) – Sampling, Testing and Monitoring** The sampling matrices are to be maintained to ensure all parameters are completed wasn't maintained. New parameters needed to be added. The frequency of samples was also not maintained. **Opportunities for Improvement (OFI) - Internal and External Audits** There was a total of 11 OFI indicated in the management review period. Action plans will be generated where deemed necessary.

Non-Conformances Corrective Actions	**Element 16 – Sampling, Testing and Monitoring** 1) Short Term – Looking into setting up Outlook Tasks to ensure jobs are getting done on time. 2) Long-Term – Integration into the Work Order System for tracking of jobs.

RESULTS OF MANAGEMENT REVIEW	REVIEW FINDINGS
Action Items The prescribed action items **(bolded (a) through (p))** were reviewed with Top Management as per Element 20 of the Quality Management System.	**Identified items:** **a) Incidents of regulatory non-compliance** Two issues were indicated in Ministry of the Environment and Climate change Inspection Report regarding the operations and maintenance manuals. There were 4 best practices recommendations indicated in the MOECC Inspection Report. i) Continue to develop and maintain up-to-date comprehensive operations manual. ii) Continue ongoing development of templates for record-keeping. iii) Continue to develop a descriptive manual of best practices for various elements of a water system's operation to meet with complete record keeping conditions. iv) It is recommended that Ontario Regulation 170/03 and Ontario Regulation 128/04 be periodically reviewed and included in the Operations Manual along with a sign in sheet including the date and time the operator reviewed the manual. **b) Incidents of adverse drinking water tests** i) Water quality exceedances for Fluoride and Sodium were observed in samples taken in 2016, no further action is required. The next reporting requirement for Fluoride, for all treated entry locations, is June 26, 2018. The next reporting requirement for Sodium, for all treated entry locations, is June 16, 2018. ii) Presence of Total Coliform in Distribution Samples on two separate occasions. Resampled and flushed watermains as per regulatory requirements and, based on these results, no further actions were required. iii) Low chlorine residuals in the Distribution System on four separate occasions. The immediate action was to resample and flush watermains as per regulatory requirements and, based on these results, no further actions were required. The long term action plan was to review the flushing program, water modelling options, and infrastructure upgrades. This resulted in the decision to replace a section of Guelph Street watermain in May of 2017.

RESULTS OF MANAGEMENT REVIEW	REVIEW FINDINGS

c) Deviations from critical control point limits and response actions

No deviations from Critical Control Point limits (CCP's) during the current review period.

d) Efficacy of the risk assessment process

Conducted the Annual Risk Assessment Review on Feb. 15, 2017. The capacity to evaluate risk was concluded to be effective during the risk assessment process.

e) Results of audits (internal and external)

There were no non-conformances identified in the last external audit (April 2017) and the internal audit (May 2017). The following seven opportunities for improvement (OFI) were identified in the 2017 internal and external audits.

i) Inconsistent header and footer formatting in QMS documentation.
ii) Risk Assessment Outcomes - Limits identified as high/low. No specific limits identified in the Summary.
iii) No findings or evidence of conformance were provided for Elements 4, 6, 9 -17, 19-21 in the internal audit report. There was no reference to the water sampling schedule in the operational plan.
iv) OFI unaddressed from April 2016 external audit relating to control limits on the risk assessment. Management review action item log does not identify that any listed action items were closed.
v) Operational Plan has not been endorsed by council since 2009.
vi) Update of QMS Element Tables is required.
vii) Continue educating staff on the QMS and location of documents.

f) Results of relevant emergency response testing

QMS Emergency Management Review was completed on December 6, 2016 focusing on Watermain Failure Standard Operating Procedure.

RESULTS OF MANAGEMENT REVIEW	REVIEW FINDINGS
	g) Operational performance Continue to study the health of the Distribution System by potentially adding a chlorine analyzer at the Forman Water Tower and through new programs such as; Chlorine Residual Flushing, Hydrant Flow Testing and Leak Detection. Continue understanding the functionality of the production wells through well rehabilitation programs, well tracer studies for CT values (CT – a product of concentration of free chlorine and contact time), and chemical dosing requirements. Review in 2017 the continued use of Sodium Silicate at the Romeo Control Centre to determine ways to optimizing this process. **h) Raw water supply and drinking water quality trends** 2016 Annual Water Quality Report for Chemical/Bacteriological sampling and the 2016 Summary Report for data collection from the Production & Monitoring Wells indicated no change to the Raw Water Supply or Drinking Water Quality. **i) Follow-up action items from previous management reviews** In 2016, it was discussed about the possibility of the addition of a Turbidity Analyzer at the Romeo Control Centre. This will be reviewed in summer / fall of 2017. **j) Status of management action items identified between reviews** No management action items were identified between the review periods. **k) Changes that could affect the QMS** Reserve funds have been established in the water budget. There are mandated changes to the DWQMS with a two year timeline to establish the New QMS Standard Objectives. This would be predominately related to administrative document changes and would not be expected to have a significant budget impact.

RESULTS OF MANAGEMENT REVIEW	REVIEW FINDINGS

l) Summary of consumer feedback

There were 80 consumer services complaints in 2016. The highest percentage was rusty water complaints. The rusty water complaints were mainly focused during the bi-annual flushing programs in the spring/fall and during the flow testing in August 2016.

m) Resources needed to maintain the QMS

Funds are set aside in the Water Capital budget for the Quality Management System (QMS) as required in the Drinking Water Quality Management Standard (DWQMS). Other opportunities which may require additional funds would be to continue updating DWQMS training courses for Water Staff and for the use of new technologies and programs in the field and office to ensure proper document & record control.

n) Results of the infrastructure review

Items identified during the review included:

i) Valve Maintenance Program continues to evolve. This will result in higher capital replacement costs as more valves are exercised.
ii) Hydrant Maintenance Program continues to evolve. Monitor results in 2017 for more information on cost impacts. .
iii) Watermain flushing review to improve efficiencies. Unidirectional Flush Pilot Program, is scheduled for Fall 2017.
iv) Hydrant Rehabilitation and Painting three year program to begin in 2017.
v) Continue Water Model calibrations in 2017.
vi) Watermain break rate continue to be higher than benchmark.
vii) Frozen Services will continue to be a year by year analysis.

o) Operational Plan currency, content and updates

Ongoing updates and review of the Operational Plan, Standard Operating Procedures, supporting documents and forms. During this review period, a total of 44 documents and forms were revised.

RESULTS OF MANAGEMENT REVIEW	REVIEW FINDINGS
	p) Summary of staff suggestions There were no formal staff suggestions since the last review. A more formal process, including summary sheet and form, to keep record staff suggestions will be created for better tracking.
Other QMS Issues Identified (including summary of corrective actions)	No other issues were identified.
Conclusions	The City of Stratford drinking water system is meeting all legislative and quality management system requirements. Overall, although issues were identified during the review period, it is reasonable to conclude that these items can be considered typical operational challenges faced by all drinking water systems across the province. An action plan has been or will be established to allow for improvement on any issues identified that require further actions.

Infrastructure and Development Services Department

MANAGEMENT REPORT

Date: June 28, 2017
To: Infrastructure, Transportation and Safety Sub-committee
From: Mike Mortimer, Manager of Environmental Services
Report#: ITS17-034
Attachments: OCWA's 2016 Annual Performance Report to City of Stratford Mar2017

Title: 2016 Stratford Water Pollution Control Plant Annual Report

Objective: To submit the 2016 Stratford Water Pollution Control Plant Annual Report to Sub-committee and Council for their information.

Background: The Stratford Water Pollution Control Plant is owned by the City of Stratford, but operated under contract by Ontario Clean Water Agency (OCWA). OCWA has prepared the 2016 Annual Water Pollution Control Plant Report, which must be submitted annually to the Ministry of the Environment and Climate Change (MOECC), showing how the treatment plant performed throughout the year.

The report summarizes the operation for the Water Pollution Control Plant and reports on all the activities that occurred at the treatment plant throughout the year. The report also indicates how the plant met all of the Certificate of Approval requirements for effluent discharge into the Avon River.

Analysis: The effluent discharges met all requirements for levels of removal for 2016:

- Carbonaceous Biological Demand 98.7 %
- Total Suspended Solids 98.2 %
- Total Kjeldahl Nitrogen 95.9 %
- Total Phosphorus 97.1 %

The treatment plant treated a total of 6,385,157 m^3 of effluent for an average daily flow of 17,509 m^3 per day. The design capacity of the treatment plant is 30,660 m^3 per day. Based on the flows received for 2016, the plant operated at 57.1 percent of the design capacity which would indicate there is ample capacity for more growth.

During the 2016 year, the treatment plant had 6 events where there was discharge from the wet weather equalization tank. These events were all due to flows caused by heavy precipitation and/or snow melt. A total of 500,833 m^3 was discharged for a total of 538.5 hours. During a flow exceedance, the excess flow is diverted to an equalization tank and contact chamber where appropriate chlorination of the flow is achieved. Upon leaving the chlorine contact chamber, the flow is then de-chlorinated prior to discharge into the Avon River.

The capital projects undertaken for the 2016 year were as follows:

- Primary clarifier upgrades and structural rehabilitation, including rehabilitation of all four primary clarifiers, the replacement of associated piping, the upgrade of all valves, and the installation of new actuators (ongoing to be completed August 2017)
- New weather station
- Aeration tank cleanout
- Replacement of a sludge pump
- Replacement of a primary effluent pump
- Replacement of the drip trap canister (digester building)
- Repair of the chemical building piping system
- Replacement of a number of valves
- Upgrade of the SCADA system (ongoing)

Other highlights of 2016:

- Performing more than 800 operator rounds
- Collecting and analyzing more than 3,000 samples on-site
- 12 health and safety audits
- Completing more than 950 preventative and corrective work orders
- All regulatory targets met

There was a Ministry of Environment and Climate Change inspection in 2016. There were a total of 7 non-compliances with regulatory requirements and actions required. There were a total of 4 recommendations and best practices. A detailed summary of this inspection was received by Council on August 8, 2016. An update to the inspection summary is that all non-compliances have now been addressed to the satisfaction of the MOECC.

In summary, the Water Pollution Control Plant, operated by OCWA, has met and exceeded all Certificate of Approval requirements for the 2016 operating year.

Financial Impact: Capital works and the cost of operating the Water Pollution Control Plant is financed through the Sanitary Sewer Surcharge rate.

Staff Recommendation: THAT the 2016 Stratford Water Pollution Control Plant Annual Report be received for information.

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Mike Mortimer, Manager of Environmental Services

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Ed Dujlovic, Director of Infrastructure and Development Services

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Rob Horne, Chief Administrative Officer

OCWA's 2016 ANNUAL PERFORMANCE REPORT

to the City of Stratford

March 31, 2017

ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

Table of Contents

2016 Measurement and Verification Report for the Stratford WPCP turbo blowers data is attached to this document.

SECTION 1: EXECUTIVE SUMMARY

Overview

Water quality in the Avon River is essential to the health of local water fowl and the aquatic ecosystem of the Avon River Basin. 2016 marked another year of successful protection of that sensitive ecosystem at the City's Water Pollution Control Plant (WPCP). OCWA's plant operators made sure all effluent water quality targets were met and exceeded throughout 2016 despite a number of abnormally high rainfall events. This continues the string of good results our operators have consistently delivered to the City since 1958.

2016 Results

The Stratford WPCP consistently produced high quality effluent that met and exceeded all requirements of the plant's Certificate of Approval (C of A) in 2016. Removal rates for key effluent quality indicator parameters (i.e.CBOD5, TSS, TKN and Total Phosphorus) were all 95.9% or better for 2016 despite 12 days of abnormally high flows into the plant (from excess precipitation) that led to 6 storm tank discharge events lasting a total of 22 days. There were also no negative results or corrective actions from all samples tested during the year.

In addition to meeting all regulatory targets, our top 10 highlights for 2016 are:

- Conducted comprehensive operations activities to monitor and control plant performance 24/7
- Minimized risk of exceedances impacting effluent quality through ongoing quality assurance
- Supported City Public Works Department during a time of needs in the collection system
- Programmed maintenance, inspections and calibrations to underscore level of care of facility assets and equipment
- Successfully delivered 22 major repair and replacement projects at $300,000, including the administration building's air handling unit designed to improve building health and safety
- Delivered 4 significant improvement projects, including the Primary Effluent Pump, Aeration Cell #3 cleanout, Bearing Replacement on one of the Filter Building screw pumps and the Chemical Building Pipe Replacement
- Continued to build community water awareness through our OneWater Program, provided education and contributed to a number local causes
- There were no service disruptions and we were responsive to all customer enquiries. This was due to our strong local presence, a presence backed up by OCWA's full team of emergency responders and technical experts
- Continued promoting a safe and healthy work environment for our staff, contractors and visitors

- Produced anaerobically stabilized biosolids meeting all the guidelines for agricultural use

Looking Ahead

The future looks bright as we all look forward to continued good results in 2017 and beyond. We will continue to improve our operating practices and technologies to better predict and prepare for extreme weather events and other factors impacting plant processes. We will also continue to help successfully implement repair, replacement and other capital projects aimed at sustaining or improving plant performance.

OCWA continually invests in our people and those systems that support our clients. There is great value in our remote monitoring, data collection and asset management system. We are in the process of a major investment to expand our data and asset management tools. With these enhanced systems, the City will have access to real time data with a view to trending and optimization. OCWA's migration to Maximo for our asset management system provides greater detail and timely accuracy for your equipment and assets. The Maximo system has been installed in the Stratford WPCP in late 2016.

One key project which began October 2016 and expected to be completed November 2017 will be the Primary Clarifier Upgrade and Structural Rehabilitation including replacement of mechanical equipment and valves. This means we will increase our resilience in the face of external factors such as climate change.

There are a number of recommendations for repair and replacement (requiring capital investment) in Section 8 of this report, and we propose formalizing our operational reporting to the Manager of Environmental Services on a quarterly basis rather than the current annual reporting.

Our partnership with the Stratford community is based on protecting the Avon River and broader environment through wastewater treatment, optimization, and managing capital projects. We appreciate our long-term partnership with the City and look forward to continuing our successful collaboration.

REPORT PREPARED BY:

Marcel Misuraca
General Manager
Ontario Clean Water Agency

SECTION 2: PROTECTING THE ENVIRONMENT

When it comes to the environment, we align our programs with community expectations and goals to focus on protecting the Avon River watershed and keeping the local habitat healthy. Our operating procedures and Quality and Environmental Management System (QEMS) describe the activities we undertake to make sure compliance targets are met along with Stratford's expected outcomes.

Operational Activities Conducted

Operational activity highlights during 2016 include:

- Performing more than 800 operator rounds
- Collecting and analyzing more than 3,000 samples in our on-site laboratory
- Collecting and sending more than 650 samples to external laboratories for detailed analysis of more than 50 parameters
- Updating all O&M procedures manuals
- Creating and updating SOP's (Standard Operating Procedures)
- Implementing our new process data management technology
- Accommodating 2 internal process audits
- 12 health and safety audits
- Completing more than 950 preventive and corrective work orders
- Completing and submitting all required compliance reports – including this annual performance report
- Meeting on a regular basis with City representatives
- OCWA also provided operations staff and on-call services to support the City during a time of needs in the wastewater collection system

All Regulatory Targets Met

The City of Stratford Water Pollution Control Plant is equipped and operated to meet stringent regulatory requirements from the Ministry of Environment and Climate Change (MOECC) and protect the river's aquatic environment. All effluent water quality targets in the facility's Certificate of Approval were met and exceeded in 2016.

The plant met the 2016 targets for the following important indicators of water quality:

- Carbonaceous Biochemical Oxygen Demand ($CBOD_5$) – we removed more than 98.7% of $CBOD_5$, the most important indicator of the amount of organic pollution in the wastewater effluent
- Total Suspended Solids (TSS) – we removed more than 98.2% of TSS, an indicator of the concentration of solid particles in the wastewater effluent and a determinant of the level of water clarity which, if reduced, can inhibit the ability of aquatic organisms to find food
- Total Kjeldahl Nitrogen (TKN) – we removed 95.9% of TKN (organic nitrogen + ammonia) a major component of total nitrogen. Nitrogen in the form of nitrates can encourage nuisance algae

growth, lead to eutrophication in the river and have a toxic effect on amphibian species while un-ionized ammonia (calculated by the ammonia levels, pH and temperature) can be toxic to aquatic life at low concentrations

- Total Phosphorus (TP) – we removed more than 97.1% of phosphorous, which, though essential to the growth and survival of organisms, can, in excess amounts, stimulate nuisance algae and aquatic plant growth and cause eutrophication. Those organisms, in turn, can deplete oxygen levels as they decompose, resulting in potential adverse effects on aquatic fauna and restrictions on recreational use of waterways

Table 1.0 below shows a summary of the results achieved in 2016 against the Effluent Limits set in the plant's Certificate of Approval (Number 4926-8C5QZL Issued January 14, 2011). Each shows that our performance was significantly better than required under the regulation.

Table 1.1 below shows a summary of the results achieved in 2016 against the Effluent Objectives set in the plant's Certificate of Approval (Number 4926-8C5QZL Issued January 14, 2011). All parameters except pH met regulation required limits and system design objectives. In house process monitoring and related process adjustments were made to strive to meet facility design objective values.

Table 1.0: Effluent Water Quality Parameters - Targets vs. Results

Effluent Quality Parameter	Certificate of Approval Effluent Concentration Limits	Average Annual Concentration Results
Carbonaceous Biochemical Oxygen Demand ($CBOD_5$ - mg/L)	10.0 mg/L – 15.0 mg/L (summer – winter)	2.2 mg/L
Total Suspended Solids (TSS – mg/L)	10.0 mg/l - 15.0 mg/L (summer - winter)	2.6 mg/L
Un-Ionized Ammonia (used in the C of A as indicator rather than TKN)	0.1 mg/L	0.0009 mg/l
Total Phosphorous (TP - mg/L)	0.2 mg/L – 0.5mg/L (summer - winter)	0.10 mg/l
E-Coli (Geometric Mean Density in CFU per 100 ml)	200 per 100 ml	2.46 per 100 ml
pH	6.0 - 9.5 Inclusive at all times	6.2 – 7.98
Dissolved Oxygen	Not less than 4.0 mg/L Monthly Average Concentration	5.07 – 14.48

Table 1.1: Effluent Water Quality Parameters - Targets vs. Results

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Carbonaceous Biochemical Oxygen Demand ($CBOD_5$ - mg/L)	5.0 mg/L – 10.0 mg/L (summer – winter)	2.2 mg/L
Total Suspended Solids (TSS – mg/L)	5.0 mg/l - 10.0 mg/L (summer - winter)	2.6 mg/L
Un-Ionized Ammonia (used in the CofA as indicator rather than TKN)	0.08 mg/L	0.0009 mg/l
Total Phosphorous (TP - mg/L)	0.1 mg/L – 0.3mg/L (summer - winter)	0.10 mg/l
E-Coli (Geometric Mean Density in CFU per 100 ml)	150 per 100 ml	2.46 per 100 ml
pH	6.5 - 9.5 Inclusive at all times	6.2 – 7.98

Bypasses Well-Managed Despite Heavy Rain Events

Compliance targets were consistently met during 2016 despite the fact that a number of unusually heavy rainfall events and a rapid snow melt resulted in 12 days of abnormally high flows coming into the treatment plant. The excessive flows caused the storm tanks to discharge 6 times over a twenty two day period but the plant continued to remove key pollutants and stay within the target limits.

Processes Controlled to Produce Safe Effluent and Reusable Biosolids

Wastewater is collected from the more the than 32,000 residents as well as Stratford's industries, commercial establishments and institutions. The City's operators convey the wastewater using gravity and pumping to deliver it to the water pollution control plant. OCWA's operators then treat and manage the wastewater along the following path:

- Receiving the raw sewage influent into the plant for treatment during regular flow levels. If flows are too high to be able to be treated at the plant during heavy rainfall events the extra flow is diverted to the wet weather flow equalization tanks. When the rain subsides the wastewater is then diverted back into the plant to be treated
- Screening the raw wastewater to remove large objects

- Removing grit in the grit chambers
- Settling out larger particles in the primary clarifiers and removing the settled out materials (primary sludge) for further processing
- Using aeration to supply the oxygen needed to metabolize the microorganisms in the wastewater so they can break down the dissolved and suspended organic matter; thereby reducing their Biochemical Oxygen Demand (BOD) and wasting and returning excess materials (waste and return activated sludge) as needed to keep the process in perfect balance
- Final settling-out remaining particles and removing the settled materials using a rapid sludge removal process. Some of this sludge is returned back to the front of the aeration process (return activated sludge) while any excess (waste activated sludge) is further processed along with the sludge from the primary clarifiers
- Filtering or "polishing" the liquid effluent from the final settling tanks
- Disinfecting the liquid effluent using ultraviolet disinfection
- Sludge removed from the primary and final settling processes is digested and stabilized so that it is safe for eventual application to agricultural lands as a soil conditioner
- Phosphorus is removed during the treatment process through the addition of ferrous chloride chemicals at one or two points in the treatment process

Quality Assurance Part of Day-to-Day Operations

Effluent quality is assured on an ongoing basis by monitoring process parameters, analyzing the relationship between various parameters and examining any changes and trends that may have an impact on effluent quality.

Operators perform a number of daily tests for liquids processes. One example is the testing of the mixed liquor, a mixture of raw or settled wastewater and activated sludge within the aeration process. Tests include dissolved oxygen, pH, temperature, settling tests, and Mixed Liquor Suspended Solids (MLSS) and the results tell the operators about the health of the processes and their impact on the final effluent. Tests to monitor the ferrous chloride dosages and wasting volumes are also completed.

The solids processes are continuously monitored as well. Volatile acid and alkalinity tests are completed weekly on the primary digester to monitor the health of the digestion process.

Data collected from all the tests is analyzed and provides valuable information to the operator so that the appropriate adjustments in the treatment process can be made and corrective action can be taken before the plant gets close to reaching its effluent limits.

MOECC Inspections

An MOECC Inspection was completed on April 16, 2016.

There were a total of 7 Non-Compliances with Regulatory Requirements and Actions Required. 3 of the 7 Non-Compliances required no further actions.

There were a total of 4 Recommendations and Best Practices.

SECTION 3: RESPONSIBLE FACILITY MAINTENANCE & STEWARDSHIP

The City of Stratford owns all wastewater facilities used to transport and treat Stratford's wastewater while the Ontario Clean Water Agency operates and maintains the facilities used to receive and treat the wastewater under contract to the City.

Facilities under OCWA's Stewardship

Wastewater system facilities and equipment under OCWA's stewardship extend from the influent structure to the final effluent point. The Water Pollution Control Plant (WPCP) is a conventional activated sludge facility which uses anaerobic digestion to stabilize its solids. Major facility components include the following:

- Raw sewage pumping station
- Wet weather flow equalization tanks (2)
- Overflow chlorination and de-chlorination system (1)
- Storm flow tanks (2)
- Grit removal chambers
- Primary settling basins (clarifiers)
- Aeration tanks equipped with fine pore ceramic diffusers (4)
- Final settling tanks (clarifiers) with rapid sludge removal (3)
- Filters
- Ultraviolet disinfection unit
- Anaerobic digesters
- Waste sludge system
- Chemical storage and delivery facility (2)
- Generator and standby diesel generator

Equipment required to properly operate and maintain the facilities, including:

- Mechanical Systems (e.g. pumps, valves, mixers, screens, augurs)
- Electrical systems (e.g. power supplies)
- Instruments
- Control systems (e.g. Supervisory Control & Data Acquisition Systems, programmable logic controllers)
- Information Technology Systems (e.g. work management systems, process data management system)

The wastewater system also includes 10 sanitary sewage pumping stations and 1 storm station located across the City which are operated and maintained by the City's Public Works Department.

Operations and Maintenance Work Prioritized and Scheduled

All operations and maintenance work at the plant was requested, scheduled, completed and documented using OCWA's Work Management System (WMS). As of December 2016 Maximo has been used. Work to be done is often identified by a plant operator or mechanic and documented using a work request. This work request is then approved to become a work order which is assigned to and completed by an appropriate staff member. Work orders can also be scheduled and generated automatically by the WMS in the case of planned or preventive work to be done (e.g. weekly sample taking or monthly pump lubrication).

The WMS/Maximo contains a lot of important data about valuable plant assets as well as the specific "job plans" whose instructions we follow to maintain those assets in the best way and with the right frequency. The system helps us identify when the assets reach the point when it is most cost-effective to perform rehabilitation or replacement.

The WMS/Maximo also contains the risk and impact-based priorities that help us determine the order in which to perform our maintenance and operational activities. The prioritization method in the system uses factors such as risk, safety, environmental, customer, operations, financial and urgency. This means that work requests are prioritized to ensure that top priority work is being pursued at all times.

There are three types of work orders used by plant staff to perform work:

1. **Emergency work** – which usually involves safety hazards, environmental concerns or major interruption of service. Repairs are often initiated without waiting for work orders to be processed

2. **Routine or Preventive** maintenance work – which does not require prioritizing, as it is always scheduled and built into the regular work schedule

3. **Breakdown or Corrective** maintenance work – which is prioritized, planned and scheduled into the regular preventive maintenance program

The preventive maintenance requirement and corrective maintenance work requests are added to the schedule according to the priority and workload of staff and availability of outside contractors. The following table shows the number of preventive work orders generated and completed in 2016.

Table 2: Word Orders for 2016

ROUTINE or PREVENTIVE MAINTENANCE WORK ORDERS GENERATED in 2016											
JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
94	88	74	83	83	77	69	71	75	103	100	71

As mentioned in the Executive Summary, OCWA's ongoing investment in our information technology and asset management tools will continue to provide sound monitoring and detailed support for asset protection and for the long-term health of your system.

Equipment Inspection & Instrument Calibration

There were a number of planned calibrations and inspections completed in 2016, including:

- Meters: influent meter, effluent meter, bypass meter and flow transmitters (calibrated by Pierce Services and Solutions Inc.)
- All hand-held and laboratory equipment (calibrated by Pierce Services and Solutions Inc.)
- Backflow preventers (inspected by Turner Plumbing and Heating)
- All lifting equipment/devices (inspected by Kone Cranes)
- All gas monitoring equipment (calibrated by Hetek Solutions Inc.)
- Emergency generator (inspected by Toromont)
- All fire extinguishers (inspected by Mobile Fire and Safety)
- In house meters for pH and dissolved oxygen (calibrated by OCWA operators as per manufacturer's instructions)
- Health and Safety (inspections completed monthly by OCWA Health and Safety Inspector)

SECTION 4: CAPITAL PROJECTS AND PERFORMANCE IMPROVEMENTS

2016 Annual Capital Repair and Replacement Projects

The following is a summary of capital work undertaken by OCWA at the Stratford WPCP in 2016. This work was performed under OCWA's direction and coordinated in a way to ensure the plant continued to operate at an optimum level during any on-site construction activities. Each project was identified in the rolling 5-year capital improvement plan for the wastewater plant.

OCWA was responsible for identifying, designing and successfully implementing a number of important repairs and replacement projects on behalf of the City in 2016. The table below shows the projects and the benefits they produced for the City.

Table 3: Capital Projects for 2016 managed by OCWA

Capital Project	Maintain Day-To-Day Operations	Reduce Risk	Increase Efficiency	Reduce Cost	Improve Health & Safety
Replace primary effluent pump	X	X	X		
Replacement of the air handling unit	X	X	X		X
Repair of the sludge pump	X	X	X		
Replace screw pump bearing	X	X	X	X	
Re-shingle chemical and tipping bucket buildings roofs	X		X		
New weather station	X				
2 new digester gas flame arrestors	X	X	X		X
Replacement of new windows in the workshop and storage facility	X	X	X	X	
Replacement of the sludge pump	X	X	X	X	
Replacement of the drip trap canister (digester building)	X	X			X
Repair of the chemical building	X	X	X	X	X

(#1) piping system					
Filter building surface wash repair	X	X	X		
Aeration cleanout	X	X	X	X	
Replacement a number of valves	X				X
Upgrade of the SCADA system (ongoing) (2015, 2016)	X	X	X	X	X

2016 Improvement Projects

Four improvement projects were delivered in 2016 by OCWA's technical advisory staff as part of Stratford's ongoing commitment to improving the performance of its wastewater facility

- Plant Aeration Cleanout
- Purchase of a new Primary Effluent Pump
- Bearing Replacement on one of the Filter Screw Pumps
- Chemical Building Pipe Replacement

Each is targeted at reducing the amount of energy required to run the facility, reduce the amount of chemicals required to achieve effluent quality targets and reduce the cost of both. The ultimate outcome is to deliver a significant reduction of the City's carbon footprint.

Plant Aeration Blower Upgrade

The OCWA technical advisory team successfully completed the installation of the Stratford WPCP turbo blower on March 20, 2014. The team did an initial engineering study in coordination with City management to determine the size and type of the blowers and estimate the anticipated annual energy reduction (293,000 kWh). The team's recommendations were then validated by a third party.

Significant energy savings and cost reductions have been achieved as a result of the turbo blower implementation, including:

- In 2014-15, 376,000 kWh of actual energy savings was achieved for a total of $56,400 in cost savings
- In 2015-16, a reduction of 521,781 kWh of energy savings is anticipated for a total of $78,267 in cost savings

The detailed *2016 Measurement and Verification Report* for the turbo blowers data is attached at the end of this document.

Energy Audit

OCWA performed an Energy Audit at the plant in 2015 to identify all opportunities to improve the use of energy in addition to the use of the turbo blower. Additional recommendations to reduce energy usage in the plant were provided and taken into consideration for action in 2016.

Comprehensive Performance Evaluation (CPE)

In October 2014, OCWA delivered a Comprehensive Performance Evaluation Report (CPE) to the City. The CPE identified the health of the wastewater system and provided 25 recommendations for

improvement in the areas of design, operation, maintenance, and administration. Those recommendations continue to be a source of potential capital projects.

SECTION 5: CLOSE COMMUNITY PARTNERSHIP

OCWA's staff is proud to be able to support the Stratford community through our education and awareness programs such as OCWA's OneWater Program as well as contributing to various important charitable. Examples of local outreach include:

St. Ambrose School Tour

- Providing 10-15 tours per year of the Stratford Water Pollution Control Plant for organizations such as elementary schools, high schools, Kiwanis members, Probus members, Energy & Environment committee and boy scouts
- Presenting our OneWater program for water literacy and good water stewardship to St. Ambrose School as part of the grade 8 water system curriculum
- Sponsoring local events such as:
    - Canadian Baseball Hall of Fame Golf Tournament (2015/2016)
    - Winterfest (2016, 2015, 2014)
    - Santa Clause Parade (2016, 2013,)

OCWA Staff Working on Aeration System

SECTION 6: RESPONSIVE CUSTOMER SERVICE

OCWA staff is committed to protecting the Stratford community and its environment 24 hours per day and 365 days per year. Our licensed wastewater operators provide that protection during regular working hours as well as on call every minute of every day in case of an emergency. In addition, they have ongoing access to OCWA's unique province-wide Operational Emergency Response Team as well as a team of technical and engineering experts who can be on site at a moment's notice.

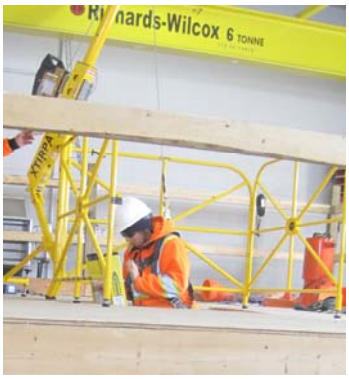
Customer Enquiries

Our staff are always on hand to respond to any questions from City representatives. We use the latest in mobile and integrated technologies to access the necessary information quickly and effectively. We also analyze data and monitor trends to predict situations before they occur so information is shared with City staff before problems occur.

Essential Services Status Means No Labour Disruption

OCWA's operations staff are covered under an Essential Services Agreement that guarantees the City of Stratford will not experience any labour disruption during our partnership.

OCWA Staff Working in Confined Space



SECTION 7: SAFE & HEALTHY WORK ENVIRONMENT

The health and safety of our staff, our contractors and any visitors to the Stratford wastewater facilities is of paramount importance. We are committed to providing a safe and healthy workplace for all employees, regularly promoting awareness and providing training at every level of the organization. Our Occupational Health and Safety Policy set the foundation for the development, implementation and continuous improvement of our Occupational Health and Safety System and related programs. We also provide extensive training on everything from defensive driving to regulatory and facility-specific safety procedures. With health and safety at the core of our culture we make sure all our services are provided professionally and responsibly.

At Stratford we achieved our target of zero lost time incidents in 2016. Not only that, our local staff each completed their MOECC mandatory training included in 50 hours of operations training plus 20 hours of specific health, safety and emergency preparedness training.

SECTION 8: OCWA CAPITAL RECOMMENDATIONS FOR 2017

There are a number of operational recommendations for equipment rehabilitation and replacement required to ensure the plant continues to meet effluent compliance targets at an acceptable level of risk. We continue to consider a number of sources for the determination of capital priorities, including our Work Management System, the Comprehensive Performance Evaluation, the Energy Audit as well as the ongoing discussions with the City to make sure municipal priorities are considered. All projects are captured in an annually updated 5-year capital plan.

With the City's repair and replacement budget set at $310,000, the following capital items are recommended for 2017:

1. Replace storm tank valves and actuators.
2. Aeration #4 cleanout.
3. Replace chain on bar screen #1.
4. Repair generator transfer switch.
5. Replace O-rings and gaskets on aeration diffusers.
6. Repairs to the ferrous chloride piping system.
7. Replace heaters in the grit removal building.
8. Replace grinders in raw sludge pumps.

Additional projects will be completed based on a clear cost-benefit as discussed with and approved by City staff.

SECTION 9: PLANT DESCRIPTION

Summary

The Stratford Water Pollution Control Plant (WPCP) is a conventional activated sludge facility with tertiary treatment. The plant receives raw effluent which is subject to pumping, screening, grit removal, and primary settling before it arrives at the aeration process (tanks are equipped with fine pore ceramic diffusers). The liquids are then sent on for final settling (with rapid sludge removal), before going through tertiary treatment (filtration and ultraviolet disinfection).

In addition, phosphorus is removed during the treatment process by injection of ferrous chloride at a single point in the process (dual point is available if required).

The solids are stabilized using two stage anaerobic digestion.

Wet weather flow is diverted from the distribution chamber to the wet weather flow equalization tanks and pumped back into the plant after the wet weather event for treatment.

Table 4: Stratford Water Pollution Control Plant

Plant Fact / Category	Description
Facility Type	Conventional activated sludge-sand filtration as tertiary treatment, with UV disinfection. Chlorination and de-chlorination of storm water discharges.
Design Capacity	30,660 m^3/day
Receiving Water	Avon River
Certificate of Approval Number (as of January 14, 2011)	4926-8C5QZL
Plant Classification	WWT-IV

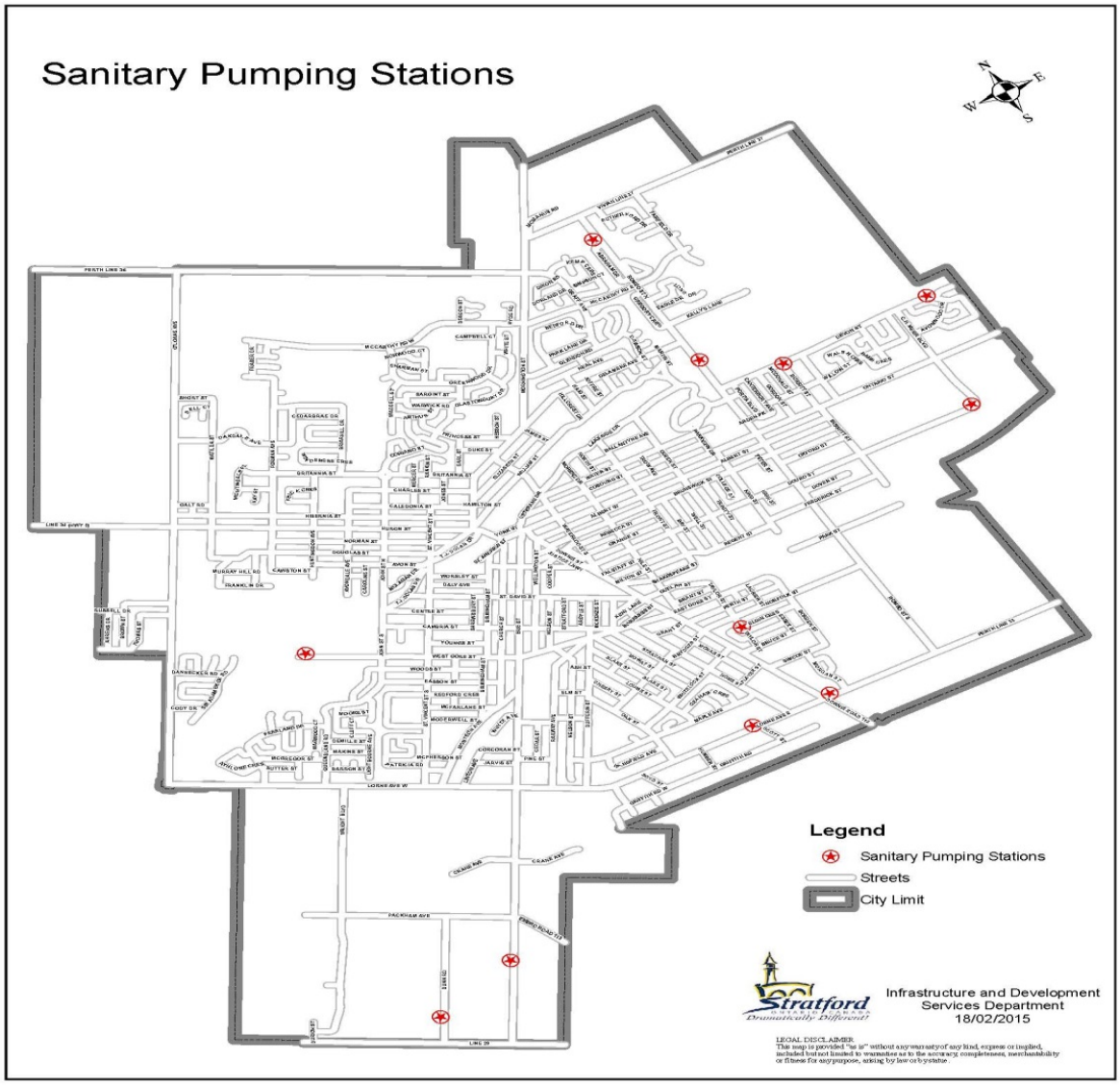
History

The improvements to the treatment facility were completed in 1996 and 2004. The 1996 improvements included the construction of a new wet weather flow equalization tank, the conversion of two former primary clarifiers to storm flow tanks, upgraded the sewage pumping facilities, 4 new aeration tanks with fine bubble diffusion, one new secondary clarifier, modifications to the existing 2 secondary clarifiers, new chemical storage and delivery facilities, a new standby diesel engine and a generator capable of supplying 100% standby power for the site, new return sludge and waste sludge systems, metering and UV. The 2004 improvements included the modification to wet weather flow equalization tank number 1 with baffle walls, the construction of wet weather flow equalization tank number 2, the addition of chlorination and de-chlorination facilities and miscellaneous controls, electrical equipment, instrumentation, piping, pumps and appurtenances essentials for the proper operation of the Water Pollution Control Plant.

Raw Wastewater Collection

The wastewater is collected by gravity and directed to the 10 pump stations and 1 storm station located throughout the City of Stratford (see Fig. 1). The pump stations range from submersible pump operations to dry pit applications. All pump stations are equipped with 2 pumps ranging in size from 1.5 horsepower to 29.0 horsepower. Six (6) of the pumping stations are equipped with backup emergency generators while the other stations have stand by power hook ups for connecting an emergency generator. The pumps are controlled by a two level control systems, Miltronics Ultrasonic sensor and a float system. All pump stations are operated by the City of Stratford Public Works Department and are equipped with an alarm system.

Figure 1: Stratford Sanitary Pumping Stations



Raw Wastewater Lift (raw sewage pumping) Station

The raw domestic wastewater is pumped from the pump stations to the raw sewage lift station located inside the gate at the WPCP treatment facility from the Forman/O'Loane and the Erie/Brydges/Worsley

trunk sewers. The lift station is equipped with four (4) Archimedean screw, each of the three (3) screws having a capacity of 427L/s to handle peak dry weather flows and one (1) screw having a capacity of 2,600L/s to handle wet weather flows.

Archimedean Screw

Wet Weather Flow Equalization Tanks and Facility

The storm tank and storm diversion system was commissioned and put into service in 1998. Under the new operation, excess flows are diverted to the two spare primary clarifiers and the new equalization tank and then to the chlorination contact tank during high flow events. Once all storage is full, excess flow begins to overflow the chlorination contact tank and the de-chlorinated primary treated effluent is discharged to the river. In these instances, the equalization tank acts as a primary clarifier (solids removal), providing primary treatment prior to the discharge to the Avon River.

Another storm tank was constructed beside the original tank on-site with a flushing system. Also, a chemical building was constructed for the pumping of the sodium hypochlorite for the disinfection of the discharge and sodium bisulphite for the dechlorination.

There are two wet weather flow equalization tanks, controlled by the Wet Weather Flow Distribution Chamber. Tank 1 is 3000m3 in capacity, with a sediment flushing system and a 300mm diameter outlet sewer connecting to the inlet sewer to the raw sewage lift station. The overflow from tank 1 enters tank 2 which has a capacity of 3000m^3 with baffle walls to provide an additional function as a chlorine disinfection facility for emergency wet weather overflow prior to discharge to the Avon River. In the event of a discharge to the Avon River, de-chlorination is achieved.

The overflow chlorination and de-chlorination facility consists of: chlorination and de-chlorination process equipment, controls and sampling equipment. The chlorination system for disinfection of emergency wet weather overflow includes two (2) 15,000 L capacity sodium hypochlorite storage tanks and four (4) 13.4 L/minute capacity metering pumps (one standby), chemical feed lines to the primary dosing point at the inlet chamber of the wet weather flow equalization tank # 1, equipped with an in-line mixer and a backup dosing point at the equalization tanks distribution chamber. The de-chlorination system for the emergency wet weather overflow includes one (1) 3,000 L capacity sodium bisulphite storage tank and two (2) 4.0 L/minute capacity metering pumps (one standby), chemical feed lines to

the primary dosing point at the discharge channel of the wet weather flow equalization tank # 2, equipped with an in-line mixer and a backup dosing point at the bypass channel of the wet weather flow equalization tank # 2.

A SCADA system monitors all the flows entering the storm tanks and adjusts the chemical feed rates to flow.

Chlorine Contact Chamber

Equalization Tank

Influent Works

The flow from the raw water lift station flows through the distribution chamber and into the screening building. The building consists of two (2) mechanical bar screens rated at a hydraulic peak flow of 450L/s, a dewatering screw auger to remove screenings, a grit handling facility and a metering chamber. The screening and the grit are removed and sent to the landfill site.

Automatic bar screens

Grit removal system

Primary Clarification

The primary treatment system consists of two (2) circular primary clarifiers, two (2) storm holding/waste storage tanks, the sludge collector mechanisms, two (2) primary sludge pumps rated at 10L/second, two (2) in-line sludge grinders, three (3) primary effluent submersible pumps rated at 210L/second and one (1) dewatering pump rated at 50L/second. The primary clarifiers are designed to remove settleable

solids from the wastewater stream, thereby reducing the organic load on the downstream biological treatment process.

The flow from the inlet works enters the distribution chamber with activated sludge being added to the stream for co-settling through 2 of 4 primary clarifiers each rated at 1,500m^3. The additional 2 clarifiers can be used as either primary clarifiers, waste holding tanks or for additional wet weather flows. Settled sludge collects on the bottom of the primary clarifiers and is moved to the central hoppers by a rotating scraper mechanism. Scum and floatables from the surface of the clarifiers are collected by rotating surface skimmers and directed to the scum hoppers. Both the sludge and scum are pumped by two (2) sludge pumps and macerated through in-line grinders to the primary anaerobic digester.

Primary Clarifiers

Storm Holding / Waste Storage

Biological Treatment (Secondary Treatment)

The main purpose of the secondary treatment system is the removal of solids dissolved in the wastewater and removal of suspended solids that were not removed in the primary treatment. In the aeration process (activated sludge process) bacteria utilize organic matter in the presence of dissolved oxygen for cell growth. It is a biological treatment process that requires aerobic conditions and includes:

- **Carbonaceous Oxidation:** Biological conversion of carbonaceous matter in wastewater to cell tissue and various gaseous end products.
- **Nitrification:** Conversion of ammonia nitrogen to nitrites and then to nitrates.

The aeration system consists of four (4) aeration tanks. Each tank is divided into three passes to provide a plug flow aeration pattern. This flow pattern is usually recommended for nitrifying systems. It provides flexibility to vary the air supply within the tanks, favouring better oxygen transfer and Dissolved Oxygen (D.O.) control. It also optimizes power usage for aeration and improves sludge settle ability. Aeration and mixing is provided by 12 grids of 944 ceramic disc fine pore diffusers per tank, (1st pass 480, 2nd pass 284 and 3rd pass 180).

- **Air Supply System**: consists one (1) duty…APG Neuros 350HP Turbo Blower and two (2) standby. Hoffman 200HP centrifugal blowers that deliver air to the aeration tanks and the channel air system. The blowers have been designed to deliver compressed air to the aeration system.

- **Secondary Clarification**: There are three (3) circular secondary clarifiers. Mixed Liquor Suspended Solids (MLSS) enter the final clarifier influent distribution chamber and are distributed evenly to the three tanks. The symmetrical shape of the chamber and positioning of the weirs ensure an equal split of the flow to each clarifier. Mixed liquor enters each of the final clarifier via a feed pipe located at the base of the clarifier. The feed pipe discharges within a circular feed well which acts as a baffle to deflect the incoming flow downwards and reduces short circuiting.

The clarifier mechanism in each tank is classified as a rapid sludge removal type. The settled sludge is continuously removed from the tank bottom by pipes which are supported on two rotating trusses. Squeegees on the bottom of the trusses scrape the settled sludge towards the opening in the suction pipes. The eight (8) suction pipes enter the sludge return box from below. A butterfly valve on each pipe is used to control the sludge flow rate into the box from each withdrawal pipe.

The settled sludge from the final clarifiers is identified as **Return Activated Sludge** and is either returned to the main RAS header and further to the inlet chamber upstream of the aeration tanks or **Waste Activated Sludge** which is pumped to the discharge point in the primary settling tank inlet chamber for co-settling with the primary sludge which is pumped to the digester.

Aeration System

Air Supply

Final Clarifiers

Effluent Filtration

The effluent filtration system is rated at 30,660m^3 per day, and consists of four (4) rapid filters provided with two (2) sub-surface agitators on each filter. The filters are designed to remove solids in the effluent discharged from the secondary clarifiers. In removing the solids, some of the residual BOD and phosphorus are also reduced. The solids accumulated in the filter are removed when the filters are backwashed and the backwash waste water is recycled to the primary clarifier inlet channel. In the process of recycling, many of the solids removed by filtration are removed in the second routing through the plant by physical, chemical or biological flocculation and resultant sedimentation. As a result, finely divided solids do not accumulate in the plant.

The four (4) filters are housed in rectangular concrete boxes arranged side by side. In the concrete boxes are longitudinal trenches with pipe connections that provide outlets for filtered effluent and also is the supply source for the backwash pump. The trenches are bridged by vitrified clay filter blocks that cover the floors of the filter boxes. On the filter blocks, three (3) layers of media are placed. Layer one consists of 310 mm of graded support gravel varying in size from 19 mm on the bottom to 2.5 mm on the top. Layer two is 350 mm of filter sand and layer three is 460 mm layer of anthracite. There are two rotating sub-surface agitators in each filter box. Each agitator arm is provided with 38 nozzles and is designed to mix the expanded media during the backwash operation in order to effectively scour the media and remove all accumulated solids. Water with at least 485 kPa is used to rotate the sub-surface agitator during the backwash operation.

In normal operation, secondary effluent is lifted by the Archimedean screws and flow into the filter box through the filter inlet gate. The effluent passes down through the filter media and is collected in the wet well beneath the filters and flow into the UV disinfection building channel. The rate of flow through the filters can be controlled for each filter by the filter rate control valve or by the filter inlet gate. Once passed through the filter, the effluent flows via channel to the final effluent disinfection process.

Filter control room

Filter room

Filter model

Interior of a filter

Final Effluent Disinfection

The effluent is directed to the open channel ultra-violet (UV) disinfection system before being finally discharged to the Avon River.

Filtered effluent flows to the UV channel where it is disinfected by the UV light. The UV system consists of two banks each comprised of 21 racks (modules) with 8 lamps per rack totaling 168 lamps per bank placed in series within one disinfection channel. In addition, one stand-by unit is stored in the UV system cleaning basin in case there is failure with the active UV banks.

Ultraviolet Disinfection

Sludge Management System

The sludge stabilization system is a two-stage digestion process. The primary digester has a fixed cover and the secondary digester has a floating gasholder cover. The system has been designed so that either unit can function as a primary digester if necessary.

These are essentially four key elements to the anaerobic digestion system:

- Sludge feed and supernatant withdrawal

- Sludge recirculation and heating
- Gas system and digester mixing
- Sludge withdrawal

Primary sludge is pumped from the primary settling tanks to the primary digester. The primary digester is maintained at a constant level. When sludge is pumped into the digester, excess sludge overflows into the primary tank supernatant overflow box. The lowest pipe in the overflow box connects to the transfer line that leads to the secondary digester. The second highest pipe connects to the supernatant return line to the inlet works (acts as an emergency overflow).The third pipe in the box is the feed line for the box from the primary digester.

The primary digester is gas mixed. The gas compressor located in the gas pump room continuously moves gas through the diffusers located in the bottom cone of the tank. This induces a rolling motion in the digester that provides complete mixing in the unit. Sludge is heated by pumping it through the heat exchanger and back to the primary digester. The sludge recirculation pump operates continuously in duty/standby mode. Hot water is fed to the heat exchanger to heat the primary sludge and is turned on and off automatically.

Once sludge is transferred to the secondary digester, it settles and thickens in the tank. Gas that is produced is stored in the gas holder cover. Supernatant from the tank overflows in the secondary overflow box and is returned (by gravity) to the primary clarifier influent channel. Sludge can be sampled at various levels inside the digester by opening the appropriate valves in the sampling sink room.

Sludge is withdrawn from the bottom of the secondary digester and transferred to the sludge storage holding tank or sludge storage bed. Sludge is then withdrawn from the holding tank/bed and transferred to the truck loading bay by the transfer pumps. All sludge is removed and applied to agricultural land as per the NASM Guidelines.

2 Stage Anaerobic Digestion (Primary on the left and Secondary on the right, boiler room in the middle)

Sludge storage tank

Standby Power

The WPCP has an automatic standby generator which will operate the plant when there is a power failure. This allows for continuous running of the plant when power outages occur.

Emergency standby power

SECTION 10: FLOW AND WATER QUALITY DATA

Flow and water quality data at the Stratford WPCP is monitored as per the Certificate of Approval #4926-8C5QZL requirements. Detailed monitoring data is supplied in **Appendix 4.**

Raw Wastewater Flow & Discharge Data

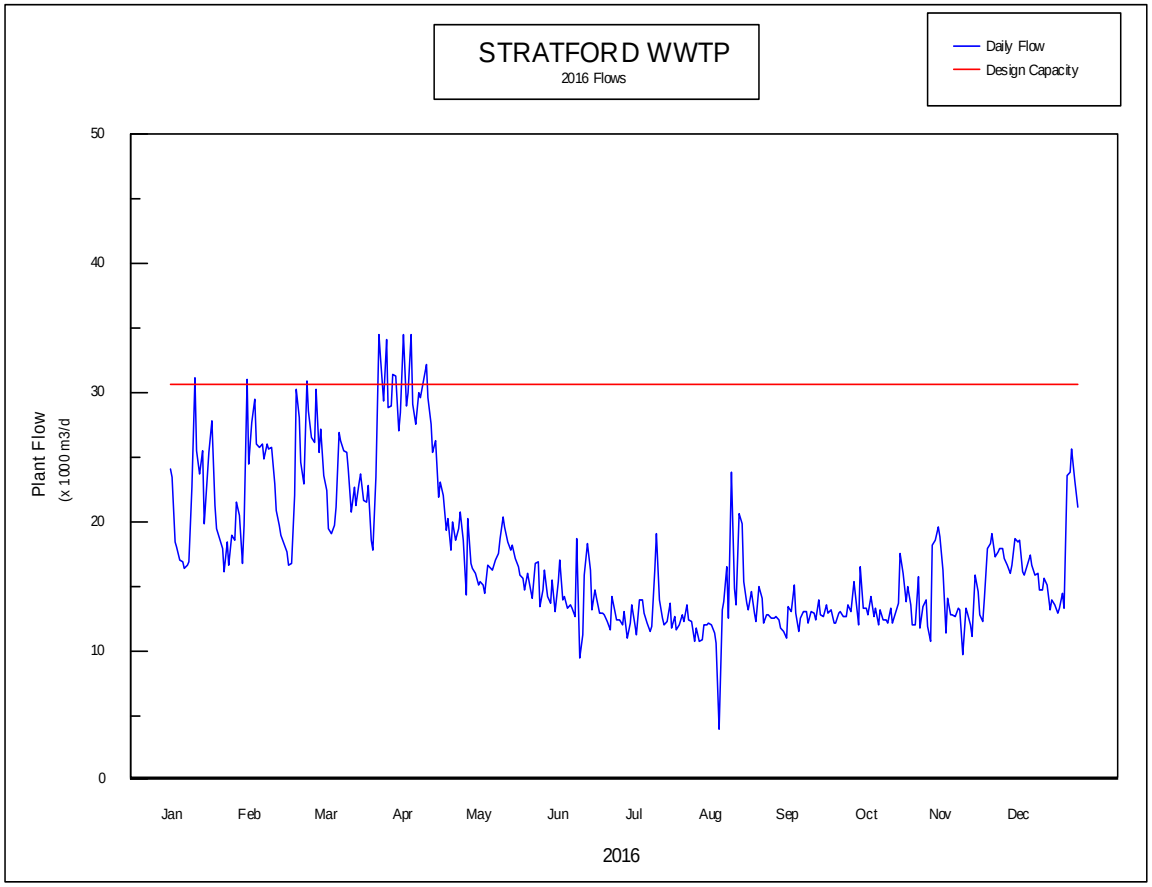
The table below summarizes the flow data for 2016.

Table 5: Stratford Water Pollution Control Plant Flows 2016

Flow Parameter	Value
Total Annual Wastewater Flow Treated (m^3)	6,385,157
Average Daily Raw Wastewater Flow (m^3/d)	17,509
Average Daily Raw Wastewater Flow / Design Capacity (%)	57.1
Maximum Daily Flow (m^3)	34,570
Instances Flow Exceeded Design Capacity (#)	12
Instances Certificate of Approval limits were exceeded (#)	0

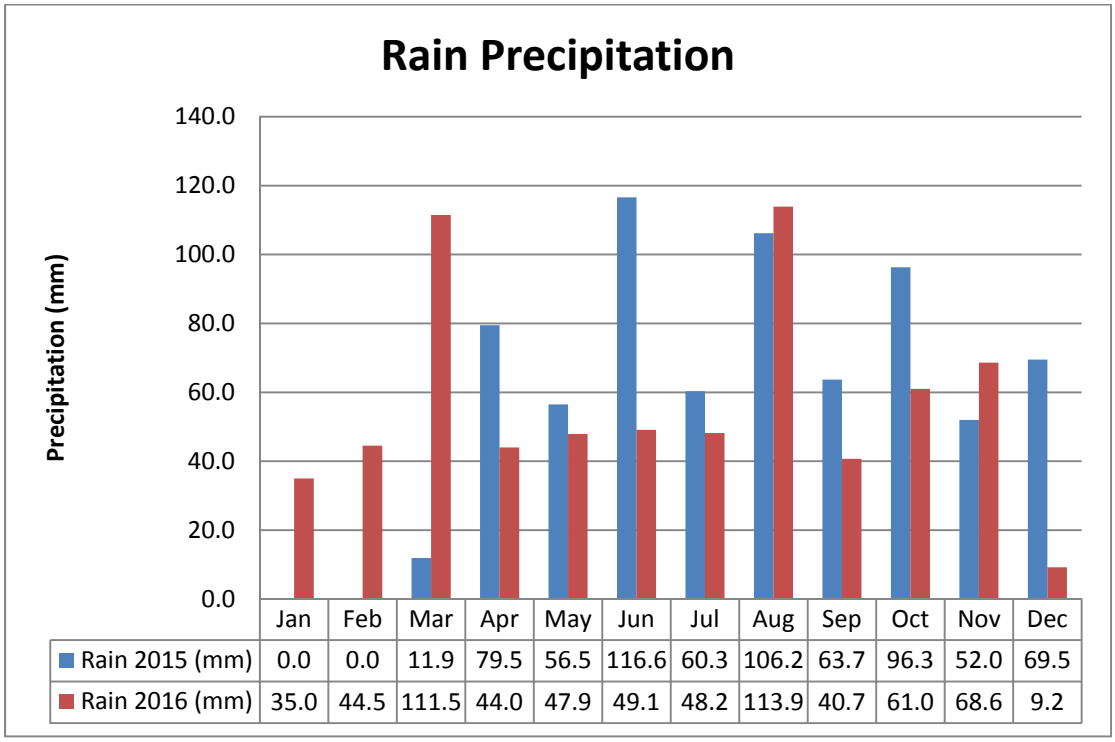
The graph below shows the average daily flows during each month in 2016. There were 12 instances where the design flow of 30,660 was exceeded, these occurred throughout the year. Despite the higher flows, the plant was able to produce quality effluent without limit exceedances during these months as per approved certificate # 4926-8C5QZL.

Graph 1: Average daily flows for each month in 2016



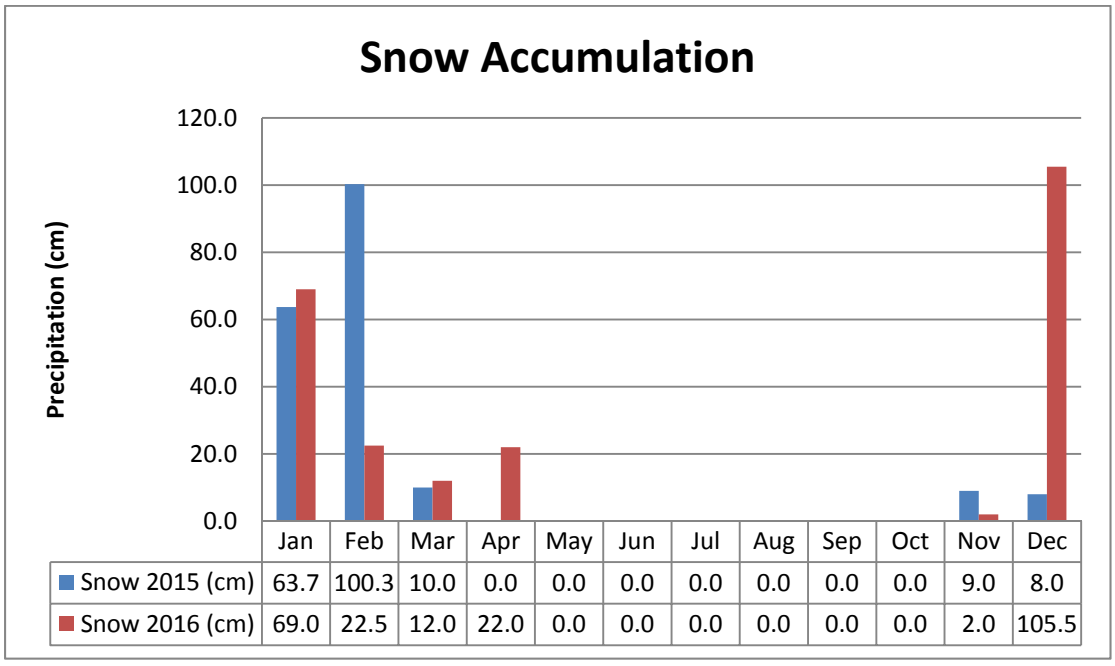
There were 6 events totaling 22.4 days of discharge from the wet weather flow equalization tanks in 2016 due to flows caused by heavy precipitation and or snow melt. All plant discharges received minimum primary treatment and were reported to the MOECC. A total of 500,833m^3 was discharged for a total of 538.5 hours. A summary of plant bypasses from 2007 to 2016 is provided in **Appendix 2.**

Graph 2: Data from Stratford WPCP Weather Station



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rain 2015 (mm)	0.0	0.0	11.9	79.5	56.5	116.6	60.3	106.2	63.7	96.3	52.0	69.5
Rain 2016 (mm)	35.0	44.5	111.5	44.0	47.9	49.1	48.2	113.9	40.7	61.0	68.6	9.2

Graph 3: Data from Stratford WPCP Weather Station



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Snow 2015 (cm)	63.7	100.3	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0	8.0
Snow 2016 (cm)	69.0	22.5	12.0	22.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	105.5

Wastewater Quality

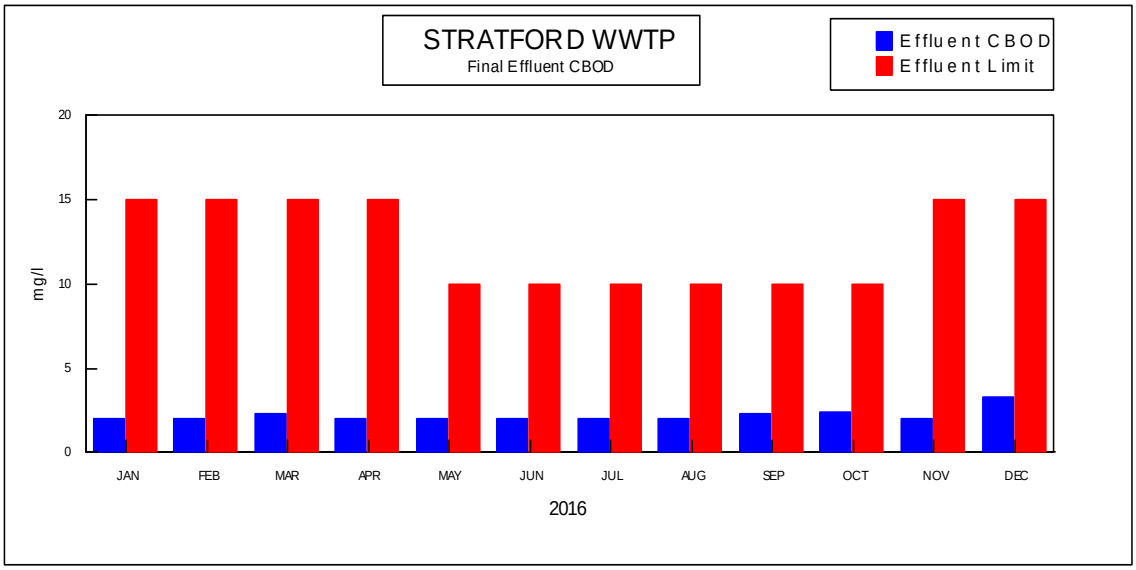
The raw wastewater is monitored for BOD_5, total suspended solids, total kjeldahl nitrogen and total phosphorus weekly by composite sample.

The final effluent is monitored and sampled and tested weekly for $CBOD_5$, total suspended solids, total phosphorus, and total ammonia nitrogen weekly by composite sample. E-coli and dissolved oxygen is monitored weekly by grab sample. Unionized ammonia is calculated weekly. PH and temperature are monitored daily by grab sample. The plant was designed based on typical raw water characteristics. Refer to **Appendix 4** for more detailed monthly results.

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)

The annual average raw sewage BOD_5 concentration to the plant was 141 mg/L with a maximum concentration of 258 mg/L. The annual final effluent CBOD concentration was 2.1mg/L with a maximum of 2.5mg/L.

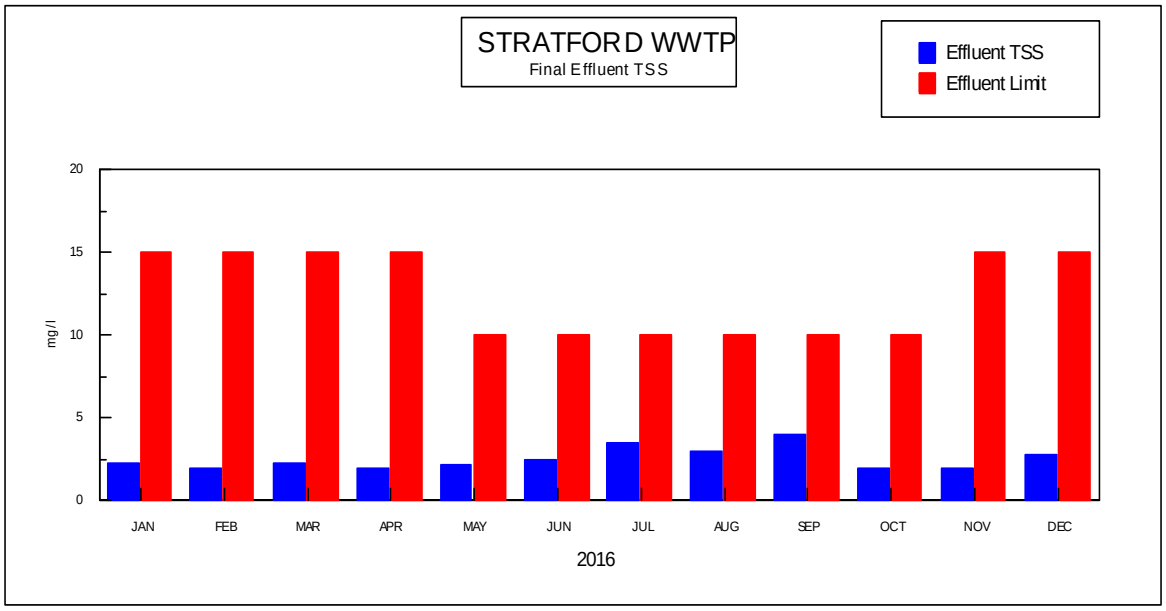
Graph 4: Final Effluent CBOD



Total Suspended Solids (TSS)

The annual average raw sewage total suspended solids (TSS) concentration to the plant was 139.5mg/L, with a maximum concentration of 241mg/L. The annual average final effluent TSS concentration was 2.5mg/L with a maximum concentration of 4.3mg/L.

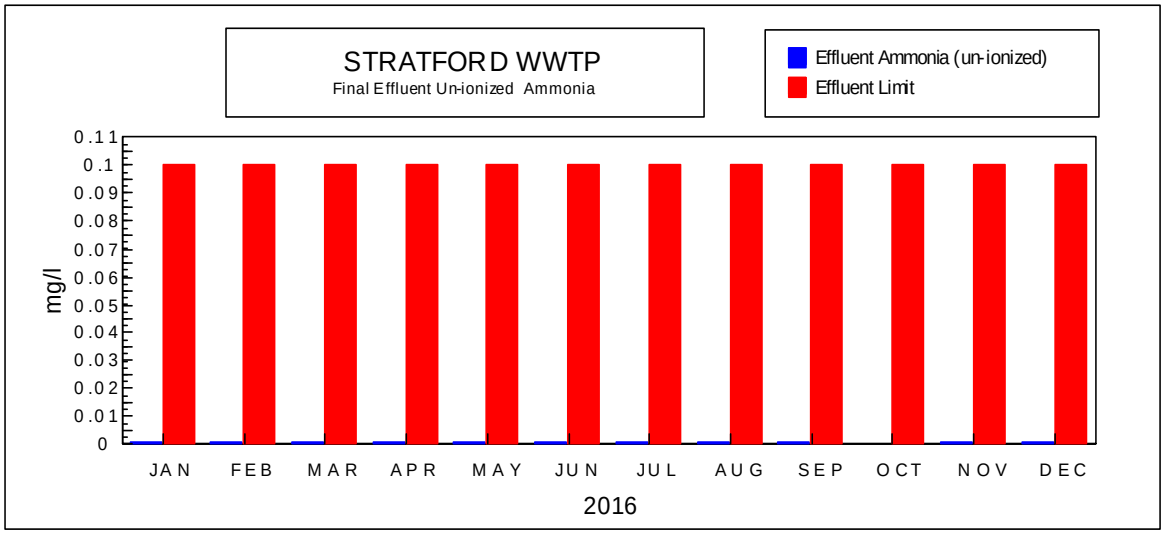
Graph 5: Final Effluent TSS



Total Kjeldahl Nitrogen(TKN) & Un-Ionized Ammonia

The annual average raw sewage total Kjeldahl nitrogen (TKN) concentration to the plant was 26.6 mg/L with a maximum concentration of 34.13 mg/L. The annual final effluent TKN concentration was 0.94 mg/L with a maximum concentration of 2.13 mg/L. The un-ionized ammonia level of the effluent was 0.0006 mg/L versus the limit of 0.1 mg/L.

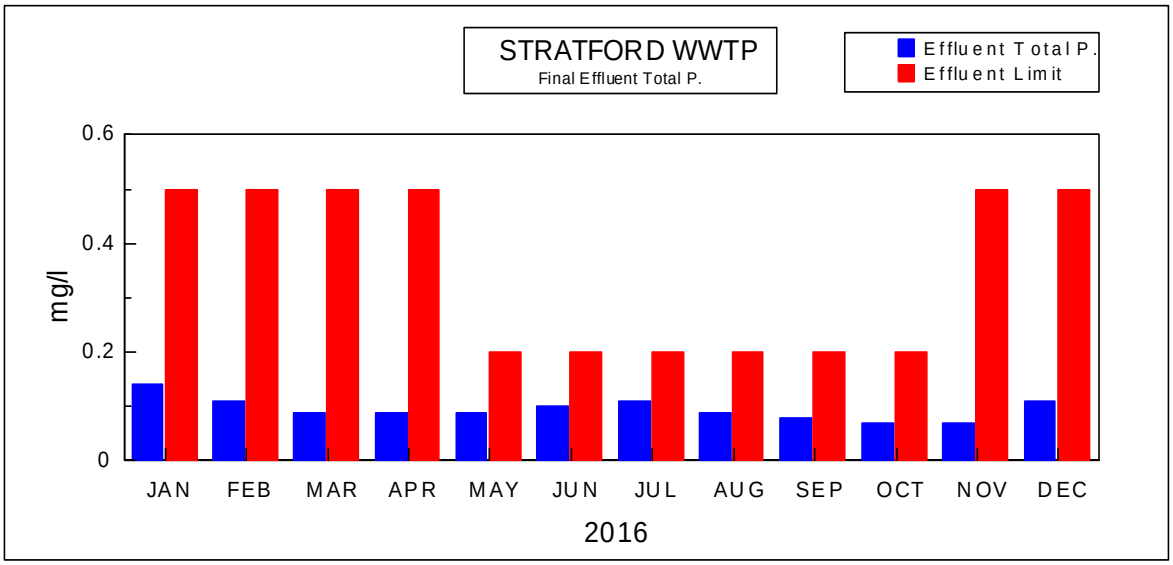
Graph 6: Final Effluent Un-ionized Ammonia



Total Phosphorous

The annual average raw sewage total phosphorus (TP) concentration to the plant was 3.0mg/L with a maximum concentration of 4.8mg/L. The annual average final effluent TP concentration was 0.13mg/L with the maximum being 0.24mg/L.

Graph 7: Final Effluent Total P.



Biosolids Quality

Biosolids produced at the Stratford WPCP are anaerobically-stabilized and land applied in accordance with the Ontario Guidelines for Sewage Biosolids Utilization on Agricultural Lands. All Biosolids sample analysis was carried out by SGS Lakefield Research Ltd. A summary of the analysis is provided in **Appendix 4.**

Bartel Environmental Services has been contracted to haul and land apply all Biosolids produced at the WPCP. A total of 14,059 m^3 was land applied to numerous sites located within Perth County. Monthly haulage volumes from the treatment plant can be found in the Annual Summary report in **Appendix 4.** Based on the information, the hauled biosolids volume for 2017 is anticipated to be in the range 14,500 m^3.

Biosolids Land Application

NASM Plan Locations:
NASM # 22030 – County of Perth, Township of Perth South, Downie, Concession 2, Lot 22
NASM # 21610 – County of Perth, City of Stratford, Downie, Concession 3, Lot 4
County of Perth, City of Stratford, Downie, Concession 3, Lot 5
NASM # 22044 – County of Perth, Township of Perth South, Downie, Concession 7, Lot 6

Air Quality

There were no odour complaints in 2016.

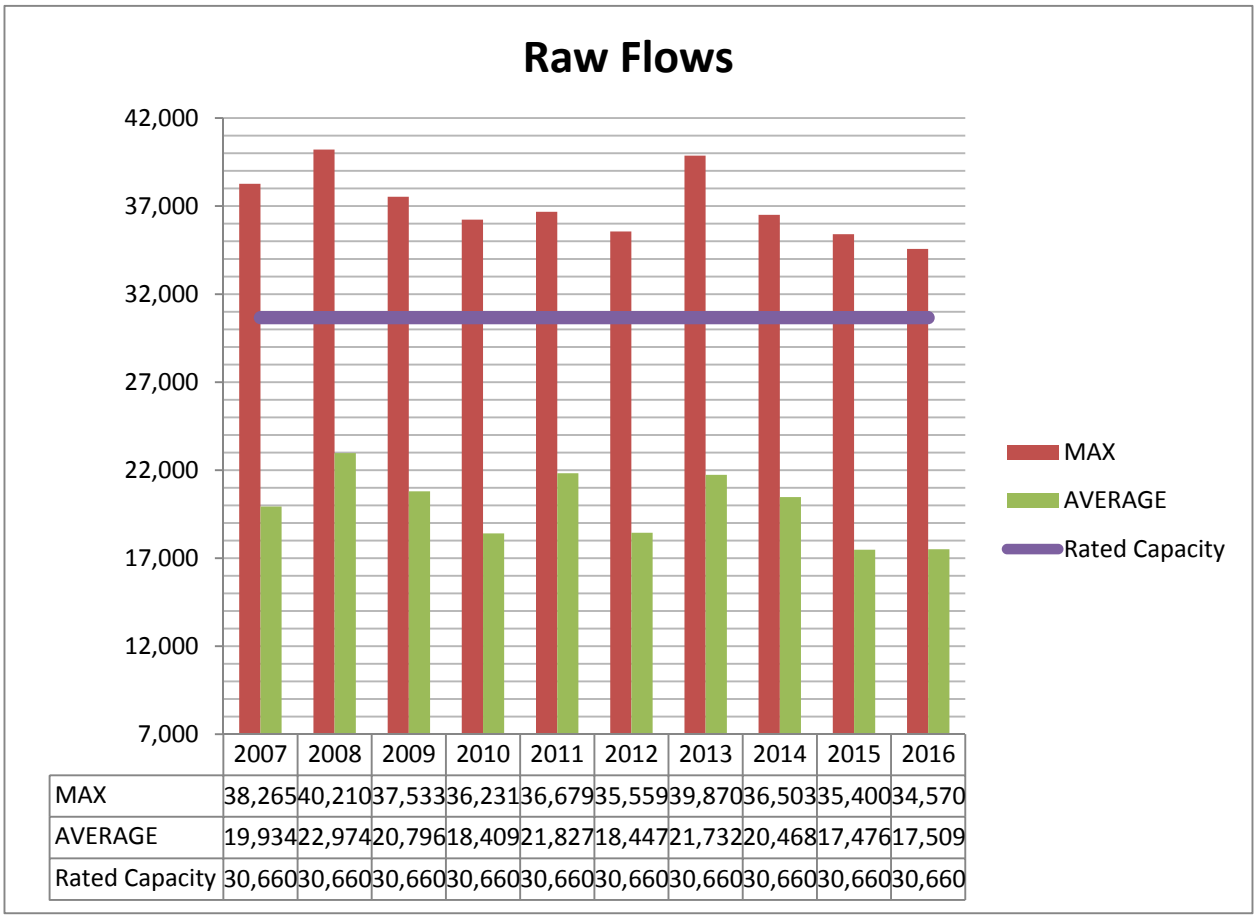
ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

APPENDICES

FOR OCWA'S 2016 ANNUAL PERFORMANCE REPORT

TO THE CITY OF STRATFORD

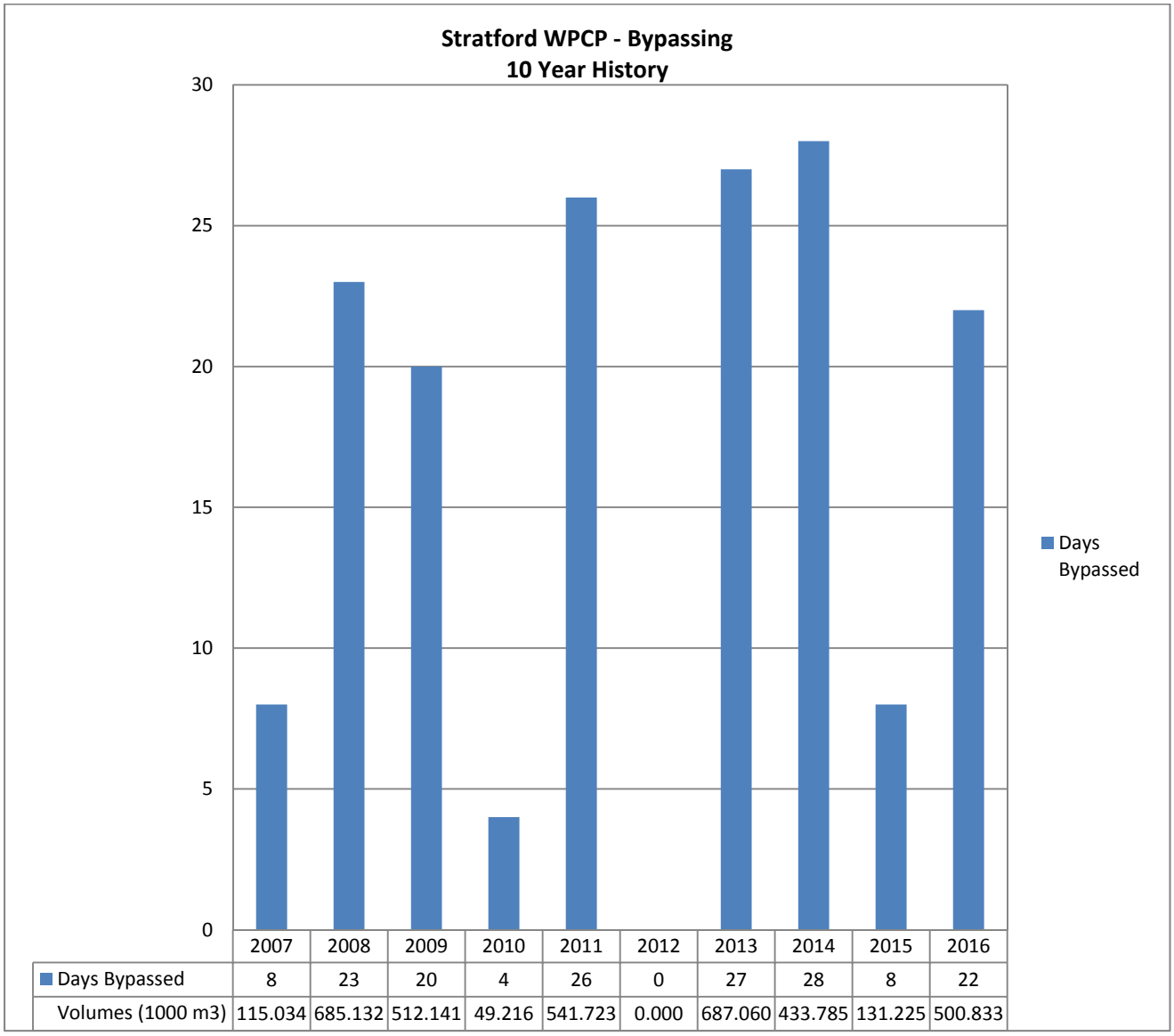
Appendix 1: Raw Sewage Influent Flows



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MAX	38,265	40,210	37,533	36,231	36,679	35,559	39,870	36,503	35,400	34,570
AVERAGE	19,934	22,974	20,796	18,409	21,827	18,447	21,732	20,468	17,476	17,509
Rated Capacity	30,660	30,660	30,660	30,660	30,660	30,660	30,660	30,660	30,660	30,660

Raw Wastewater Influent Flows

Appendix 2: 10-Year Plant Bypass History



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Days Bypassed	8	23	20	4	26	0	27	28	8	22
Volumes (1000 m3)	115.034	685.132	512.141	49.216	541.723	0.000	687.060	433.785	131.225	500.833

10-Year Bypass History

Appendix 3: Plant Performance Data

STRATFORD WASTEWATER TREATMENT PLANT 2016 Treatment Performance Results		
ANNUAL SUMMARY FOR 2016		
PLANT FLOWS		
Total Flow:	6,385,157 m^3	
Average Daily Flow:	17,509 m^3	
RAW SEWAGE QUALITY DATA (ANNUAL AVERAGE – mg/l)		ANNUAL LOADINGS
BOD:	166.0 mg/L	2,910.0 kg/day
TSS:	140.0 mg/L	2,447.0 kg/day
TKN:	28.8 mg/L	505.0 kg/day
Total Phosphorus:	3.3 mg/L	57.0 kg/day
EFFLUENT QUALITY DATA (ANNUAL AVERAGE – mg/l)		ANNUAL LOADINGS
CBOD:	2.18 mg/L	35.7 kg/day
TSS:	2.54 mg/L	39.9 kg/day
Ammonia:	0.14 mg/L	2.3 kg/day
TKN:	1.19 mg/L	19.6 kg/day
Total Phosphorus:	0.095mg/L	1.6 kg/day
PERCENT REMOVAL		
CBOD:	98.7%	
TSS:	98.2%	
TKN:	95.9%	
Total Phosphorus:	97.1%	
SLUDGE REMOVED		
Total Volume:	14,059 m^3	
CHEMICALS USED		
Ferrous Chloride:	76,302 kg	

Appendix 4: Performance Assessment Report Details

STRATFORD WASTEWATER TREATMENT PLANT

ANNUAL SUMMARY FOR 2 2015

FLOWS & RAW SEWAGE QUALITY

FLOWS		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVERAGE	C. of A. LIMIT NEW
Total	1000m3	556,827	443,202	737,856	770,345	478,883	636,060	478,526	448,004	388,340	412,606	484,824	542,450	**6,377,923.0**	
Avg day flow	1000m3/d	17,962	15,829	23,802	25,678	15,448	21,202	15,436	14,452	12,945	13,310	16,161	17,498	**17476.917**	**30.660**
Max day flow	1000m3/d	24,457	17,824	35,400	32,154	23,500	32,120	19,500	19,014	14,790	23,940	27,350	30,590	**300639.000**	**78.000**
Secondary Discharge															
Plant Volume	1000m3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	**0.000**	
Time	hrs.	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	
Sec. volume	1000m3	0.000	0.000	0.000	96,405	0.000	34,820	0.000	0.000	0.000	0.000	0.000	0.000	**131,225**	
Time	hrs.	0.0	0.0	0.0	96.0	0.0	34.0	0.0	0.0	0.0	0.0	0.0	0.0	**130.0**	
RAW SEWAGE															
No. of Samples Taken		4	4	5	4	4	5	4	5	4	4	5	4	**52**	
No. of Samples Req'd		**4**	**4**	**5**	**4**	**4**	**5**	**4**	**5**	**4**	**4**	**5**	**4**	**52**	
BOD	mg/l	135	177	92	70	173	82	162	119	187	196	126	168	**141**	
TSS	mg/l	145	171	71	68	241	72	202	139	158	170	102	133	**139**	
TKN	mg/l	24.73	30.70	19.14	13.90	32.93	21.30	28.83	30.24	34.13	31.43	23.60	28.23	**26.6**	
Total P	mg/l	2.4	3.5	2.0	1.4	4.8	2.7	4.3	2.9	3.4	3.1	2.8	2.8	**3.0**	
Alkalinity	mg/l	273	379	342	349	387	346	386	378	360	365	350	381	**358**	

STRATFORD WASTEWATER TREATMENT PLANT

ANNUAL SUMMARY FOR 2 2015

EFFLUENT QUALITY		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVERAGE	C. of A. LIMIT NEW
No. of Samples Taken		4	4	5	4	4	5	4	5	4	4	5	4	**52**	
No. of Samples Req'd		**4**	**4**	**5**	**4**	**4**	**5**	**4**	**5**	**4**	**4**	**5**	**4**	**52**	
CBOD	mg/l	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.5	2.0	2.3	**2.1**	**10.0/15.0**
CBOD LIMIT	mg/l	**15.0**	**15.0**	**15.0**	**15.0**	**10.0**	**10.0**	**10.0**	**10.0**	**10.0**	**10.0**	**15.0**	**15.0**		
TSS	mg/l	2.0	2.5	3.2	2.5	2.8	2.2	2.0	2.0	2.0	2.0	2.0	4.3	**2.5**	**10.0/15.0**
TSS LIMIT	mg/l	**15.0**	**15.0**	**15.0**	**15.0**	**10.0**	**10.0**	**10.0**	**10.0**	**10.0**	**10.0**	**15.0**	**15.0**		
Ammonia	mg/l	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	**0.10**	
TKN	mg/l	0.53	0.58	0.74	0.63	1.03	0.66	1.18	0.92	0.75	1.13	1.02	2.13	**0.94**	
Nitrate	mg/l	20.20	25.20	17.80	14.00	22.20	14.20	20.00	21.70	24.90	25.60	19.30	22.10	**20.60**	
Nitrite	mg/l	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.30	**0.05**	
Total P.	mg/l	0.01	0.20	0.20	0.10	0.10	0.10	0.20	0.10	0.10	0.10	0.10	0.20	**0.13**	**0.2/0.5**
Total P. LIMIT	mg/l	**0.50**	**0.50**	**0.50**	**0.50**	**0.20**	**0.20**	**0.20**	**0.20**	**0.20**	**0.20**	**0.50**	**0.50**		
Dissolved Oxygen	mg/l	10.0	10.1	9.9	10.5	9.0	8.2	7.7	7.7	8.0	8.5	11.9	12.9	**9.5**	**4.0**
pH		7.4	7.2	7.2	7.4	7.4	7.2	7.3	7.2	7.3	7.2	6.9	7.7	**7.3**	
Temperature	C	10.4	8.8	11.5	11.9	17.3	15.6	20.2	20.2	19.4	18.0	13.8	12.9	**15.0**	
Alkalinity	mg/l	193	179	212	233	158	188	194	136	99	125	177	191	**174**	
Un-ionized Ammonia	mg/l	0.0005	0.0003	0.0003	0.0005	0.0008	0.0005	0.0008	0.0006	0.0008	0.0005	0.0002	0.0012	**0.0006**	
Un-ionized NH4 Limit	mg/l	**0.1000**	**0.1000**	**0.1000**	**0.1000**	**0.1000**	**0.1000**	**0.1000**	**0.1000**	**0.1000**	**0.1000**	**0.1000**	**0.1000**		
Single Sample Limit	mg/l	**0.20**	**0.20**	**0.20**	**0.20**	**0.20**	**0.20**	**0.20**	**0.20**	**0.20**	**0.20**	**0.20**	**0.20**		
No. Single Samples > Limit		0	0	0	0	0	0	0	0	0	0	0	0	**0**	

FINAL EFFLUENT - LOADINGS

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
CBOD	kg/d	35924	31658	47604	51356	30896	42404	30872	28904	25890	33275	32322	40245
LIMIT	kg/d	**460**	**460**	**460**	**460**	**306**	**306**	**306**	**306**	**306**	**306**	**460**	**460**
TSS	kg/d	35924	39573	76166	64195	43254	46644	30872	28904	25890	26620	32322	75241
LIMIT	kg/d	**460**	**460**	**460**	**460**	**306**	**306**	**306**	**306**	**306**	**306**	**460**	**460**
UN-IONIZED AMMONIA	kg/d	8.61	4.23	7.85	13.82	12.49	9.56	12.28	9.15	9.72	7.17	3.19	20.17
LIMIT	kg/d	**3.06**	**3.06**	**3.06**	**3.06**	**3.06**	**3.06**	**3.06**	**3.06**	**3.06**	**3.06**	**3.06**	**3.06**
Total P	kg/d	179.6	3165.8	4760.4	2567.8	1544.8	2120.2	3087.2	1445.2	1294.5	1331.0	1616.1	3499.6
LIMIT	kg/d	**15.3**	**15.3**	**15.3**	**15.3**	**6.1**	**6.1**	**6.1**	**6.1**	**6.1**	**6.1**	**15.3**	**15.3**

FINAL EFFLUENT - E.coli Samples

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Sample #1	# per 100 mL	1	2	4	2	2	2	1	2	2	2	1	2
Sample #2	# per 100 mL	2	2	1	2	2	2	1	2	2	2	6	2
Sample #3	# per 100 mL	2	6	16	2	2	20	2	2	2	2	2	2
Sample #4	# per 100 mL	2	4	2	1	2	2	1	2	2	2	2	188
Sample #5	# per 100 mL			840			2		2			2	
Sample #6	# per 100 mL												
Sample #7	# per 100 mL												
Sample #8	# per 100 mL												
Geometric Mean	**# per 100 mL**	**2**	**3**	**10**	**2**	**2**	**3**	**1**	**2**	**2**	**2**	**2**	**6**
C. of A. LIMIT	**# per 100 mL**	**<200**	**<200**	**<200**	**<200**	**<200**	**<200**	**<200**	**<200**	**<200**	**<200**	**<200**	**<200**

CHEMICALS & SLUDGE HAULAGE

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVERAGE
Chlorine Used	kg													
Chlorine Dosage	mg/l					ULTRAVIOLET DISINFECTION								
Chlorine Residual	mg/l													
Ferrous Chloride	kg	2,796	2,331	3,406	4,968	7,850	8,026	6,193	8,043	10,209	7,308	5,714	4,459	**71,303**
Ferrous Chloride	mg/l	5.3	5.8	4.9	6.9	16.8	13.5	13.1	19.6	26.4	18.3	12.3	8.7	**12.6**
Sludge Haulage	m3	0.0	0.0	0.0	2,348	2,357	0.0	2365.0	4,996		2,992	2,376	0.0	**17,434**
Total Solids	%	3.3	2.0	2.8	1.7	2.6	3.0	2.7	2.9	3.2	4.0	4.1	3.8	**3.01**

STRATFORD WASTEWATER TREATMENT PLANT

SLUDGE QUALITY DATA - **2015**

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVERAGE
Nutrients														
TKN	mg/l	2470	1700	2120	1880	1970	1640	2250	1900	2160	1940	2940	2240	**2101**
Ammonia	mg/l	1030	954	937	1140	1330	1,050	1070	870	904	822	992	939	**1003**
Phosphorus	mg/l	760	490	740	430	670	790	720	680	620	1,000	1200	880	**748**
Nitrate	mg/l	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	**0.3**
Ammonia + Nitrate	mg/l	1030.3	954.3	937.3	1140.3	1330.3	1,050.3	1070.3	870.3	904.3	822.3	992.3	939.3	**1003.5**
TS	mg/l	32,000	20,100	27,600	16,700	26,000	30,400	31,100	28,800	32,200	40,200	40,800	37,500	**30283**
Metal Concentrations														
Copper (Cu)	mg/l	29.0	16.0	27.0	15.0	21.0	24.0	27.0	26.0	29.0	40.0	38.0	40.0	**27.67**
Nickel (Ni)	mg/l	2.70	1.40	2.40	1.20	1.70	2.00	2.20	2.00	2.50	3.00	3.00	3.20	**2.28**
Lead (Pb)	mg/l	1.50	0.60	0.90	0.50	0.70	0.70	0.90	0.90	1.00	1.40	1.20	1.60	**0.99**
Zinc (Zn)	mg/l	25.00	13.00	20.00	10.00	17.00	20.00	22.00	22.00	24.00	31.00	29.00	32.00	**22.08**
Arsenic (As)	mg/l	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.20	0.20	0.20	**0.13**
Cadmium (Cd)	mg/l	0.024	0.006	0.010	0.007	0.006	0.012	0.020	0.013	0.020	0.022	0.022	0.024	**0.02**
Cobalt (Co)	mg/l	0.25	0.12	0.19	0.07	0.12	0.17	0.22	0.19	0.19	0.32	0.31	0.31	**0.21**
Chromium (Cr)	mg/l	3.60	1.70	2.60	1.20	1.80	2.40	3.30	2.80	3.40	5.60	5.70	5.10	**3.27**
Mercury (Hg)	mg/l	0.021	0.005	0.009	0.007	0.006	0.011	0.009	0.015	0.041	0.009	0.012	0.011	**0.01**
Molybdenum (Mo)	mg/l	0.60	0.25	0.54	0.47	0.60	0.58	0.71	0.60	0.70	1.00	1.10	1.00	**0.68**
Selenium (Se)	mg/l	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	**0.12**
Ammonia/Metal Ratios														
Copper	(Min. 10)	36	60	35	76	63	44	40	33	31	21	26	23	**36**
Nickel	(Min. 40)	381	681	390	950	782	525	486	435	362	274	331	293	**441**
Lead	(Min. 15)	687	1590	1041	2280	1900	1500	1189	967	904	587	827	587	**1012**
Zinc	(Min. 4)	41	73	47	114	78	53	49	40	38	27	34	29	**45**
Arsenic	(Min. 100)	10300	9540	9370	11400	13300	10500	10700	8700	9040	4110	4960	4695	**8025**
Cadmium	(Min. 500)	42917	159000	93700	162857	221667	87500	53500	66923	45200	37364	45091	39125	**64720**
Cobalt	(Min. 50)	4120	7950	4932	16286	11083	6176	4864	4579	4758	2569	3200	3029	**4893**
Chromium	(Min. 6)	286	561	360	950	739	438	324	311	266	147	174	184	**307**
Mercury	(Min. 1500)	49048	190800	104111	162857	221667	95455	118889	58000	22049	91333	82667	85364	**77167**
Molybdenum	(Min. 180)	1717	3816	1735	2426	2217	1810	1507	1450	1291	822	902	939	**1477**
Selenium	(Min. 500)	10300	9540	9370	11400	13300	10500	10700	8700	9040	8220	9920	3130	**8599**

STRATFORD WASTEWATER TREATMENT PLANT

SLUDGE HAULAGE BY SIT **2015**

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL TOTAL
	TOTALS ->													**0.0**
Certificate of Approval	Site #													
	S-1508-183				2348	2357								4705.0
	NASM20727							2365						2365.0
	NASM21166								1188m3					1188.0
	S-1508-176								3808m3					3808.0
	S-1508-178										2992m3			2992.0
	S-1507-183											2376m3		2376.0
														0.0
														0.0
														0.0
														0.0

Ontario Clean Water Agency
Time Series Info Report

Report extracted 05/11/2017 12:51 **From: 01/01/2016 to 31/12/2016**

Facility Org Number: 5529
Facility Works Number: 110000702
Facility Name: STRATFORD WASTEWATER TREATMENT FACILITY
Facility Owner: Corporation/Company: The Corporation of the City of Stratford
Facility Classification: Class 4 Wastewater Treatment
Receiver: Avon River
Service Population: 32000.0
Total Design Capacity: 30660.0 m3/day

	01/2016	02/2016	03/2016	04/2016	05/2016	06/2016	07/2016	08/2016	09/2016	10/2016	11/2016	12/2016	Total	Avg	Max	Min
Final Effluent / Dissolved Oxygen: DO - mg/L																
Count IH	30	27	31	28	31	30	31	31	30	31	30	31	361			
Max IH	13.8	14.34	14.4	14.48	13.06	11.44	11.12	10.6	10.07	8.89	9.27	9.79			14.48	
Mean IH	12.864	13.219	13.412	13.437	11.733	10.179	9.815	9.216	7.165	7.617	8.34	8.865		10.443		
Min IH	11.9	11.44	11.38	12.23	9.33	8.29	8.4	7.47	5.37	5.07	6.05	6.15				5.07
Final Effluent / Un-ionized Ammonia: NH3 - mg/L																
Count Lab	4	5	4	4	5	4	4	5	4	5	4	4	52			
Max Lab	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.002	< 0.006	< 0.001	0.002			< 0.006	
Mean Lab	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001		< 0.001		
Min Lab	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001				< 0.001
Final Effluent / pH - ---																
Count IH	30	27	31	28	31	30	31	31	30	31	30	31	361			
Max IH	7.8	7.66	7.98	7.84	7.68	7.6	7.42	7.64	7.39	7.57	7.7	7.68			7.98	
Mean IH	7.478	7.468	7.548	7.261	7.361	7.322	7.215	7.322	7.041	7.251	7.154	7.418		7.32		
Min IH	7.26	7.28	6.29	6.2	7.08	6.95	6.6	7.1	6.71	6.92	6.69	7				6.2
Count Lab	0	0	0	0	0	0	1	0	0	0	0	0	1			
Max Lab							7.83								7.83	
Mean Lab							7.83							7.83		
Min Lab							7.83									7.83

Appendix 5: Glossary of Terms

Term	Acronym	Meaning in Relation to the Operational Compliance Report
Acute Lethality		Indicator of an effluent of a quality level such that it kills more than 50% of rainbow trout subjected to it for a period of a 96-hours
Adverse Water Quality Incident	AWQI	Reportable event that occurs when a regulated parameter (e.g. $CBOD_5$) exceeds established targets
Biochemical Oxygen Demand	BOD_5	Measure of the amount of oxygen needed by aerobic biological organisms in a body of water to break down organic material at a certain temperature over 5 days. Indicator of the level of organic materials present in water.
Bypass		Diversion of raw sewage around one or more unit processes in a pollution control plant. Diverted sewage can be stored to be treated later or sent upstream of the by-passed processes for release into the receiving waters with or without disinfection.
Bypass Event		Situation such as heavy precipitation that causes a plant bypass or plant overflow. An Event ends when there is no recurrence of a Bypass or Overflow in the 12-hour period following the last Bypass or Overflow. Two Events are separated by at least 12 hours during which there has been no recurrence of a bypass or overflow
Bypass, Primary	PrBy	Diversion of sewage that has subjected to grit removal and disinfection (but not primary, secondary or tertiary treatment) before being released into the receiving waters
Bypass, Secondary	ScBy	Diversion of sewage that has been subjected to grit removal and primary treatment (settling and primary sludge removal) and disinfection (but not secondary or tertiary treatment) before being released into the receiving waters
Bypass, Tertiary	TeBy	Diversion of sewage that has been subjected to grit removal, primary treatment, secondary treatment (e.g. aeration) and typically nitrogen and phosphorous removal and disinfection (but not tertiary treatment) before being released into the receiving waters

Term	Acronym	Meaning in Relation to the Operational Compliance Report
Carbonaceous Biochemical Oxygen Demand	$CBOD_5$	Measure of the amount of oxygen needed by aerobic biological organisms in a body of water to break down organic material at a certain temperature over 5 days. Nitrification inhibited during the 5 day testing of unfiltered sample. Indicator of the level of organic materials present in water.
Certificate of Approval (Environmental Certificates of Approval)	CofA	Legal instrument issued by the MOECC which permits the construction or alteration and operation of certain categories of a water or wastewater system, or parts thereof. For wastewater systems, CofAs are being replaced with Environmental Certificates of Approval (ECAs)
Chlorine Residual		Concentration of chlorine remaining in the chlorinated water at the end of a given contact time that is available to continue to disinfect. Measured as Free Chlorine, Combined Chlorine and Total Chlorine
Coliform (Total Coliform)	TC	Group of waterborne bacteria consisting of three main groups with common characteristics that are able to grow in the media used in the total coliform (TC) test. This test is used as an indicator of contamination of raw water and treated water. The presence of even one colony forming unit (CFU) of TC in a microbiological sample is an AWQI
Combined Sewer Overflow	CSO	Discharge to the environment from a sewer system that conveys both sanitary sewage and storm water
Combined Sewer System		Sewage collection system which conveys sanitary sewage (domestic, commercial and industrial wastewaters) and stormwater runoff through a single-pipe system to a sewage treatment plant. Combined sewer systems which have been partially separated and in which roof leaders and/or foundation drains contribute stormwater inflow to the sewer system conveying sanitary flows are still defined as combined sewer systems in the Ministry Procedure F-5-5, "Determination of Treatment Requirements for Municipal and Private Combined and Partially Separated Sewer Systems"
Composite Sample		Quantity of undiluted effluent collected continually at an equal rate or at a rate proportionate to flow over a designated sampling period

Term	Acronym	Meaning in Relation to the Operational Compliance Report
Computerized Maintenance Management System (also known as Work Management System)	CMMS	See definition of Work Management System below
Contact Time	CT	The CT disinfection concept uses the combination of a disinfectant residual concentration (in mg/L) and the effective disinfectant contact time (in minutes), to quantify the capability of a chemical disinfection system to provide effective pathogen inactivation to the required level
Contaminant		Any solid, liquid, gas, odour, heat, sound, vibration, radiation or combination of any of them resulting directly or indirectly from human activities that causes or may cause an adverse effect
Disinfection		Destruction or inactivation of pathogenic and other kinds of microorganisms by physical or chemical means
Dissolved Oxygen	DO	Molecular (atmospheric) oxygen dissolved in water or wastewater
Environmental Certificate of Approval	ECA	Legal instrument, issued by the MOECC, which permits the construction or alteration and operation of wastewater systems, or parts thereof
Escherichia coli	E.coli	Species of bacteria naturally present in the intestines of humans and animals. If animal or human waste containing E. coli contaminates drinking water it may cause gastrointestinal disease in humans. Most types of E. coli are harmless, but some active strains produce harmful toxins and can cause severe illness. The presence of even one colony forming unit (CFU) of EC in a microbiological sample is an AWQI
Exceedance		Violation of a limit for a contaminant as prescribed by a regulation or legal instrument for a facility (e.g. Certificate of Approval)
Grab Sample		Quantity of undiluted sample collected at any given time

Term	Acronym	Meaning in Relation to the Operational Compliance Report
Material Safety Data Sheet	MSDS	Document that contains information on the potential hazards (health, fire, reactivity and environmental) and how to work safely with the chemical product.
Maximum Allowable Concentration	MAC	Concentration that represents the limit above which an exceedance occurs
Micrograms Per Litre (µg/L)	µg/l	Measure of the amount of a compound in a solution in terms of micrograms of the compound per litre of solution. It is equivalent to a part per billion in water
Milligrams Per Litre (mg/l)	mg/l	Measure of the amount of a compound in a solution in terms of milligrams of the compound per litre of solution; equivalent to a part per million in water
Mixed Liquor Suspended Solids	MLSS	Suspended solid particles in the mixed liquor of an aeration tank.
Non-Agricultural Source Material	NASM	Materials from non-agricultural sources that can be applied to agricultural land to provide valuable nutrients to soil and crops
Nitrate (NO3)/ Nitrite(NO2)		**MAC** for Nitrate (NO3) is 10 mg/L (as nitrogen). The MAC for Nitrite is 1 mg/L (as nitrogen). NO3 and NO2 combined have a MAC of 10 mg/L. Nitrate is commonly found in source water, especially ground water. Nitrite can be formed in water systems from either ammonia or nitrate
Pathogen		An organism capable of causing illness or death
pH	pH	pH is a numerical measure of acidity, or hydrogen ion activity used to express acidity or alkalinity. Neutral value is pH 7.0, values below pH 7.0 are acid, and above pH 7.0 are alkaline
Phosphorus	Phos	Phosphorus is an essential nutrient that contributes to plant productivity. In excessive amounts, this nutrient may contribute to a buildup of nutrients (called eutrophication), which can in turn encourage the overgrowth of weeds, algae, and cyanobacteria (blue-green algae)

Term	Acronym	Meaning in Relation to the Operational Compliance Report
Rapid Sludge Removal	RSR	
Return Activated Sludge	RAS	Settled activated sludge collected in the secondary clarifier and returned to the aeration basin to mix with incoming raw or primary settled wastewater
Rotating Biological Contactor	RBC	a biological treatment process used in the treatment of wastewater following primary treatment. As a secondary treatment process, a RBC consists of a series of closely spaced, parallel discs mounted on a rotating shaft which is supported just above the surface of the waste water. Microorganisms grow on the surface of the discs where biological degradation of the wastewater pollutants takes place
Sanitary Sewer Overflow	SSP	a discharge to the environment from a sanitary sewer system
Sanitary Sewer System		a separate sewer system which conveys sanitary sewage (domestic, commercial and industrial wastewaters), infiltrated groundwater and limited amounts of stormwater where an adjoining separate storm sewer system exists as the primary collection system to receive stormwater flows from catch basins and other sources of stormwater
Sequencing Batch Reactors	SBR	a type of activated sludge process for the treatment of wastewater. SBR reactors treat wastewater such as sewage or output from anaerobic digesters or mechanical biological treatment facilities in batches. Oxygen is bubbled through the mixture of wastewater and activated sludge to reduce the organic matter (measured as biochemical oxygen demand (BOD) and chemical oxygen demand (COD)). The treated effluent may be suitable for discharge to surface waters or possibly for use on land
Supervisory Control And Data Acquisition	SCADA	Automated system used by operations staff to monitor and control wastewater equipment and processes to ensure all plant parameters stay within target ranges
Total Ammonia Nitrogen	TAN	Indicates the content of both un-ionized ammonia (NH3) and ionized ammonia (NH4+). NH3 is the principal form of toxic ammonia. Toxicity levels are both pH and temperature dependent

Term	Acronym	Meaning in Relation to the Operational Compliance Report
Total Kjeldahl Nitrogen	TKN	Indicates nitrogen content in the form of organic proteins or their decomposition product ammonia, as measured by the Kjeldahl Method
Total Suspended Solids	TSS	Particles larger than 2 microns found in water. Anything smaller than 2 microns (average filter size) is considered a dissolved solid. TSS in mg/L can be calculated as: (dry weight of residue and filter - dry weight of filter alone, in grams)/ mL of sample * 1,000,000
Un-ionized Ammonia	NH_3	Ammonia is un-ionized, and has the formula NH_3. Ammonium is ionized, and has the formula NH_4^+. The major factor that determines the proportion of ammonia or ammonium in water is water pH. The activity of ammonia also is influenced by temperature and ionic strength. This is important as the unionized NH_3 is the form that can be toxic to aquatic organisms. The ionized NH_4 is basically harmless to aquatic organisms.
Waste Activated Sludge	WAS	The excess growth of microorganisms which must be removed from the process to keep the biological system in balance.
Wastewater System Effluent Regulation	WSER	Federal regulation established under the Fisheries Act that includes mandatory minimum effluent quality standards that can be achieved through secondary wastewater treatment. Requirements for monitoring, record-keeping, reporting and toxicity testing
Work Management System (also known as Computerized Maintenance Management System)	WMS	Software tool that allows staff to categorize work activities (Work Orders) into 4 types based on nature of work performed. These include corrective, preventive (e.g. weekly PM), capital, and operational. The work orders provide staff with all the information, instructions, and procedures that they need to complete the work. Contains a snapshot of the general overall condition, cost, criticality and life expectancy of equipment and plant assets. OCWA's uses the WMS to manage work, maintain equipment, and manage the assets within their care. Assets are registered within the WMS along with maintenance plans and schedules. As work orders containing this information are generated and closed, data is collected and used for reporting, and supporting modification of the preventive maintenance program.

Corporate Services Department

MANAGEMENT REPORT

Date: June 28, 2017
To: Infrastructure, Transportation and Safety Sub-committee
From: Tatiana Dafoe, Deputy Clerk
Report#: ITS17-038
Attachments: Parking Action Plan Update

Title: Parking Action Plan Update

Objective: To provide an update on the Parking Action Plan.

Background: In 2016, the Parking Study and Action Plan, prepared by DSorbara Parking & Systems Consulting, was presented and approved by Council. The Parking Study and Action Plan provided analysis on the municipal parking activity patterns in downtown Stratford in the summer of 2015 and led to the development of a parking strategy.

The Parking Strategy Action Plan consists of initiatives that, if implemented, will result in the continued provision of a high level of customer service to tourists and those that work in and visit the downtown. The initiatives as outlined are to be completed during the following planning horizons:

- Short Term - Immediately to 2 years;
- Mid-Term;
- Longer-Range – Beyond 6 years.

This report is an update on the initiatives outlined in the Short Term and Mid-Term Planning Horizon, along with other parking initiatives currently being undertaken.

Analysis: There are 8 recommendations within the Short Term Planning Horizon and 9 recommendations within the Mid-Term Planning Horizon of the Parking Strategy Action Plan. Attached to this report is the Action Plan along with each items respective update.

With respect to the recommendations made in the Action Plan the City has:

- Maintained the current level of parking supply in the downtown, even with the loss of parking due to the Market Square redevelopment;
- Maintained the current level of accessible parking supply in the downtown and has increased signage with use of the new accessible icon as a pavement marker;

- Added 5 Pay by Licence Plate units which now allows users to purchase time by coin or credit card and no longer requires them to return to their vehicle; and
- Is monitoring parking activity trends in the Erie, Kalbfleisch and Market Place lots with the new Pay by Licence Plate technology which will allow the City to run statistical reports.

The City is also in the process of reviewing the following items which will be reported on in a future report:

- Where 3-30 minute parking spaces will be located on Wellington Street and where 2-30 minute spaces will be located on Downie Street;
- Tiered pricing;
- Wayfinding;
- A parking structure.

Wanting to be proactive, the City is examining ways of increasing parking in the downtown. Specifically, the City is looking at adding parking along the sides of City Hall, if the transit buses do not return to this location following the transit terminal public consultation. The Corporate Services department is also reviewing the parking section on the City's website for the purposes of enhancing customer service and communication of parking in the downtown.

Other initiatives the City has undertaken to enhance parking is partnering with the University of Waterloo Stratford campus to use 24 of their parking spaces. These spaces will be used by City employees during the Summer of 2017 for the purpose of increasing the amount of available spaces in the Cooper lot. The City has also adopted an Accessible Parking Permit Policy which allows persons with a valid accessible parking permit to park for free in accessible spaces.

It is the City's intention to continue adding Pay by Licence Plate technology to all parking lots in the City and then begin replacing on-street meters. Following the conclusion of the transit terminal and the Cooper Site public consultation more information will be known on the future of these two items and the potential impact on parking in the downtown core.

Administration has met twice with the BIA Parking Task Force in 2017 and will continue to arrange meetings for the purpose of gathering input and recommendations on parking initiatives.

Financial Impact: There are no financial implications with respect to this report as it is provided for information.

Staff Recommendations: THAT the report entitled "Parking Action Plan Update" be received for information.

_____
Tatiana Dafoe, Deputy Clerk

_____
Andre Morin, Director of Corporate Services

_____
Rob Horne, Chief Administrative Officer

Preliminary Parking Strategy Action Plan Items		
Initiative (Numbers are drawn from the above discussion and do not represent ranking order)	**Issues/Strengths Addressed**	**Status Update**
Short term Planning Horizon (Immediate to 2 years)		
1. **Maintain the current level of parking supply in the downtown to meet existing parking demand.**	• Provides continued level of customer service • Provides opportunities to enhance use through revenue control • Preserves infrastructure assets to respond to future marketing • Evidence shows that reduction in the parking service around Market Square can be accommodated within the current inventory and no-change in the operations	• Current level of parking supply has been maintained in the downtown – June 15, 2017
16. Continue to monitor parking activity trends in occupancy of space, duration of stay profiles and turnover of parking space with the view of improvement and adjustment to parking rates, time restrictions and the parking system's response to changing land use (demand) conditions in the short and long term planning horizon.	• Provides solid historical data that serves to measure changes in the performance of public parking services • Provides more solid support evidence to measure changes over time due to changes in parking and travel demand drivers in the downtown • Full parking activity metrics to more clearly show changes in performance and why those changes might have occurred	• As the new Pay by Licence Plate Units have been installed there is capability to monitor use of spaces in the Erie and Kalbfleisch Lots, and Market Square – June 19, 2017
3. **Secure longer term (6 to 10 years) parking assets to accommodate long term parking demand and supply.**	• Provides control over assets in order to more effectively and economically responds to changes in market opportunities • Demonstrates municipal	• No update to provide at this time.

	commitment to the provision of the parking service in the short and longer range planning horizons • Provides the potential to market asset as a development site that could meet other municipal objectives (student housing, residential, commercial activity, public space, and parking for example)	
4. **Address Customer Service Issues** - **Assist customers in understanding that on-street plays a different role than off-street spaces.** - **Consider pricing the on-street to reflect its true value to the customer.** - **Consider pricing the off-street as an incentive to use that product with greater frequency.** - **Consider the technology or a program that accepts payment by cell phone and that can message customer when time limit is approaching. It does require marking areas or block faces as distinct parking zones. It does require some up front software. Not everyone of course is tech savvy so there would need to be alternatives for payment. The key in this is that users get notified so this reduces their anxiety over time limits. There are operational features that**	• Availability of Space • Technology • Payment options • Time Restrictions • Longer term parking contracts • One purchase for multiple destinations • Enforcement • Role of parking products – on- and off-street spaces	• RFP – Pay by License Plate issued and closed on March 1, 2017 • All Pay by Licence Plate units installed by June 14, 2017 • Capability to implement a pay-by-phone option in the future • Reviewing tiered-pricing June, 2017 • In the process of updating Parking section on the City's website to provide further information to tourists and residents on parking – June/July 2017

can allow the purchase of more time if so desired.

- **Consider a technology that allows parking at multiple locations. This program serves to provide parking time to those who over-estimated their duration of stay at one space. It requires a mobile enforcement team to monitor and electronically verify that the vehicle has purchased enough time no matter where they parked.**

- **There is a mobile enforcement solution – License Plate Recognition System – that makes use of cameras mounted on a vehicle and a software package that records and stores time of arrival and departure, and can automatically issue a violation to the owner via email.**

- **Increase the time restrictions on selected side streets. Requires enforcement and management as it will impact largely the residential community. Paired with the technology mentioned above option, this can be readily feasible.**

- **Some consideration can be given to the sale of contract parking on the**

streets that do not logically serve visitors. Potential conflict with local residents however needs to be addressed openly.

- **One uniform pricing system for all on-street parking spaces regardless of their location. Although this does not reflect level of service and convenience, we do appreciate that it might be more complicated to implement. Let us keep it simple but discuss changing or altering time restrictions on a non-uniform basis to better reflect local micro-level demand characteristics.**

- **Better communicate the role that the Lots have in serving customer and visitor parking needs and price accordingly. This strategy will tie in with marketing individual facilities to serve specific markets in their area.**

- **The on-street parking space is critical to the level of service and convenience to customers/visitors; therefore price their use to reflect that value – it should cost more to park on-street than on the Lots. This remedy of course contradicts the uniform price strategy above. This**

remedy needs to be discussed with evidence brought to the table.		
9. Maintain the current level of accessible parking spaces; improve signage for on street accessible spaces and request input from the Accessibility Advisory Committee when utilization indicates more spaces are required.	• Data provided to the study team shows good use of current inventory • Parking industry best practice generally identifies accessible spaces through pavement and blue metered revenue control units and well as sidewalk signage • Continue to be an active participant on the Accessibility Advisory Committee	• Accessible Parking Permit Policy adopted June, 2017. Policy allows users with valid accessible parking permits to park for free in accessible spaces. • An accessible parking space has been added to the George Street lot. • Accessible spaces are being signed with the accessible icon
5. **Investigate new parking supply and financing opportunities.**	• As it relates to responding to new opportunities • Stand-alone parking facilities are considered to be a lost opportunity to provide public service in addition to parking • Partnerships and multiple uses is the best practice approach	• Investigating the use of 25-30 parking spaces at the University of Waterloo – Stratford Campus for City employees during the Summer of 2017. • Reviewing making Wellington Street a permanent 1-way which would allow additional parking spaces to be erected.
6. **Address the permit parking distribution by allocating 20 percent of off-street parking inventory to this customer type.**	• Responds to the observed longer walking distances that longer stay users exhibit • Valuable on-street space and off-street space should be priced to cater to the shorter stay, higher turnover visitor customer • Seasonal permits is an option that should be considered	• In review.
17. Evaluate the extension of pay parking periods from 6 pm to 9 pm Monday to Saturday	• As it relates to self-sustaining business operation, consider its	• In review.

in the downtown as well as extending pay parking services on Sundays.	study • Raised concern from the online surveys • Equitable treatment of daytime and after-six commercial businesses	
Mid-range Planning Horizon		
7. **Maintain the current three hour time restriction and hourly charges for on street municipal parking service and maintain the current cost of parking permits for on and off street at their current rates with a review in 2 years' time.**	• Current on-street parking time limit matches observed durations of less than three hours • Three hours has become typical now • Review rates every 2 years within the scope that parking services should be self-sustaining	• Time restrictions remain in effect as well as the cost for parking permits. • Rates to be reviewing in 2018-19.
8. **Market the time restriction and the role of on and off street parking space through online media tools, as well as, colour-code identification system on the pay stations to convey the notion that parking spaces are meant to be utilized by a number of customers with varying lengths of stay over the course of the day.**	• Tie in with technology considerations • Customer information should be online	• Reviewing parking section on the City's website. • Updated parking map to highlight Pay by Licence Plate lots.
10. **Link to Active Transportation Initiatives.** • **Treat parking sites as a stage for vehicles and other travel modes including bike, electric vehicles, self-parking vehicles** • **Geometry of parking space both on and off-street to consider multi-mode travel methods** • **After-parking pedestrian links to destinations must reflect safety (lighting, pavement condition**	• Study bike lanes and their integration with on-street parking • Provide a broader array of travel mode services (bike parking, bike repair station, re-charging stations for electric vehicles) • Be an active participant in the self- or assisted drive vehicles project currently underway in the City • Self-parking and assisted drive vehicle technology points to the potential for our parking service to provide drivers with	• In review.

and safety kiosk devices to assist our customers)	current information on the available of parking space, where that parking space is located in advance of entering the downtown; in parking industry this is referred to as "Parking Guidance Systems"	
11. **Convert current revenue control system to "Pay by License Plate" Pay and Display unit for both on and off street facilities throughout the study areas.**	• Flexibility • Wider payment options including coupons • Pay and display unit can be a kiosk of events on that particular stretch of the street or in the downtown in general • Can advise customer of time left via SMS text message • Audit trail and use data is provided online to the parking management team • Customer especially business customers can see parking transactions for audit purposes • Metered units are becoming very difficult to service as they are largely being phased out • Tie this conversion to the study of active transportation initiatives so that the two are integrated	• Installed Pay by Licence Plate units in: Erie, Kalbfleisch and Market Square. Reviewing other potential locations such as the Albert Street Lot.
12. **Maintain enforcement fines for parked at expired "meter".**	• Maintain a "firm but fair" business approach to enforcement • Online information should explain that **compliance** is our goal • Online information to explain why staying within the time restriction is vital to the service of	• Current fines are being maintained.

	many customers to the downtown	
13. **Expand and Explore Communication Themes.**	• Initiative ties parking service role and customer • Signage is excellent currently but we should consider identifying time restriction through colour of revenue control equipment (meters or pay and display units) • Online communication package	• In review.
14. **Maintain the bold way-finding / signage system.**	• Tie this initiative with parking guidance system • Pedestrian way finding is important; consistent signage to indicate where customer is and where primary destinations are in the vicinity • As suggested in Orillia and Oakville, information kiosks on the parking facility can be incorporated to provide shopping, geographic information to our customers	• Being undertaken in partnership with the BIA Parking Task Force.
15. **Continue to expand and improve pedestrian links to and from municipal off street sites.**	• Study spoke to perhaps animating the pedestrian links with pop-up arts/craft displays that reflect season and promotions on-going • Safety design factors to be integrated • Weather protected where possible of course • Tie the name of the parking facility to the link through a reference on a sign along the pedestrian path	• Bump outs added to Market Square developments. • Wayfinding project underway.
16. Continue to monitor parking activity trends in occupancy of space, duration	• Provides solid historical data that serves to measure changes in the	• In review.

of stay profiles and turnover of parking space with the view of improvement and adjustment to parking rates, time restrictions and the parking system's response to changing land use (demand) conditions in the short and long term planning horizon.	performance of public parking services • Provides more solid support evidence to measure changes over time due to changes in parking and travel demand drivers in the downtown • Full parking activity metrics to more clearly show changes in performance and why those changes might have occurred
Longer-range Planning Horizon (beyond 6 years)	
16. Continue to monitor parking activity trends in occupancy of space, duration of stay profiles and turnover of parking space with the view of improvement and adjustment to parking rates, time restrictions and the parking system's response to changing land use (demand) conditions in the short and long term planning horizon.	• Should continue this task beyond mid-range planning horizon and become part of the parking operations
2. Stratford will continue to monitor land use (new development and redevelopment) and their impact on parking supply over the mid and longer range planning horizons	• In order to understand performance changes to parking supply use we need to know quantity and type of activity that is attracting that demand for parking space • Establish an in-house data repository that shows each building's current land use type and the quantity of floor space by that land use type (in appropriate planning units – floor area, number of units or seats for example) • Begin to integrate and make better use of

	information already available in other municipal databases – planning department and in particular the property tax assessment area

Corporate Services Department

MANAGEMENT REPORT

Date: June 28, 2017
To: Infrastructure, Transportation and Safety Sub-committee
From: Tatiana Dafoe, Deputy Clerk
Report#: ITS17-039
Attachments: Map – Potential Refreshment Vehicle Locations

Title: Refreshment Vehicle Downtown Locations

Objective: To outline potential locations for a refreshment vehicle in the downtown core.

Background: The City of Stratford's Business Licensing By-law 187-2004 (Licensing By-law), licences, regulates and governs certain businesses in the City of Stratford and establishes licencing fees. In the Licensing By-law, individuals selling food stuffs prepared or cooked in a refreshment vehicle would be classified as a Category 1 Refreshment Vehicle.

There are conditions within the Licensing By-law addressing items such as, but not limited to, cleanliness, refuse containers, wrapping and selling of food stuffs in individual packages. There are also separation distance requirements from intersections, public parks and the downtown core.

Currently, there is a notwithstanding clause that allows for the operation of two refreshment vehicles in the downtown core, "one hot dog cart at Memorial Gardens on Ontario Street and one refreshment vehicle located in Market Square". As part of the Licensing By-law, these two operators are required to sign a lease agreement with the City which outlines conditions relating to items such as the physical location of the vehicle, hours of operation, cleanliness around the site and rental calculations for the use of municipal space.

In December 2016, the agreement with the operator of the refreshment vehicle located in Market Square expired and was not renewed due to the re-development of this site. At the May 23, 2017, Infrastructure, Transportation and Safety (ITS) Committee meeting the Market Square Proposed Interim Terms of Use and Event Coordination Report (ITS17-027) was presented which recommended that a refreshment vehicle not be located in Market Square.

At the ITS Committee meeting, discussion regarding alternative locations for a refreshment vehicle was held and the following resolution was passed:

> **"THAT staff review options for the placement of a second food truck in the downtown core."**

Analysis: When considering potential downtown locations for refreshment vehicle it is imperative that pedestrian and vehicular traffic not be impeded with any food vehicle operation. The Licensing By-law also states that no person shall operate a refreshment vehicle within 60 meters of the property line of an existing restaurant or food premise within the City of Stratford unless the said refreshment vehicle is a legal and conforming accessory use of the existing restaurant or food premise business or if operating from municipal property where prior authorization has been granted by the City.

Keeping in mind the need for a continuous flow of pedestrian and vehicular traffic and the separation distance requirement, the possible locations for a refreshment vehicle in the downtown are limited.

As reported in 2011 to the Public Works Sub-committee, two possible locations were identified by Administration that would ensure pedestrian and vehicular traffic is not impeded. Both locations however were within 60 meters of the property line of an existing restaurant or food premise.

The two identified locations were:

1. In the dedicated parkette known as Tir na nOg, "Land of Youth" which is located between 42 and 30 Downie Street. This location is within 30 meters of a food premise.

2. On the property adjacent to the Administration of Justice building on George Street where the "Anna Banana" building was situated, 39 George Street West. Situated next to this location is an adjacent restaurant.

These two locations remain available today and are recommended for consideration as a potential location for a second refreshment vehicle in the downtown. Administration does not recommend any other location in the downtown core as the separation distance requirements will not be met. Parking lots are not recommended as potential sites because refreshment vehicles are larger than normal vehicles and will require a minimum of two parking spaces for use.

Financial Impact: In the event a second Refreshment Vehicle location is approved for the downtown, a competitive process will determine the lease revenue to the City.

Staff Recommendations: THAT the property located at 39 George Street West, be considered as the location for a second refreshment vehicle in the downtown City of Stratford;

THAT a Request for Quotation be prepared and issued in 2017;

THAT direction be given on the length of time of the lease agreement to be entered into with the successful bidder;

AND THAT the Business Licensing By-law 187-2004, be amended to include the location of the second refreshment vehicle to be located at 39 George Street West.

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Tatiana Dafoe, Deputy Clerk

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Andre Morin, Director of Corporate Services

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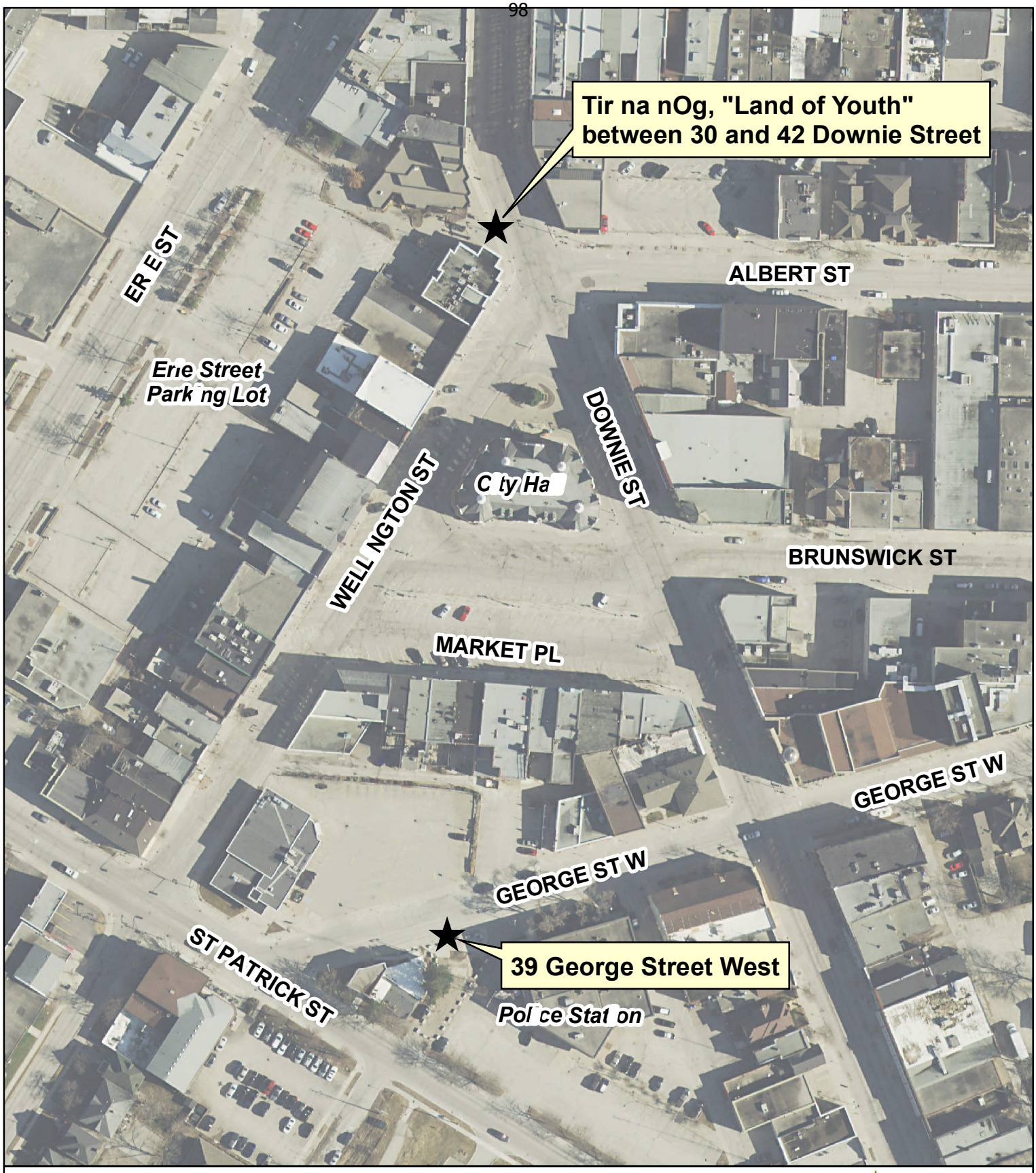
Rob Horne, Chief Administrative Officer



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Aerial Photo Flown in 2015

Potential Refreshment Vehicle Locations

Stratford
ONTARIO CANADA
Dramatically Different!

City of Stratford
Infrastructure and Development
Services Departmrent

Date: June 23, 2017

Corporate Services Department

MANAGEMENT REPORT

Date:	June 28, 2017
To:	Infrastructure, Transportation and Safety Sub-committee
From:	Joan Thomson, City Clerk
Report#:	ITS17-036
Attachments:	Delegation Information - Bicycle Licencing By-law 51-91 City of Stratford Bicycle Licencing

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Title: Request to repeal By-law 51-91 with respect to licencing bicycles

Objective: To hear the presentation by Jay Hunt requesting that the City repeal By-law 51-91 that requires owners to licence their bicycles with the City.

Background: Included with this report is the request received with respect to the by-law.

Analysis: City Council adopted By-law 51-91 in 1991 to require owners to obtain a licence from the City. The licence is a one-time licence and does not need to be renewed.

The bicycle licencing program is a shared program with the Optimist Club of Stratford which sponsored the original program. The Club continues to conduct a bike day for youth each year. In addition to safety awareness, the Club issues licences at the bike day at no charge.

The data base of ownership information is available to Stratford Police Services when bicycles are recovered or reported as missing and officers are trying to locate the owner.

Financial Impact: The revenue taken in by the City from the sale of licences is less than $200 per year.

Staff Recommendation: THAT the presentation by Jay Hunt regarding the Bicycle Licencing By-law 51-91 be heard;

AND THAT any direction be provided to staff.

_____
Joan Thomson, City Clerk

_____
Andre Morin, Director of Corporate Services

_____
Rob Horne, Chief Administrative Officer

Joan Thomson

From:
Sent: May-19-17 9:21 AM
To: Joan Thomson
Subject: Bicycle by-law licensing

Dear Joan Thomson: City Clerk

Last week I called and left my name and number for you to call me back regarding bicycle licensing. I received no call back. I called again this morning and talked to one of your staff and was offered your email.

It has come to my attention after buying a bicycle in Stratford that the city has a bylaw regarding licensing. I learned this 2 weeks from another bicycle owner. After reviewing information posted on your web site on this bylaw, it would seem that this was done to assist in the return of stolen property by police to the rightful owners. On talking to 2 police officers, they stated that "they have better things to do that trace bicycles" and I would have to agree.

I would suggest this bylaw be struck as it is not legal for a city to "licence" bicycles. That would the decision of the province who have decided it's not a useful law, has no merit and have not adopted it. Also, the current bylaw does nothing to ensure the bicycle is protected and thus is useless to the owner of a stolen bike by any professional thief. In addition, a fee of $6 is pointless to police and is just a cash grab by the city like the parking here. At least the parking I understand as revenue for the City.

I wish to debate and dismantle this bylaw in person. If it is not repealed, I would consider taking this matter to legal.

Please see Toronto's "effectiveness and jurisdictional issues" to bicycle licensing in the following link:

http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=0be4970aa08c1410VgnVCM10000071d60f89RCRD#jurisdiction

I remain:

Jay Hunt -

TORONTO

Web page Printout

Cycling and the Law

Bicycle Licensing

The City of Toronto has examined the idea of bicycle licensing on many occasions in response to concerns surrounding pedestrian safety, bike theft and compliance with the law.

Bicycle licensing has not been adopted as a solution to these issues. The studies asked what is **purpose of licensing**? If the goal is to increase cyclists' compliance with traffic laws, and to reduce the number of conflicts with pedestrians and other road users, then licensing as an approach needs to be compared with other possible initiatives.

Is the creation of the major bureaucracy that licensing would require worth it? The studies have concluded that licensing is not worth it. Learn about **licensing issues** in detail, as well as the **history of licensing** in Toronto.

On May 20, 1935 the City of Toronto passed a bylaw to license residents owning and using bicycles on the highways of the City.

The licensing process was quite complicated. Cyclists had to apply for a license through City Hall. Then the cyclist was required to go to a police station and have a police officer inspect the bicycle and fill out paperwork. That paper work was returned to City Hall and a license was granted. The cyclists then had to return a duplicate license to the same Police Inspector where the bicycle was examined. Then a metal plate was issued for the year and affixed to the mudguard of the bike.

Any time the cyclist moved or transferred or exchanged his bike, the new information had to be filed. The cost of the yearly license was 50 cents and the fine for not having a license on your bicycle was $5.00.

On February 4, 1957, City Council repealed the bicycle licensing by-law in the City. At that time, there was a communication from the Canada Cycle and Motor Company Limited suggesting the City use the services of the Bicycle Guild Incorporated to administer bicycle licensing.

At that time, the City opted out of bicycle licensing, stating amongst other issues that "licensing of bicycles be discontinued because it often results in an unconscious contravention of the law at a very tender age; they also emphasize the resulting poor public relations between police officers and children". Nathan Phillips was the Mayor at the time and it is his signature on the by-law amendment.

The City of Toronto has investigated licensing cyclists on at least three occasions in the recent past:

- 1984: focus on bike theft
- 1992: focus on riding on sidewalks, traffic law compliance and couriers
- 1996: focus on riding on sidewalks, traffic law compliance and couriers

Licensing in the nineties has been most often discussed in response to concerns for pedestrian safety on sidewalks, where incidents of collisions, near misses, and a lack of courtesy have made many pedestrians, including seniors feel insecure.

Each time the City has rejected licensing as a solution to the problem under discussion.

The major reasons why licensing has been rejected are:

- The difficulty in keeping a database complete and current
- The difficulty in licensing children, given that they ride bikes too
- Licensing in and of itself does not change the behaviour of cyclists who are disobeying traffic laws.

TORONTO

Web page Printout

Cycling and the Law

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- Cost
- Age
- Jurisdiction
- Enforcement
- Effectiveness
- Public policy considerations

Cost

The cost of obtaining a license to drive a motor vehicle is considerable. Much of that cost covers the administrative costs of maintaining an accurate database, and processing licenses. The costs of developing a system for cyclists would be similar. When asked to consider such a move in the past, the Ministry of Transportation has rejected it. If cyclists were asked to cover the cost of licensing, in many cases, the license would be more expensive than the bicycle itself.

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Age

Many children cycle, in fact most cyclists are young people. It would be difficult to create one standardized test that could be used by adults as well as children as young as five years old. There is an argument to be made that licensing would allow an opportunity for education, but again the bureaucracy of such a mandatory system has been seen as too cumbersome to develop.

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Jurisdiction

Those who have looked into licensing cycling have determined that the only natural jurisdiction to license is the province, which has rejected licensing. Historically, municipalities have licensed bicycles in Ontario. Today, many cyclists cross municipal boundaries.

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Enforcement

The discussions about cyclists and the law have raised the question about how we want our police to spend their time and limited resources. Do we want them checking up on and enforcing licenses, or do we want them enforcing traffic laws? Most people would argue that enforcing traffic laws is more worthwhile. Police who have been involved in the studies of licensing have determined that the HTA already gives them the necessary tools, such as Section 218, to do the enforcement job.

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Effectiveness

In each of the above cases, major problems and difficulties arise in establishing a licensing system. The studies asked what is the goal that licensing cyclists is attempting to achieve? If the goal is to increase cyclists' compliance with traffic laws, and to reduce the number of conflicts with pedestrians and other road users, then licensing as an approach needs to be compared with other possible initiatives. Is the creation of the major bureaucracy that licensing would require worth it? The studies have concluded that licensing is not worth it. Other solutions: blitz enforcement of rules on riding on sidewalks, public awareness campaigns, skills training through CAN-BIKE, and the provision of bicycle-friendly facilities, such as bike lanes, while not perfect, are more effective in meeting the goals of cyclist compliance with traffic laws than the investment in licensing.

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Public policy considerations

Concerns over cyclist compliance with traffic laws are real, and require ongoing attention. If, however, major investments are to be made by governments or by cyclists themselves, then the overall public policy goals behind that investment need to be addressed. For example, there is a strong public policy case to be made for licensing motor vehicle drivers. Hundreds of lives are lost each year because of motor vehicle crashes and collisions, and many thousands more are injured. Cyclists are involved in a smaller number of incidents, which must be addressed. However, given the benefits of cycling to health, the environment, and the community, on-going efforts to increase cycling compliance with traffic laws must be a part of an overall strategy to promote safe cycling.

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TORONTO

Web page Printout

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Theft

The police recover many stolen bikes, but are often frustrated at not being able to return the stolen property to the owner as the owner is unknown to them. A license might help ensure that the owner recovered his or her bike.

The Toronto Police Service still registers bicycles, using the factory identification numbers. A difficulty is that many manufacturers repeat serial numbers, making these numbers hard to use as a means of identification. A license might work better.

The difficulty, of course, is that license plates, stickers, or other means of identification can be stripped from the bike, making a license hard to use as a reliable means of identification.

Compliance with the law

The need to identify a cyclist who has broken a traffic law or been involved in a collision has been identified as a key concern by many.

The various studies that have looked at licensing for cyclists have determined that there

are many problems with **issuing licenses to cyclists**.

Police believe they have adequate tools to address cyclists who break traffic laws. The most important was the 1989 addition of Section 218 to the **Highway Traffic Act**.

Section 218 of the Highway Traffic Act (HTA)

1. A police officer who finds any person contravening any provision under this Act [HTA] or any municipal by-law regulating traffic while in charge of a bicycle may require that that person stop and to provide identification of himself or herself.
2. Every person who is required to stop, by a police officer acting under Subsection (1), shall stop and identify himself or herself to the police officer.
3. For the purposes of this Section, giving one's correct name and address is sufficient identification.
4. A police officer may arrest without warrant any person who does not comply with Subsection (2).

Consolidated to May 14, 2002

BY-LAW NUMBER 51-91
OF THE CORPORATION OF
THE CITY OF STRATFORD

BEING a by-law to regulate the issuing of bicycle licences and to prohibit the use of bicycles on the public streets within the City of Stratford without a bicycle licence.

WHEREAS Section 210, Paragraph 126 of the *Municipal Act, R.S.O. 1980, Chapter 302*, provides that Municipal Councils may pass by-laws requiring all residents in the municipality owning and using a wheeled vehicle other than a motor vehicle or trailer as defined in the Highway Traffic Act to obtain a licence therefore before using it upon any highway of the municipality;

AND WHEREAS the municipal Council of this Corporation deems it in the public interest that bicycle licences should be licenced.

NOW THEREFORE BE IT ENACTED as a By-law of The Corporation of the City of Stratford as follows:

1. In this by-law:

   (a) "bicycle" includes any wheeled vehicle other than a motor vehicle and a trailer as defined in the Highway Traffic Act and a wheeled vehicle used for farming purposes.

   (b) "highway" includes, while not limiting the generality of the foregoing, a common and public highway, street, avenue, parkway, driveway, square, place, bridge, viaduct or trestle, designed and intended for, or used by, the general public for the passage of vehicle and includes sidewalks, boulevards and the road allowance for any street or highway within the boundaries of the City of Stratford.

2. Every resident of the City of Stratford owning and using a bicycle shall obtain a licence therefore before using it upon any highway within the City of Stratford.

3. No person shall operate a bicycle on a highway within the City of Stratford without a valid licence attached to the bicycle in the area as prescribed in Section 6 hereof.

4. Applications for such licences shall be made to the office of the City Clerk, City Hall, Stratford, upon a form to be provides by the City, and the applicant shall complete such form, which shall require such information as may be necessary to distinguish the said bicycle from another bicycle and the said owner from any other person.

5. Upon receipt by the City of the completed application, a bicycle identification sticker shall be issued by the Clerk. Such sticker shall be evidence of obtaining the licence as required herein.

6. The licence sticker shall be fastened to the bicycle for which it has been issued on the frame beneath the seat, and if the bicycle has a cross bar, below the cross bar. The sticker shall remain attached to such bicycle so long as such bicycle is, or is capable of, being used upon any highway of the City of Stratford. No person shall attach the licence to any other part of the bicycle.

7. No person shall attach a licence sticker to any other bicycle at any time other than the bicycle for which the licence sticker was issued.

8. In the event of the sale or other transfer of a bicycle from one owner to another, the new owner shall make an application for the transfer of ownership at the office of the City Clerk within ten days of such sale or other transfer. Applications for replacement of a licence shall also be made to the office of the City Clerk.

9. The fees for bicycle licences, transfer of ownership, and replacement licences shall be as follows:

   (a) Students up to and including 17 years of age - $4.00

   (b) Adults (18 years and older) - $6.00

10. All fees collected under this by-law shall be transferred to the City Treasurer.

11. A Peace Officer for the City of Stratford may seize any apparently abandoned bicycle not on private property, or any apparently abandoned bicycle on private property when requested by an occupant of the said property, and hold such bicycle in a place determined by the City of Stratford Police Department until the owner comes forward or the bicycle is sold at auction pursuant to the provisions of the Police Services Act or otherwise disposed of.

12. No seized bicycle shall be returned to the owner until a fee of $5.00 is paid to the Stratford Police Department to cover expenses for the pick-up and storage of the said bicycle. No unlicenced bicycle shall be returned to an owner until a licence as provided for herein is obtained and attached to the said bicycle.

13. No person within the limits of the City of Stratford who sells a bicycle to a resident of Stratford shall transfer such bicycle to such person unless and until a licence as required herein is affixed to the said bicycle.

14. Persons within the limits of the City of Stratford who sell bicycles from retail locations may obtain a quantity of bicycle licence application forms from the Clerk's Office and are encouraged to provide such forms on behalf of the City of Stratford to the purchasers at the time of purchase of a bicycle.

    a) Residents of Stratford who purchase a bicycle are required to obtain a City of Stratford bicycle licence from the Clerk's Office, City Hall by completing an application form available at the point of sale or from the Clerk's Office;

    b) The completed application form and appropriate licence fee are to be submitted to the Clerk's office, City Hall, at which time the application will be processed and a licence provided to be affixed to the bicycle as prescribed.

15. Every person who contravenes any of the provisions of this by-law is guilty of an offence and shall, on conviction thereof, be subject to the penalties provided for in the Provincial Offences Act, R.S.O. 1980, c. 400, as amended.

16. This by-law shall come into force and effect upon the date of approval of the set fines pursuant to the Provincial Offences Act.

READ a FIRST, SECOND and THIRD TIME and

FINALLY PASSED this 25th day of March, 1991.

"Dave Hunt"
MAYOR - Dave Hunt

"R. Schulthies"
CLERK - R. Schulthies

Capital Projects Update for June 2017

1. Quinlan Pump Station Engineering
   - RFP awarded to RV Anderson
2. Mornington Vivian Reconstruction – Completion of 2014 project
   - Sanitary trunk sewer extension to Quinlan Road
   - Required upgrade at Vivian Pumping Station moving forward
   - Tender planned for July/August
3. Queen Street Storm Sewer
   - Consultant – AMEC, design is ongoing
   - Geotechnical program and report completed
   - Public information meeting held May 31
   - Detailed design under review
4. Clarifiers at Water Pollution Control Plant
   - Consultant – CIMA, tender to Wellington Construction Contractors Incorporated, construction ongoing, on schedule, complete August/Sept
5. Flow Monitoring and Sanitary model update
   - RFP award to AECOM
   - Data exchanged, flow monitors ordered, weather stations installed, model being compiled
6. Water Master Plan and model
   - Water Model awarded to C3Water
   - Pipe Condition Assessment and hydrant flow testing complete
   - RFP for master plan to be finalized after to above work is completed
7. Bridge Appraisals
   - BM Ross Final report for 2015 inspections complete
   - 2017 inspections this fall
8. Romeo St and St. Vincent St. Bridge Rehabilitation
   - R.J.Burnside consultant. Tender and construction for Romeo 2017, St. Vincent 2018
   - OCIF top up funding application was unsuccessful
   - Design finalized, open house for Romeo bridge work held on May 8
   - Tender being prepared
9. Concrete Sanitary Sewer Relining
   - Insituform awarded contract
   - CWWF funding obtained
   - Approx. 5000m of sewer to be rehabilitated
   - Work to be complete by November 2017

Capital Projects Update for June continued

10. Joffre Street Reconstruction
    - Moorefield Excavation Limited
    - construction complete, topcoat this summer
11. Ballantyne Avenue Watermain replacement
    - Road reconstruction – new watermain, storm and sanitary sewers
    - Project delayed until 2018
12. At Grade Railway Crossing Evaluations
    - RFP awarded to MMM Group
    - Waiting on final report this month, then a program for improvments will be developed
13. Oxford Street Reconstruction
    - New watermain, some sanitary and road reconstruction
    - Tender awarded to Lavis Contracting Co. Limited
    - LID measures included
    - construction on schedule for completion early August
14. Guelph Street Watermain
    - New watermain complete
15. Asphalt Resurfacing 2017
    - Douro Street from Romeo to Burritt
    - Erie Street from Lorne to Gibb Road with Connecting Link funding
    - Tender scheduled for July
16. Lorne Avenue Multi-use Trail
    - Armstrong Paving Ltd.
    - multi-use trail from railway tracks to Erie Street
    - construction to commence shortly
17. St. Vincent Watermain
    - New watermain from Lorne Ave to Patricia due to 17 main breaks in this section
    - Project will include resurfacing and extension of sidewalk from Patricia Road to Lorne Avenue
    - Design ongoing, construction spring 2018
18. Lorne Avenue Turning Lane
    - Left turn lane on Lorne Avenue at Wright Boulevard
    - Design ongoing, construction 2018
19. Market Square Redevelopment
    - Ro-buck Contracting Ltd. completed on schedule
    - Final stone and woodwork for concrete plinths scheduled first week of July

Active Transportation Advisory Committee
April 26, 2017

A meeting of the Active Transportation Advisory Committee (ATAC) was held on the above date at 7:00 p.m., Kiwanis Centre, 111 Lakeside Drive, Stratford.

Committee Present: Councillor McManus – Chair presiding, Councillor Vassilakos – Vice-Chair, Henry Centen, Bernard Goward, Cambria Ravenhill, Sarah Merkel, Geoff Love and Gary Jacques

Staff Present: Nancy Bridges – Recording Secretary

Also Present: Katherine Horst – Perth District Health Unit

Regrets: Nancy Roulston – Manager of Engineering, Brad Hernden – Manager of Recreation and Marketing and Lorraine Kuepfer

MINUTES

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1. DECLARATIONS OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF BY MEMBERS OF CITY COUNCIL.
None declared.

2. ADOPTION OF PREVIOUS MINUTES – March 22, 2017
Geoff Love asked for clarification of a few items in the previous minutes, as he was absent from that meeting.

Motion by Cambria Ravenhill, seconded by Henry Centen
That the ATAC minutes dated March 22, 2017 be adopted as amended. Carried.

3. BUSINESS ARISING FROM PREVIOUS MINUTES

a.) Road reconstruction policy review
Councillor McManus deferred the discussion on the Road Reconstruction Policy review to the next meeting. She also requested that staff be present at the May ATAC meeting to discuss the policy.

b.) Update on Bike and Pedestrian Counters

Sarah Merkel noted that she has been in contact with the City of Hamilton regarding their bike and pedestrian counters and they were very informative and directed her to their website (www.hamilton.ca). Ms. Merkel then guided the committee through Hamilton's website, highlighting the statistics page, locations of the counters and other details. She indicated that it will be necessary to get some specific quotes in order to gather cost and details regarding the counters. She also briefly showed the website for the equipment supplier that Hamilton utilizes (www.eco-counter.ca).

Ms. Merkel responded to a question regarding how the City of Hamilton utilizes the information they receive from the counters, noting that they incorporate the data into decision making for infrastructure as well as providing updates to Council.

Councillor McManus posed the question of where the counters should be located in Stratford. Councillor Vassilakos indicated that a decision would need to be made on what the data will be used for. She suggested placing counters where usage is of interest, as well as locations that have been flagged as needing improvement. Committee members suggested the following locations:

- TJ Dolan trail
- O'Loane Ave.
- Near schools
- Popular crossings, especially during tourist season

Geoff Love inquired about the cost of the different units. Ms. Merkel indicated the mobile units range from $7,000 - $8,000. A discussion followed regarding ATAC's priorities and whether their focus should be bike parking or counters. Councillor Vassilakos noted that ATAC has enough in their reserve budget to do both projects if the committee chose to do so.

Councillor McManus noted that the deadline for the Trillium grant is July and it would make sense to package counters and bike parking together on the application. ATAC would need to partner with a charitable organization to qualify for funding from Trillium. The committee made numerous suggestions for partner organizations, including:

- Stratford BIA
- United Way
- Rotary
- Avon Trail

Ms. Merkel and Mr. Love agreed to provide quotes for counters at the May ATAC meeting and continue the discussion at that time.

c.) Short term implementation of Bike and Pedestrian Master Plan

The committee discussed the topic of signage and how the master plan does not necessarily include the most effective signage plan. It was agreed that

Stratford lacks proper wayfinding signage and that further staff consideration should be made before additional signs are installed. Councillor Vassilakos and Geoff Love provided a brief description of proper wayfinding signage for those ATAC members who were unsure.

The committee discussed the Romeo Street widening project and what type of bike lane would be most beneficial in that area; on road or separated. The committee agreed that developing a strong primary route system is important before working on the smaller, secondary routes. More information from staff regarding these types of projects and how they affect other types of infrastructure would be helpful.

Motion by Geoff Love, seconded by Henry Centen
That staff provide more information in notices and detailed plans to the public regarding upcoming projects involving active transportation elements, in order to better engage the community and allow for knowledgeable input at Open Houses.
Carried.

Motion by Geoff Love, seconded by Sarah Merkel
That staff provide an update on the Bike Parking plan at the May ATAC meeting, after it is presented to Sub-committee.
Carried.

Motion by Geoff Love, seconded by Gary Jacques
That staff develop a Bike signage plan to include wayfinding signs and present it at the October ATAC meeting.
Carried.

d.) Update on available grants

Councillor Vassilakos noted that there are numerous grants available and that it would be helpful to have another member of ATAC join the Funding Opportunities and Infrastructure working group to aid in researching the grants. Cambria Ravenhill offered to join the working group.

Katherine Horst suggested developing a spreadsheet where everyone can input their information regarding the various grants and this will aid in the decision making process. Geoff Love indicated that he will contact Share the Road to see if they have any resources that may be beneficial.

4. NEW BUSINESS

a.) Province-wide cycling network

The committee discussed the cycling maps developed by the Ministry and noted that they seem to focus on larger cities and they show a disconnect with rural Ontario. The committee discussed whether Stratford should be

more prominently displayed on the cycling maps and how to achieve this. Councillor Vassilakos suggested that promoting our 500,000 tourists per year would be a good place to start.

Sarah Merkel noted that the aim of the Guelph to Goderich trail is to offer different types of routes, for all skill levels. Geoff Love recommended that ATAC respond to the Ministry's Cycling Network with comments and request that Stratford to be added to the map. Sarah Merkel and Geoff Love volunteered to write the letter, with final approval to come from Councillor Vassilakos and McManus.

Motion by Sarah Merkel, seconded by Geoff Love
That ATAC partner with Cycle Stratford to co-write a letter to the Ministry to comment on the Cycling Network.
Carried.

NEXT MEETING DATE – Wednesday May 24, 2017 – 7:00pm – KIWANIS COMMUNITY CENTRE, 111 Lakeside Drive.

MEETING ADJOURNMENT

Motion by Geoff Love, seconded by Bernard Goward
That the April 26, 2017 ATAC meeting adjourn.
Carried.

Start Time: 7:00 pm
End Time: 8:40 pm

A meeting of the **Stratford Accessibility Advisory Committee (AAC)** was held on the above date at 11:30 a.m., 82 Erie Street – Avon Room, Stratford ON

Committee Present: Roger Koert – Chair Presiding, Councillor Bonnie Henderson, Diane Beckner, Peter Zein, Peg Huettlin, Paul Schoonderwoerd, Julie Patterson, Judy Hopf

Staff Present: *Dan Sykes – Infrastructure & Development Services, *Julia Opie – Accessibility Coordinator, *Tatiana Dafoe – Deputy Clerk, Casey Riehl – Recording Secretary

Also Present: *Alisha Pol

Regrets: Jessica Jantzi

MINUTES

1.0 CALL TO ORDER

Roger Koert called the AAC meeting to order at 11:28 a.m.

2.0 DISCLOSURE OF PECUNIARY INTEREST

None declared.

3.0 ADOPTION OF THE PREVIOUS MINUTES – March 7, 2017

Motion by Paul Schoonderwoerd, seconded by Julie Patterson that the minutes dated March 7, 2017 be adopted as amended. Carried.

4.0 INFRASTRUCTURE & DEVELOPMENT SERVICES UPDATE – Dan Sykes

Curb Cuts & Budget Update

Dan Sykes thanked committee members for sending him updates to the curb cut map. He has a generous window of time set aside for himself and an inspector to go around and visit the sites on the map and do an assessment. Cobourg and Veterans is tagged as the first one to do in 2017. The one on Wellington will also be completed. He will continually update the map as he received suggestions for improvements and encourages committee members to e-mail him. He estimates they will have a contractor finalized and can begin cement work the beginning of May.

Councillor Henderson inquired whose responsibility it is to maintain bus shelters on private property. There is one located off of a grocery store parking lot that has a steep slope into the shelter, no seat and has a curb still in front. Mr. Sykes will inquire with the Transit Manager about this issue.

Julie Patterson inquired if the audio signals at the crossings have been assessed lately. Some of them beep constantly, even when it's not time to cross. Dan Sykes will get an update on the crossing signals.

Alisha Pol suggested that there is a link missing on West Gore heading from Spruce Lodge to the old Ambulance garage at the Hospital. Mr. Sykes explained that it is already noted as a missing link and they are trying to work with the Hospital to see if they are willing to put in a sidewalk. She also noted the current sidewalk on West Gore from Spruce Lodge to John Street is in need of repair, it is very rough.

Accessible Parking Updates

The new accessible parking spot in the George Street lot will be painted closer to May when the weather warms up.

Update on 2017 Accessibility Projects

Mr. Sykes explained that some of the sidewalk missing links will be addressed with road upgrades. Court Drain to Quinlan Road is scheduled for June-October, however some issues still need to be cleared with the Ministry.

The sidewalk replacement program is scheduled to begin May 1, 2017. Ballentyne has been deferred to next year. Market Square is on target to finish on time. The contract has been awarded for Oxford (water main, sanitary, curb/gutter – May 15) and Guelph Street (water main replacement only – Apr. 18). Asphalt resurfacing on St. Vincent from Lorne to Patricia (north leg) including sidewalk, Douro from Romeo to Burritt (asphalt only), Erie from Lorne to Line 29 (formerly Gibb). The City has submitted a proposal to the Owner of the property on Douro Street from the new EMS headquarters to Burritt Street to finish the sidewalk in front of that property. When the development on the corner of Romeo/Douro is eventually finished, a sidewalk will be installed there also to complete the run from Burritt to Romeo.

Romeo Street and St. Vincent Street bridges will be repaired this year in June/July. Also, the Lorne Avenue multi-use trail extension from the CN tracks to Erie Street (3m wide asphalt) will complete that link.

Dan Sykes will forward an article about the City of Guelph adding sidewalks to make their city more accessible.

Update on Rotary Complex Parking Lot Review – R. Koert/P. Zein

Peter Zein and Roger Koert reviewed the draft presentation for the parking lot at the Rotary Complex and Ag Society Buildings for feedback from the committee prior to

presenting to Sub-committee or Council. Some of their recommendations include redirecting some sidewalks and parking, raised painted sidewalks, more direct sidewalks from McCarthy to the buildings, a wider complete sidewalk along the Rotary Complex leading to the Ag Society building behind, some sort of line painting to direct people from the Rotary to the Ag buildings through the parking lot, parking options at west side of Rotary.

*Tatiana Dafoe now present (12:15 p.m.)

Committee members supported the points made in the presentation and asked Mr. Zein if he would be ready to go directly to Community Services Sub-committee to present. Staff will inquire if Mr. Zein, Roger Koert and Julia Opie can be added as delegates at the April or May Sub-committee meeting. Julia Opie suggested getting staff together on site at the Rotary to review and see some of the suggestions that the committee is presenting would be beneficial.

Alisha Pol added that another good example of parking lot layouts is the new Costco in Waterloo.

*Dan Sykes no longer present (12:25 p.m.)

5.0 SITE PLAN REVIEW SUB-COMMITTEE – Julia Opie

Julia Opie explained that once a plan has been reviewed and a report generated, the whole AAC committee will receive a copy. If anyone has any questions, they can be raised at the regular monthly meetings.

This month the review sub-committee looked at the Samsonite Warehouse and Office, as well as the Stratford Library front stairs replacement.

Ms. Opie presented an updated design to the committee for the Service Ontario ramp. Perth County Council rejected the original plan. The width is slightly narrower, due to the pillars on the building that are along the side of the ramp. The Perth County AAC supports the design and is okay with the narrower width. Peter Zein inquired if the proposed length of the ramp required a landing part way up. Ms. Opie noted the guidelines state that a landing must be added at 9 metres. The total length of this ramp is 9 metres, so will not require a landing.

Motion by Peter Zein, seconded by Peg Huettlin that the Stratford Accessibility Advisory Committee supports the proposed design of the new Service Ontario accessibility ramp and has no issue with a pathway of 1100 millimeters. Carried.

Roger Koert welcomed the new Deputy Clerk, Tatiana Dafoe to the meeting. Ms. Dafoe introduced herself to the members and gave a brief update on the status of the accessible parking report. She plans to have it complete for the May AAC meeting and will attend to discuss. She will circulate it prior to the meeting for the committee to review.

6.0 AAC PROJECTS UPDATE

(a) Promoting Accessibility with STA – B. Henderson/R. Koert/P. Zein

Peter Zein will follow up with Kristin Sainsbury at the STA.

(b) Stratford Home Show (April 8-9, 2017) – Julia Opie

Julia Opie has a copy of the sign-up sheet for members to work in the AAC booth. She will let members know what the booth number is as soon as she hears. Councillor Henderson will arrange to gather all the Stratford AAC items for the show.

7.0 BUSINESS ARISING FROM PREVIOUS MINUTES

(a) Update on Portable Ramps for Rotary Complex – Julia Opie

Julia Opie reported that the ramps have been fabricated. They are being picked up today and will be ready to use at the Dairy Expo and then the Home Show. She inquired if the slope is within the building code of 1" rise per foot. Jim Bryson stated that they are within the code. They are having four existing ramps cut and modified by adding an increased area wing at the top side. AAC funding will be used to purchase two new ramps, for a total of six. Community Services will purchase two more next year. The surface is aluminum and non-slip abrasive tape can be added to prevent slippage.

(b) Update on Accessible Taxi Fees in Stratford – Julia Opie

Julia Opie has reviewed the entire taxi bylaw and made notes. She has forwarded it to Police Chief Bellai to make him aware of the changes required. She noted the main item that needs to be changed is Appendix D (charging higher rates for accessible taxis). This is in direct violation of the AODA. Chief Bellai will contact Ms. Opie after the next Police Services Board meeting to update her on the outcome.

(c) AAC Provincial Forums – London (Apr.19th) & Kitchener (May 23rd)

Bonnie Henderson, Judy Hopf and Diane Beckner will be attending the May 23rd forum in Kitchener.

8.0 NEW BUSINESS

(a) Draft 2016 Annual Status Update to the Multi-Year Accessibility Plan

Julia Opie previously circulated the draft update to committee members for their feedback and comments. Julie Patterson noted on page four, third bullet, that it should include "service dog". Ms. Opie will include this update. Peter Zein inquired about training that the AAC should receive. All members currently receive information to do the online customer services training, however members do not do additional AODA training. Ms. Opie is working on the web page for training on all the Standards and will forward information to the AAC members once it is complete. Training is a large project that the City is currently working on.

Motion by Peg Huettlin, seconded by Diane Beckner that the Stratford Accessibility Advisory Committee recommends that Council adopts the 2016 Status Update: City of Stratford Multi-Year Accessibility Plan. Carried.

(b) National Accessibility Awareness week (May 28 – June 3, 2017)

Roger Koert asked members to think of some ideas that the committee can do for National Accessibility Awareness week. One suggestion was doing a similar event as in the past where City Councillors and the Mayor navigate downtown in wheelchairs, only this time do it up at the Rotary Complex. Another suggestion is to run some articles in the newspapers regarding accessibility. Further discussion at the next meeting.

(c) Rick Hansen Barrier Buster Project – Stratford YMCA – Roger Koert

Roger Koert explained this initiative which promotes access for all and accessibility projects in your community. The Stratford YMCA applied for a grant for automatic door openers for their two main entrances. Mr. Koert wrote a letter of support for this project. As soon as Mr. Koert hears, he will update the committee on whether or not the YMCA was successful or not. If they are successful, one of the stipulations is to hold an event. Mr. Koert mentioned that it would be nice if some AAC members could attend.

(d) Letter to the Editor Regarding Accessibility – Peter Zein

Peter Zein discussed the recent letter to the editor in the newspaper regarding the lack of accessibility in the downtown area. The committee feels that a response to let the person know that Stratford has an Accessibility Advisory Committee that not only has been involved in the accessibility decisions of the new Market Square, but that they work very hard on the accessibility of all areas of the city. As Chair, Roger Koert will review the letter and discuss with the City Clerk should he decide to write a response.

*Julia Opie and Alisha Pol no longer present (1:00 p.m.)

(e) National Stadium – Councillor Henderson

Councillor Henderson had previously toured the stadium regarding the accessibility of the stands, washrooms, change rooms and concession areas. It is very difficult to navigate if you are in a wheelchair, some areas are not accessible at all. The baseball association is looking to partner with another group who could apply for a grant to do the accessibility upgrades. Peter Zein stated that they would have to have funds in place prior to applying for a grant, as the grant is based on the funding proposal. Councillor Henderson stated that they are trying to do some fundraising to start the process. Roger Koert will contact the president of the association to discuss.

9.0 NEXT MEETING – Tuesday, May 2, 2017 – 11:30 am – Avon Mtg. Room

10.0 ADJOURNMENT

Motion by Diane Beckner, seconded by Judy Hopf that the meeting adjourn. Carried.

Time: 1:10 p.m.

A meeting of the **Stratford Accessibility Advisory Committee (AAC)** was held on the above date at 11:30 a.m., 82 Erie Street – Avon Room, Stratford ON

Committee Present: Roger Koert – Chair Presiding, Councillor Bonnie Henderson, Diane Beckner, Peter Zein, Peg Huettlin, Paul Schoonderwoerd, Julie Patterson, Judy Hopf, Jessica Jantzi

Staff Present: *Dan Sykes – Infrastructure & Development Services, *Tatiana Dafoe – Deputy Clerk, *Andre Morin – Director of Corporate Services, Casey Riehl – Recording Secretary

Also Present: Alisha Pol

Regrets: Julia Opie – Accessibility Coordinator

MINUTES

1.0 CALL TO ORDER

Roger Koert called the AAC meeting to order at 11:30 a.m.

2.0 DISCLOSURE OF PECUNIARY INTEREST

None declared.

3.0 ADOPTION OF THE PREVIOUS MINUTES – April 4, 2017

Motion by Councillor Henderson, seconded by Peg Huettlin that the minutes dated April 4, 2017 be adopted as printed. Carried.

4.0 INFRASTRUCTURE & DEVELOPMENT SERVICES UPDATE – Dan Sykes

Curb Cuts & Budget Update

Dan Sykes updated the committee that the first curb cuts this spring will be at Cobourg near the cenotaph and Devon at Romeo.

Accessible Parking Updates

The George Street parking lot spots will be converted over and painted this month.

Staff is going to wait and do the Wellington Street spot once construction has ended. Will confirm with Jim Bryson on the KCC spots moving closer to the building and get them redone this spring. Mr. Sykes will investigate the York Street spot when he does his assessment.

Peter Zein inquired if the tactile plates that are installed on the sidewalks at intersections are directional? Mr. Sykes informed the committee that they are not directional.

Roger Koert brought with him the new dynamic symbol template that can be used to paint accessible parking spots. Students at Northwestern Secondary School fabricated the template. Mr. Koert has requested to speak at Sub-committee to request the city use the new logo. Road signs cannot be updated as of yet, they are governed by the Ministry. Roger Koert suggested a photo for the newspapers be taken downtown at an accessible parking spot once the city approves the new dynamic symbol and paints a spot. This would be great publicity for National Accessibility Awareness Week.

Update on 2017 Accessibility Projects

No new updates.

Update on Rotary Complex Parking Lot Review – R. Koert/P. Zein

Peter Zein is meeting with David St. Louis on site at the Rotary Complex on May 4, 2017 to review the areas being discussed at the next Community Services Sub-committee meeting.

*Dan Sykes no longer present (11:45 a.m.)

5.0 DELEGATES: TATIANA DAFOE/ANDRE MORIN – ACCESSIBLE PARKING

Tatiana Dafoe reviewed the management report previously distributed to the committee. There is currently a request before Council to increase the downtown parking limit from three hours to four, which may alleviate some of the time constraints, not only for accessible spots, but for all parking spots. The report supports that payment not be required when people park at an accessible parking spot with their permit visible. Payment will be required at regular parking spots, even with a permit. The city is also investigating implementing a pay-by-phone system, which may eliminate some of the barriers for people. She suggested a review after approximately six months to see if non-payment at accessible spots is working or if anything needs to be changed. She is interested in hearing feedback from members on the content of the report.

Peter Zein stated that it is difficult sometimes to find a suitable accessible parking spot that works for certain vehicle lifts. It would be helpful to be able to park in a regular spot in certain situations. Some members agree that parking free with a permit at any spot would be their preference.

Councillor Henderson is concerned that visitors and residents of Stratford who are on fixed incomes pay the accessible meter, but sometimes run out of time and are now left with a ticket to pay which may be difficult financially.

Roger Koert inquired if whatever the parking time limit is set at, could the accessible parking spots have an additional one hour? Mr. Morin noted that this is a possible option.

Andre Morin added that Stratford has a unique situation with their downtown parking and the festival. This is a step in the right direction to rectify some of the issues. He supports a review after six months to see if not paying at accessible meters is working. Mr. Morin hopes to take the report straight to Committee on May 23rd to possibly get it approved before the summer.

The blue meters will remain initially and that will be discussed at the review period. The stickers on them will be updated to explain payment. Signage will be key at the accessible spots. Roger Koert will forward a jpeg of the dynamic symbol of access to Andre Morin.

Paul Schoonderwoerd suggested that with the development of the Cooper site and the busses possibly being located there, that a shuttle could be run from the bus depot to the festival. With this option, patrons could easily park for free at the lot and possibly show their festival ticket to the bus driver for a shuttle ride to the theatre. This would ease a lot of the parking congestion in the downtown core.

Motion by Paul Schoonderwoerd, seconded by Jessica Jantzi that the Stratford Accessibility Advisory Committee supports the report on the Draft Accessible Parking Permit Policy as amended. Carried.

*Tatiana Dafoe and Andre Morin no longer present (12:30 p.m.)

6.0 SITE PLAN REVIEW SUB-COMMITTEE – Julia Opie

Roger Koert reported that a letter of support from the Stratford AAC has been sent by Julia Opie to the Director of Public Works for Perth County.

Members of the committee also reviewed plans with Community Services staff for future playground equipment for City of Stratford parks. The review committee did not have good ratings for any of the proposed equipment. Moving forward, this committee will have more of a voice to help the city work towards better accessible equipment in the parks.

7.0 AAC PROJECTS UPDATE

(a) Promoting Accessibility with STA – Peter Zein

Peter Zein has discussed with Kristin Sainsbury some ideas for promoting accessibility in the city in conjunction with the STA. He will follow up with Ms. Sainsbury to discuss moving forward with the project with another staff member, as Ms. Sainsbury will be leaving the STA the end of June. Julie Patterson noted that she had two different people comment at the Stratford Home Show about their difficulties trying to find accessible accommodations in Stratford. Councillor Henderson asked Alisha Pol how much information is in the Festival's visitors guide regarding accommodations and accessibility. Ms. Pol explained that the guide has some information, but is limited to the businesses that choose to advertise in the booklet. They do have an accommodations coordinator that visitors can talk to and ask questions. Ms. Pol will put Peter Zein in contact with a representative at the Festival.

(b) Update on Stratford Home Show/Portable Ramps (April 8-9, 2017)

Members noted the new steel ramps worked very well. Additional ramps will be ordered in the future for a total of eight, which will be required when both ice surfaces are being used for an event.

7.0 BUSINESS ARISING FROM PREVIOUS MINUTES

(a) Update on Accessible Taxi Fees in Stratford – Julia Opie

Deferred to next meeting.

(b) AAC Provincial Forum– Kitchener (May 23, 2017)

Bonnie Henderson, Judy Hopf and Diane Beckner will be attending the May 23rd forum in Kitchener.

(c) National Accessibility Awareness Week (May 28 – June 3)

Roger Koert will inform the committee the date and location of the new dynamic symbol for accessibility launch. The committee is also hoping to have the accessible parking proposal for free parking at designated accessible spots to be approved in time for National Accessibility Awareness Week.

8.0 NEW BUSINESS

(a) Request for City Adoption of new Dynamic Symbol – Roger Koert

Roger Koert has sent a request to staff for him to attend an upcoming Council meeting to discuss the City moving forward and using the new dynamic symbol to mark accessible parking spots.

Motion by Peter Zein, seconded by Judy Hopf that the Stratford Accessibility Advisory Committee requests Council approve the City of Stratford formally adopt the use of the dynamic symbol, that the guidelines reflect this change, and that the icon be changed in the city over time. This will begin when an accessible parking spot's surface icon is required to be re-painted. Carried.

(b) Stratford Day at the Blue Jays – Peter Zein

Peter Zein stated that Stratford Day at the Blue Jays is on May 13, 2017 and the city has chartered a new accessible bus. Mr. Zein is making the trip and will report back to the committee. He will also contact the Mayor's office to see about contacting the media.

(c) Accessible Stair Nosings – Stratford Public Library

Julia Opie sent three samples of stair nosing for the new stairs being installed at the Stratford Public Library. She is looking for some feedback from the AAC on which one they feel would be the best. The committee did not like the metal sample, as it was less visible and may get slippery over time. The committee would choose the yellow nosing with the glow strip as their choice for the stairs, as it will offer the most visibility.

(d) The People in Motion Show – May 26-27, 2017

This year's event will be held in Toronto on May 26-27 from 10-5 p.m. in the Queen Elizabeth Building, Exhibition Place.

9.0 NEXT MEETING – Tuesday, June 6, 2017 – 11:30 am – Avon Mtg. Room

10.0 ADJOURNMENT

Motion by Peter Zein, seconded by Diane Beckner that the meeting adjourn. Carried.

Time: 1:05 p.m.

A meeting of the Energy & Environment Advisory Committee was held on the above date at 4:00 p.m. Kiwanis Community Centre, Conference Room – 111 Lakeside Drive, Stratford

Present: Councillor Kerry McManus – Chair Presiding, Lorraine Kuepfer, Angela Bossence, Councillor Bonnie Henderson, Craig Merkley, Alan Carr, *Ethan Elliott, Geoff Love, *Vanni Azzano

Staff Present: Kate Simpson – Waste Reduction Coordinator, Casey Riehl - Recording Secretary

Absent: Scott Mitchell, Marianne Hawley, Dave Hanley, Trena Hough

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MINUTES

1.0 CALL TO ORDER

Councillor McManus called the Energy & Environment meeting to order at 4:00 p.m.

2.0 DISCLOSURE OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF

None declared.

3.0 ADOPTION OF THE PREVIOUS MINUTES – March 9, 2017

Motion by Angela Bossence, seconded by Lorraine Kuepfer that the minutes dated March 9, 2017 are adopted as printed. Carried.

4.0 UPDATES FROM WORKING GROUPS

Waste & Water

Kate Simpson reported that she has finished her textile recycling report and has submitted it to the Director of Infrastructure & Development Services. Once the report has been reviewed, it will go on to Council for consideration.

She also reported to the committee that she is working towards getting a waste app added to the City's website. A lot of municipalities are offering waste apps to allow residents to download a calendar showing waste pick up days, recycling, hazardous waste pick up dates and treasure hunt days. The app is free to download. Staff will receive

reports on usage of the app. In the future, the City could update the app for a fee and offer upgrades to citizens if they choose to. Councillor Henderson inquired if they offered a transit app. Ms. Simpson was not sure if they did or not but will inquire.

Councillor McManus noted that the tour in Woodstock regarding zero waste has been deferred to sometime closer to July.

Ethan Elliott now present (4:05 p.m.)

Transit & Climate

Geoff Love reported that he and Councillor McManus met some local high school students to create a video on the 1 Meter Law. The students are interested in the project and already have some ideas on content. They are hoping to post the video on the high school websites, as well as Cycle Stratford. He also noted that Cycle Stratford is planning to do two rides as part of the Canada Day celebrations. They have hit a snag regarding insurance, but are working on a way to make it work. He also reported that ATAC will be discussing bike racks at their next meeting.

Ecological

Councillor Henderson reported that the Home Show went very well. Both winners of the trees were from Stratford. Kate Simpson followed up with some of the questions visitors had at the booth. There were a lot of questions regarding battery recycling. Ms. Simpson let committee members know that they can direct citizens to the website of the company that provides this recycling service for Stratford (RAW). Councillor McManus noted that focusing on one topic for the booth display is less overwhelming for visitors to stop and discuss.

Lorraine Kuepfer discussed with the committee that it was recently brought to her attention that nurseries use neonicotinoids on plants, which in turn will kill the bees. Ontario uses the least amount of neo-nics. She encouraged members to spread the word and to ask questions at the nursery when purchasing plants. Craig Merkley will do some follow up work and fact check before the committee moves ahead with this issue.

Councillor Henderson reminded the committee that on Tuesday, April 18th, Barb Hacking and Ethan Elliott will be speaking at the KCC regarding butterflies.

Councillor McManus reported that the World Water Day tours around Stratford were well received. Kate Simpson reported that staff will run tours again and look at some different dates, as well as reach out to schools to tour facilities.

Energy

No new updates.

5.0 BUSINESS ARISING FROM PREVIOUS MINUTES

(a) Update on Social Media Proposal

No new update.

(b) Bee City Update – Ethan Elliott

City Council endorsed Stratford becoming a Bee City. Ethan Elliott will be visiting Ottawa next month to discuss some more pollinator action plans with MP's. Councillor Henderson noted that some local schools have inquired about starting pollinator gardens.

*Vanni Azzano now present (4:20 p.m.)

(c) 2017 Projects

Councillor McManus discussed some ideas that Dave Hanley submitted.

- Planting trees was one suggestion. Craig Merkley has discussed this idea with Mr. Hanley and suggested planting pockets of perhaps five trees in some different locations throughout the city. Craig Merkley, Dave Hanley and Quin Malott to discuss a plan.
- Bike racks
- Pollinator gardens
- Further Avon River bank work
- Invasive species – i.e. myrtle
- Review of multi-res composters currently being used (Kate Simpson)
- Organics project – Kate Simpson explained that there is funding for a bio-solids project at the solid waste treatment plant. Stratford generates approximately 1,000 tons of residentially generated organics. The project requires 13,000 tons of organics. If the project goes ahead, other municipalities and farms will be approached to reach the 13,000 ton goal. The organics will be put in a digester to create methane and then put that methane back on the power grid. This would mean curbside collection of organics for the city at a much more feasible cost. She will keep the committee updated on the progress and details of this project.
- Vanni Azzano reported that UTRCA may be running a new educational program starting in September.
- Ethan Elliott suggested organizing a climate reality presenter to come speak
- Items for E&E events/displays, i.e. table cloth for booth

Councillor McManus asked committee members for the May meeting, to bring back costs associated with completing the above projects.

6.0 UPCOMING EVENTS

Green Week (April 18-23, 2017) – Vanni Azzano reviewed the calendar of events with the committee. He also sent a copy of the calendar to the newspaper.

7.0 NEW BUSINESS

No new business.

8.0 NEXT MEETING DATE – Thursday, May 11, 2017 – 4:00 p.m. - KCC

9.0 ADJOURNMENT

Motion by Bonnie Henderson, seconded by Vanni Azzano that the meeting adjourn. Carried.

Time: 4:50 p.m.

A meeting of the Energy & Environment Advisory Committee was held on the above date at 4:00 p.m. Kiwanis Community Centre, Conference Room – 111 Lakeside Drive, Stratford

Present: Councillor Kerry McManus – Chair Presiding, Lorraine Kuepfer, Angela Bossence, Councillor Bonnie Henderson, Craig Merkley, Geoff Love, Vanni Azzano, Scott Mitchell, Marianne Hawley, Dave Hanley, Trena Hough

Staff Present: Casey Riehl - Recording Secretary

Absent: Alan Carr, Ethan Elliott, Kate Simpson, Taylor Crinklaw

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MINUTES

1.0 CALL TO ORDER

Councillor McManus called the Energy & Environment meeting to order at 4:00 p.m.

2.0 DISCLOSURE OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF

None declared.

3.0 ADOPTION OF THE PREVIOUS MINUTES – April 13, 2017

Motion by Angela Bossence, seconded by Lorraine Kuepfer that the minutes dated April 13, 2017 are adopted as printed. Carried.

4.0 UPDATES FROM WORKING GROUPS

Waste & Water

Geoff Love reported that the Oxford County site visit has been tentatively rescheduled for the end of August. Councillor McManus reported that they have discussed the concerns around recycling at events in City buildings, not necessarily large outside events, and not having enough recycling options. They are going to look into the city's policies regarding this and possibly have information added to event applications. Councillor McManus noted that there will be a combined meeting between the waste/water working group and the energy working group to discuss the potential pilot project on organics at the waste water treatment plant.

Transit & Climate

Geoff Love discussed the new tourism plan by the province announcing cycling infrastructure details. There is a cycling tourism map posted, however Stratford is not on it. ATAC and Cycle Stratford are working on a response to the Environmental Bill of Rights to have Stratford added. He also reported that there is a meeting this week regarding the Romeo Street bridge. The meeting is to discuss making the bridge wide enough to accommodate marked cycle lanes as well as sidewalks. ATAC has also sent in a letter requesting that as part of the fairgrounds development process that attention is given to incorporating multi-use trails and cycling paths. The organization, Share the Road, is bulk-purchasing front/back bike light kits. He is requesting that E&E partner with ATAC to purchase kits to give out at the Canada Day rides to promote cycling in Stratford. The lights will be installed on the bikes at the event.

Motion by Geoff Love, seconded by Dave Hanley that the Energy & Environment Advisory Committee spend up to a maximum of $500.00 from the committees reserve fund for the purchase of bike lights to give away at the Sesquicentennial bike rides. Carried.

Ecological

Craig Merkley and Councillor Henderson reported that the spring speaking event was well attended and they are working on plans for a fall speaker. Dave Hanley and Craig Merkley reported that one of the two trees won at the Garden Show has been planted.
They are working on arrangements to get the second one planted shortly.

Energy

No new updates.

5.0 BUSINESS ARISING FROM PREVIOUS MINUTES

(a) 1 Metre Law Campaign Update – Geoff Love

No new update.

(b) Update on Social Media Proposal

No new update.

(c) Bee City Update – Ethan Elliott

Lorraine Kuepfer reported that Stratford is officially a “Bee City” now. She also discussed that Northwestern Secondary School is looking into possibly becoming a “Bee School”.

(d) 2017 Projects

Dave Hanley and Craig Merkley have met with the Parks & Forestry Manager to discuss planting groupings of trees in the city (25 trees in groupings of 5). They will follow up next month to firm up a location.

Motion by Geoff Love, seconded by Lorraine Kuepfer that the Energy & Environment Advisory Committee spends up to a maximum of $1,000.00 from their reserve fund to purchase approximately 25 trees to plant in groupings around the city as chosen by Community Services staff. Carried.

Councillor McManus suggested planting 150 trees at the storm water ponds as part of the sesquicentennial events. Members also discussed planting fruit trees in partnership with the LCFC at the new community garden. Angela Bossence will discuss with representatives from the LCFC.

Motion by Dave Hanley, seconded by Trena Hough that the Energy & Environment Advisory Committee spends up to a maximum of $2,000.00 from their reserve fund to purchase 150 trees to plant at the storm water ponds as part of Sesquicentennial Celebrations. Carried.

Members also discussed using some of their reserve funds for an Avon River crib wall project in the fall. Craig Merkley would like to discuss with UTRCA staff, as manpower may be an issue to complete this project. There may also be grant funding that could be applied for to use towards this project.

The idea of better cigarette receptacles and locations was discussed. This could be an issue that could be brought up with the local health unit.

Craig Merkley suggested removal of invasive species down at TJ Dolan as an ongoing project.

Members would like to add a 2017 project for energy.

6.0 UPCOMING EVENTS

Sesquicentennial Tree Planting – Friday, May 12th @ 10:00 a.m.
Cycle Stratford Ride (Walton to Auburn) – Saturday, May 13th

7.0 NEW BUSINESS

(a) Fruit Pulp – Trena Hough

Trena Hough inquired with committee members where someone would take excess fruit pulp. Geoff Love suggested she call Kate Simpson and she can put her in touch with local farmers who might take it.

(b) Clean-up Projects – Craig Merkley

Craig Merkley was contacted by a representative from Scotia Bank to let the UTRCA know that they have a group of people available to help with any clean-up projects they may have planned.

8.0 NEXT MEETING DATE – Thursday, May 11, 2017 – 4:00 p.m. - KCC

9.0 ADJOURNMENT

Motion by Marianne Hawley, seconded by Angela Bossence that the meeting adjourn. Carried.

Time: 5:05 p.m.

A meeting of the **Stratford Town and Gown Committee (T&G)** was held on the above date at 5:00 p.m. – University of Waterloo Campus, 125 St. Patrick Street, Stratford ON

Present: Councillor Martin Ritsma – Chair Presiding, Nancy Orr, Annaka Willemsen, Councillor Bonnie Henderson

Staff Present: *Jeff Leunissen – Manager of Development Services, Stephanie Potter – Policy and Research Associate, Casey Riehl – Recording Secretary

Regrets: Mayor Mathieson, Brandi Gillett, Councillor Danielle Ingram, Austin Fisher

MINUTES

1. CALL TO ORDER

Councillor Ritsma called the meeting to order at 5:15 p.m.

2. DISCLOSURE OF PECUNIARY INTEREST

None declared.

3. ELECTION OF 2017 COMMITTEE VICE-CHAIR

Deferred to next meeting.

4. ADOPTION OF PREVIOUS MINUTES – February 16, 2017

Motion by Nancy Orr, seconded by Annaka Willemsen to adopt the previous minutes dated February 16, 2017 as printed. Carried.

5. BUSINESS ARISING FROM PREVIOUS MINUTES

(a) U of W Updates – Annaka Willemsen

Annaka Willemsen discussed U of W updates with the committee.

- Ginny Dybenko is doing a presentation at an upcoming Council meeting.
- There were 180 undergraduates accepted into the program this past September, there will be 180+ accepted this coming September, which will put the building at capacity.
- The University is in the process of completing their curriculum review and changes for the undergraduate program. The recommendations have

moved forward to senate at the university and part of the proposed changes looks like the second year students will be coming to the Stratford campus full time. Second, third and fourth year students will be full time, with no first year students. First year will be completed at the main campus in Waterloo. The university would offer transportation between Waterloo and Stratford twice per week. Currently the buses operate Wednesday evenings, Friday evenings and Sunday afternoons. This gives students the opportunity to participate in varsity programs at the main campus.

- The masters' program is projecting the same number of students as last year, which is approximately 25. Masters' students are usually a combination of part and full-time students who live in Stratford.
- If approved, full-time second year students will begin in September 2018.
- Ms. Willemsen reported that nearly all masters' graduates find employment in their field of study shortly after graduation. Some of them are hired by the companies that they do their final research projects with.
- Councillor Ritsma inquired if students could change one thing about attending U of W in Stratford, what would that be? Ms. Willemsen stated that it is always "student life". There is a close student community at the Stratford campus and they are very much missing some sort of night life. The students do embrace all kinds of events that happen in Stratford, such as Heartburn Day, Soups On, Fall Fair, Gallery events, etc. Councillor Ritsma hopes that as the student population grows, the businesses in Stratford will start to pick up on this issue. Ms. Willemsen noted that students do love living in Stratford to be close to the campus, as it offers them an amazing facility with access to state of the art equipment.

*Jeff Leunissen now present (5:25 p.m.)

- Stephanie Potter inquired if most students are leaving after graduation. Ms. Willemsen stated that they are mostly all leaving to find employment in larger cities like Toronto, as Stratford has a lack of industry partners.
- Councillor Ritsma stated that it is beneficial to get young students into the facility to see what the campus has to offer. Ms. Willemsen noted that the university does host four discovering digital media days throughout the year that are offered to area grade 11 students.

(b) T&G Committee Strategic Plan

The committee previously contacted a firm regarding working on a strategic plan for the Stratford Town and Gown Committee. It was cost prohibitive, however the committee would like to inquire if there is any way to do some preliminary work to get the plan started, such as a visioning session. Nancy Orr will contact the firm and inquire if there are any options.

The committee has carried over a small amount of unused funds from their 2016 budget for this project. They also discussed that with no one from the committee attending the annual symposium in Ottawa, could funds for the symposium be re-allocated for use towards starting the strategic plan. Staff will inquire with the Director of Corporate Services for the City to see if this is possible. The committee feels it is important to get a plan in place before September.

(c) 2017 TGAO Symposium (Ottawa) – May 8-10, 2017

No members from the committee will be attending the symposium in Ottawa this year. Staff will inquire if funds for this can be re-allocated to other uses.

6. NEW BUSINESS

None.

7. NEXT MEETING DATE - Thursday, September 21, 2017 @ 5:00 p.m. – U of W

8. ADJOURNMENT

Motion by Councillor Henderson, seconded by Annaka Willemsen that the meeting adjourn. Carried.

Time: 6:05 p.m.