



Corporate Services Committee Agenda
May 15th, 2018, 7:00 p.m.
Carleton Place Town Hall, Council Chambers

Please silence all electronic devices.

- 1) **CALL TO ORDER**
- 2) **DECLARATION OF PECUNIARY/CONFLICT OF INTEREST**
- 3) **REGISTRATION OF PUBLIC WISHING TO SPEAK**
- 4) **DELEGATIONS / PRESENTATIONS**
 - i. **Paul Knowles, Town Engineer**
Re: Water and Wastewater Resiliency Plans, Capacity Assessment, and Master Plans and Development Charges Background Study
- 5) **COMMUNICATIONS (REPORTS)**
 - i. **Water and Wastewater Resiliency Plans Update to Communication 129181 (Communication 129200)**
Paul Knowles, Town Engineer

Suggested Motion:
THAT Staff present the proposed Water/Wastewater Resiliency Plans to Council; and

THAT Staff compile comments from the public and report back on the Water/Wastewater Resiliency Plans June 5, 2018.
 - ii. **Water/Wastewater Capacity Expansion Assessment Reports Update to Communication 129182 (Communication 129201)**
Paul Knowles, Town Engineer

Suggested Motion:
THAT Staff present the proposed Water/Wastewater Capacity Expansion Assessment to Council; and

THAT Staff compile comments from the public and report back on the Water/Wastewater Capacity Expansion Assessment June 5, 2018

**iii. Development Charges Update to Communication 129183
(Communication 129202)**

Paul Knowles, Town Engineer

Suggested Motion:

THAT Staff present the proposed Development Charges to Council; and

THAT Staff compile comments from the public and report back on Development Charges June 5, 2018.

**iv. Works on Ottawa Valley Rail (OVR) Trail and Carleton Junction
(Communication 129203)**

Paul Knowles, Town Engineer

Suggested Motion:

THAT the following work be completed in 2018 as Phase I funded from the existing budget.

DESCRIPTION	COST
Parking	\$9,000
Ice Rink	\$6,000
Pump Track Base/Skateboard	\$115,000
Pavilion (slab only)	\$80,000
OVR Trail	\$480,000
Illumination	\$45,000
Drainage	\$80,000
Landscaping Concept Plat	\$10,000
Play Structure	\$126,062
Total	\$951,062

THAT the fencing at the Police Station be installed at a cost of \$13,000 with the cost funded from the Police Building Maintenance Reserve; and

THAT the curbs/sidewalks on cross streets be extended to connect to the Ottawa Valley Rail (OVR) Trail at a cost of approximately \$75,000 with the cost funded from the Hydro Reserve; and

THAT adjacent owners to the OVR trail/Carleton Junction area and the community be invited to attend an Open House to view plans for the OVR Corridor on Monday, May 28th, 2018; and

THAT a sign be prepared that explains the importance of managing storm water volumes in an urban area; and

THAT staff meets with County staff to discuss:

- the lease for Carleton Junction;
- construction timing and maintenance for the remainder of the OVR Trail;
- compensation the Town will receive for constructing the granular trail for the County from Coleman Street to Townline Road;
- signage/markings at cross streets (both on the OVR Trail and on the cross streets);
- Detectable Warning Systems (TWSI) at each cross street;
- Mile markers, historical signs, etc.; and

THAT funds be included in the 2019 budget for Phase 2 as follows:

DESCRIPTON	BUDGETED AMOUNT
Install solar lighting from Moore Street to Townline Road	\$85,000
Construct Pavilion Building and Time Capsule	\$100,000 Less fundraising and grants
Construct landscape features as per landscape conceptual plan	\$ TBD after plan is completed
Construct Pump Track	\$125,000

v. 2018 Public Sector Accounting Board (PSAB) Budget (Communication 129204)

Trisa McConkey, CPA, CGA, Treasurer

Suggested Motion:

THAT Council approve the 2018 Public Sector Accounting Board (PSAB) Budget prepared by the Treasurer as required by the Municipal Act, 2001 O. Reg. 284/09.

vi. Insurance Renewal (Communication 129205)

Trisa McConkey, CPA, CGA, Treasurer

Suggested Motion:

THAT Council accepts the quote from Arthur J. Gallagher, Insurance Broker for Frank Cowan Insurance for the period June 15, 2018 to June 15, 2019 at the quoted price of \$201,027 + PST;

THAT Council authorizes proceeding with the Frank Cowan Facility User Policy to be able to offer insurance coverage to Town facility users; and

THAT Council direct staff to bring forward a proposal for Cyber Liability coverage once the required policies and procedures are implemented.

vii. Establish Final Tax Rates for 2018 (Communication 129206)

Trisa McConkey, CPA, CGA, Treasurer

Suggested Motion:

THAT the 2018 Tax Rate By-law be forwarded to Council for approval.

viii. 2017 Operating Fund Adjustment (Communication 129207)

Ontario Clean Water Agency

Suggested Motion:

THAT Council receive the Treasurer's Report dated May 15, 2018 regarding the 2017 Operating Fund Adjustment related to the Town's contracts with the Ontario Clean Water Agency for the operation of the Waste Water and Water Treatment Plants as information.

iv. Letter of Municipal Significance from Council re Poker Run for Guide Dogs/Motorcycle Show and Shine Event (Communication 129208)

Diane Smithson, Chief Administrative Officer

Suggested Motion:

THAT the Poker Run for Guide Dogs / Motorcycle Show and Shine event taking place at the Market Square on Saturday, May 26, 2018 be deemed a municipally significant event; and

THAT the Clerk be authorized to forward a letter to the Alcohol and Gaming Commission of Ontario advising them of this fact on behalf of the Municipality.

6) ADJOURNMENT

WATER/WASTEWATER

- Resiliency Plan
- Capacity Assessment
- Master Plan

DEVELOPMENT CHARGES

- Water/Wastewater
- Roads and Recreation

WATER/WASTEWATER RESILIENCY PLAN

Examine

- Flows to/from plants
- Flows in Mississippi River
- Climate Change Impacts to Precipitation, Temperature, Wind

Improve Resiliency of Plants to Impacts

CLIMATE CHANGE

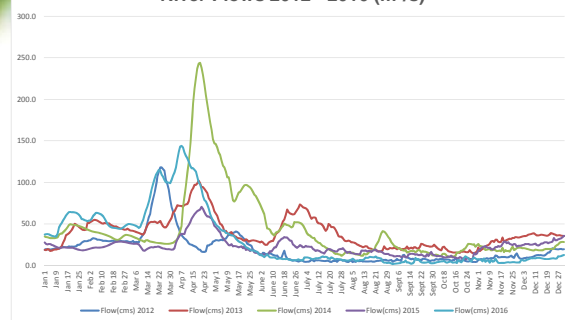
Precipitation Changes Predictions

Year	Precipitation (1)
2011-2040	-50 to +100 mm
2040-2070	-50 to +100 mm
2070-2100	-50 to +100 mm

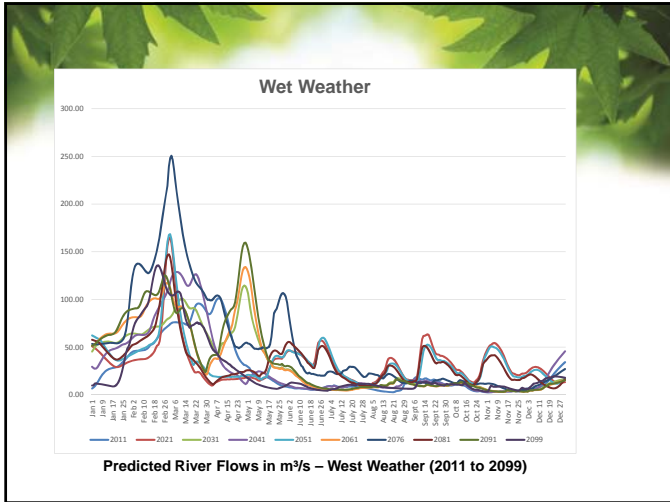
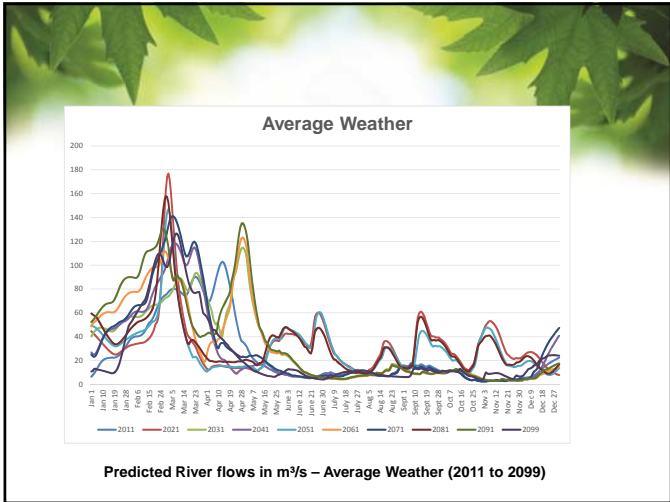
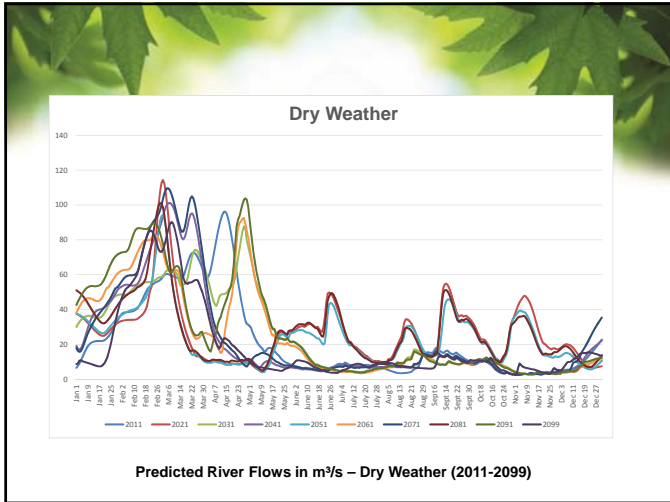
Temperature and Precipitation Changes Predictions

Year	Temperature (1)
2011-2040	Increase of 1-2 deg.
2040-2070	Increase of 1.5-3.5 deg.
2070-2100	Increase of 1.5-7 deg.

River Flows 2012 - 2016 (m³/s)



Daily Flows in the Mississippi River (2012 to 2016)



MISSISSIPPI RIVER FLOWS

<250 m³s Never approaches historic high flows
 1.35 m³s Lower than 2016 – 1.6 m³s

CLIMATE CHANGE EFFECT	POTENTIAL IMPACTS TO WTP	POSSIBLE RESILIENCY MEASURES
Changes to Precipitation (both increases and decreases)		
Very low flows in the River during the summer.	The projected low flow of 1.35 m ³ /s would still provide sufficient water supply. The new design capacity of the WTP (18 MLD or 0.208 m ³ /s) represents only 15% of the projected extreme low flow in the river and the river is fed by Mississippi Lake which is a very large water reservoir.	<ul style="list-style-type: none"> - Provide additional treated water storage at the WTP and within the distribution system as part of a future plant expansion. - Continue to enforce watering by-laws and amplify efforts under extreme conditions. - Prepare an emergency preparedness plan which would include public communications protocols under sever conditions. - Implement contingency measures for alternative water sources for fire protection.
Very low water levels in the River during the winter	Potential formation of frazil ice at the intake structure.	<ul style="list-style-type: none"> - Install a line from the high lift pump system to allow for a reverse of flow through the raw water pipe and intake system.
Higher flows in the River during the spring	Predicted high flows are not anticipated to be a problem in terms of flooding	<ul style="list-style-type: none"> - No action required.

CLIMATE CHANGE EFFECT	POTENTIAL IMPACTS TO WTP	POSSIBLE RESILIENCY MEASURES
Increases to Temperatures		
Water temperature increases in the upstream lake during very hot summers combined with low water levels.	Could cause occasional episodes of algae blooms and the development of cyanotoxins in the lake water that could eventually reach the WTP raw water intake. Algae blooms can also be a potential cause of taste and odor in the treated water.	<ul style="list-style-type: none"> - Consider installation of a PAC (Powdered Activated Carbon) system in front of the three (3) Actiflo® units. A contact chamber could be installed upstream of the Actiflo®. The chamber would be equipped with a mixing system. A new PAC dosage system would be required. The system would be activated during algae blooms episodes.
Water temperature increases in the lake during very hot summers.	Could promote occasional episodes of zebra mussels.	<ul style="list-style-type: none"> - Put into operation the existing zebra mussel control system at the WTP.
Warmer lake water in the summer.	Could impact chlorine residuals in the distribution system. Free chlorine depletion could be accelerated in the distribution system with warmer water in the water tower.	<ul style="list-style-type: none"> - There is a possibility to increase the free chlorine residual at the outlet of the WTP. - A better strategy would be to add chlorine at the outlet of the water tower. - Consider putting existing chloramination system into service.

CLIMATE CHANGE EFFECT	POTENTIAL IMPACTS TO WTP	POSSIBLE RESILIENCY MEASURES
Unexpected worsening of the microbial quality of the raw water due to anthropologic pollution.	More stringent log-removal for disinfection would be required for Giardia, Cryptosporidium and viruses.	<ul style="list-style-type: none"> - Additional disinfection for Cryptosporidium and Giardia could be achieved through the installation of installation of UV reactors on the filter effluent pipes or on the common filter effluent pipe or on the common discharge of the high lift pumps.
Increased air temperatures causing hotter and drier summers.	Increased water demand from residents for longer periods of time.	<ul style="list-style-type: none"> - Provide additional treated water storage at the WTP and within the distribution system as part of a future plant expansion. Storage is currently located at the WTP and at the water tower. The Town is already considering additional storage on the north side of Mississippi River. - Continue to enforce watering by-laws and amplify efforts under extreme conditions. - Prepare an emergency preparedness plan which would include public communications protocols under sever conditions. - Implement contingency measures for alternative water sources for fire protection.

CLIMATE CHANGE EFFECT	POTENTIAL IMPACTS TO WTP	POSSIBLE RESILIENCY MEASURES
More Severe Winds/Storms		
Summertime rainstorms in the upstream watershed.	This situation could produce rapid turbidity spikes at the raw water intake.	<ul style="list-style-type: none"> - The WTP will be equipped with three (3) Actiflo® units after the expansion and the ballasted floc clarification technology is known to be very efficient against rapid spikes of turbidity in the raw water. Do nothing.
Severe storms in the region during the summer and/or ice storms during the winter.	Interruption of access to the WTP such as chemical deliveries and/or interruption of electrical grid for extended periods of time.	<ul style="list-style-type: none"> - Develop appropriate contingency plans. - Provide enough storage for each chemical and secure an alternative chemical supplier, for each chemical utilized. - Review backup power system capacity and flexibility and upgrade as required.

CLIMATE CHANGE EFFECT	POTENTIAL IMPACTS TO WWTP	POSSIBLE RESILIENCY MEASURES
Changes to Precipitation (both increases and decreases)		
Higher overall precipitation amounts throughout the year	Increase to inflow and infiltration increasing peak flows received at the plant	<ul style="list-style-type: none"> - Implement plant expansion. - Ensure sufficient emergency bypass capacity. - Continue efforts to reduce Inflows and Infiltration in the collection system.
Lower precipitation amounts in the summer	Lower river flows resulting in lower assimilative capacity which could trigger the need for more stringent treated effluent limits	<ul style="list-style-type: none"> - Implement tertiary treatment as part of a plant expansion project.
Higher precipitation in the spring causing higher flows in the River	Predicted high flows are not anticipated to be a problem in terms of plant flooding	<ul style="list-style-type: none"> - No action required.

CLIMATE CHANGE EFFECT	POTENTIAL IMPACTS TO WWTP	POSSIBLE RESILIENCY MEASURES
Increases to Temperatures		
Increase in the air temperature	Could impact the plant's aeration system.	<ul style="list-style-type: none"> - Ensure sufficient aeration system capacity as part of a future plant upgrade.
Increase in the air temperature	Additional odour generation from the plant	<ul style="list-style-type: none"> - Provide additional odour control systems as part of a future plant expansion.
Increases in the air temperature causing early spring melts and/or more melts in the winter	Increased need to bring wet weather treatment system into service throughout the year	

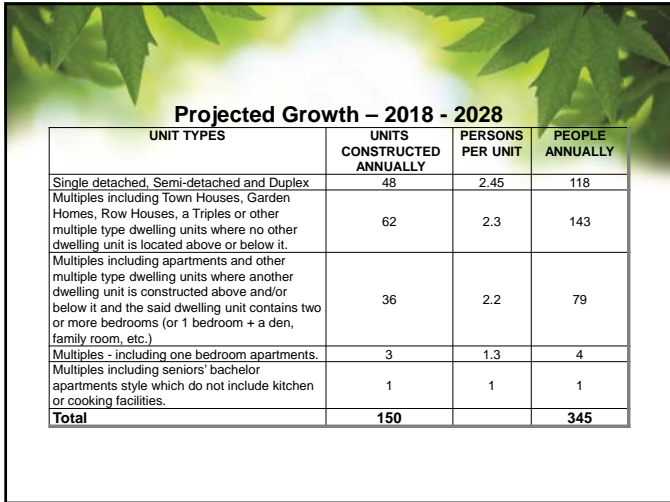
CLIMATE CHANGE EFFECT	POTENTIAL IMPACTS TO WWTP	POSSIBLE RESILIENCY MEASURES
More Severe Winds/Storms		
Severe storms in the region during the summer and/or ice storms during the winter	Interruption of access to the WTP such as chemical deliveries and/or interruption of electrical grid for extended periods of time	<ul style="list-style-type: none"> - Develop appropriate contingency plans - Provide enough storage for each chemical and secure an alternative chemical supplier for each chemical utilized. - Review backup power system capacity and flexibility and upgrade as required.
Larger storms causing larger precipitation and inflow in the collection system	Larger wet weather flows received at the plant	<ul style="list-style-type: none"> - Implement plant expansion. - Ensure sufficient emergency bypass capacity. - Continue efforts to reduce Inflows and Infiltration in the collection system with program such as sewer lining and continuous flow monitoring for example.

WATER/WASTEWATER CAPACITY EXPANSION ASSESSMENT

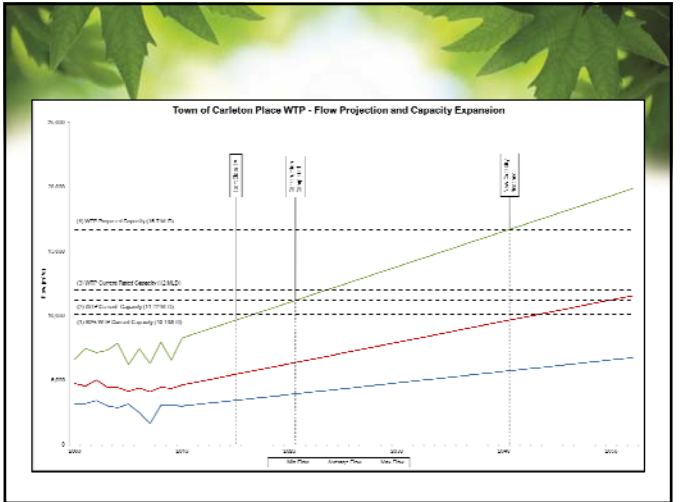
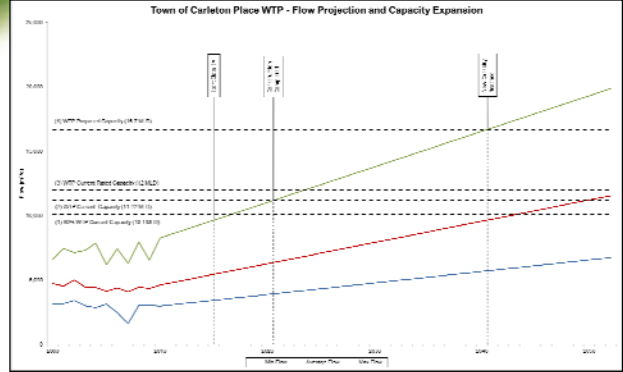
- Predict Future Capacity Requirements
- Identify Projects Required to Increase Capacity
- Incorporate Projects into Master Plan

Projected Growth – 2018 - 2028

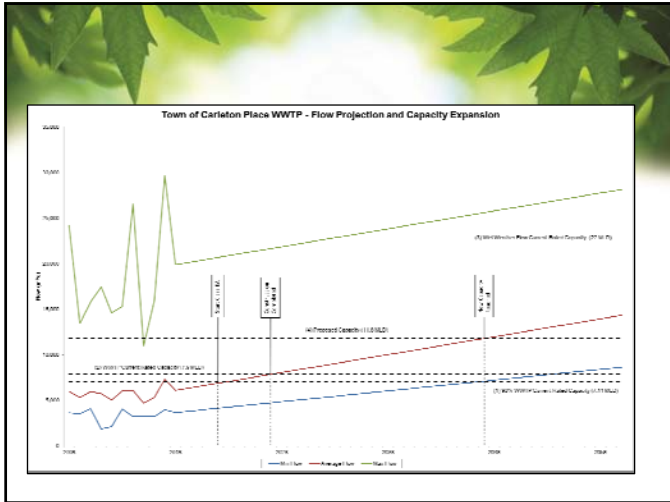
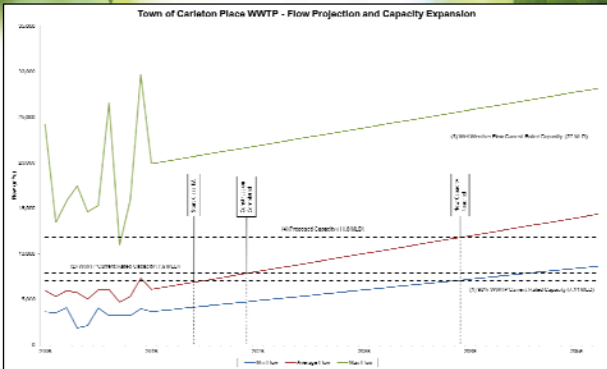
UNIT TYPES	UNITS CONSTRUCTED ANNUALLY	PERSONS PER UNIT	PEOPLE ANNUALLY
Single detached, Semi-detached and Duplex	48	2.45	118
Multiples including Town Houses, Garden Homes, Row Houses, a Triples or other multiple type dwelling units where no other dwelling unit is located above or below it.	62	2.3	143
Multiples including apartments and other multiple type dwelling units where another dwelling unit is constructed above and/or below it and the said dwelling unit contains two or more bedrooms (or 1 bedroom + a den, family room, etc.)	36	2.2	79
Multiples - including one bedroom apartments.	3	1.3	4
Multiples including seniors' bachelor apartments style which do not include kitchen or cooking facilities.	1	1	1
Total	150		345



Town of Carleton Place WTP - Flow Projection and Capacity Expansion

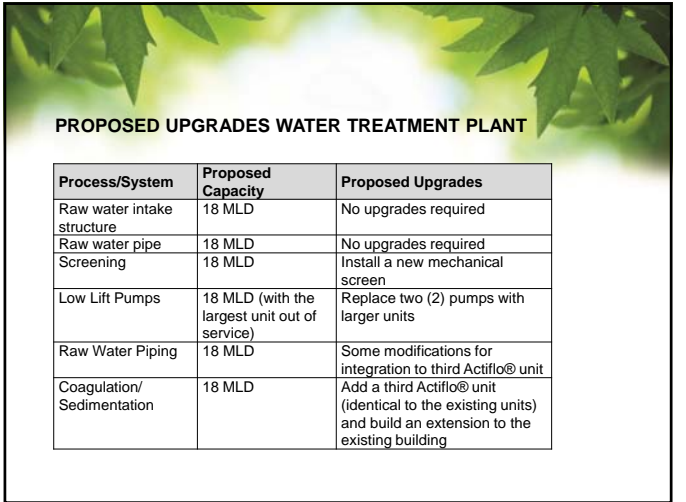


Town of Carleton Place WWTP - Flow Projection and Capacity Expansion



PROPOSED UPGRADES WATER TREATMENT PLANT

Process/System	Proposed Capacity	Proposed Upgrades
Raw water intake structure	18 MLD	No upgrades required
Raw water pipe	18 MLD	No upgrades required
Screening	18 MLD	Install a new mechanical screen
Low Lift Pumps	18 MLD (with the largest unit out of service)	Replace two (2) pumps with larger units
Raw Water Piping	18 MLD	Some modifications for integration to third Actiflo® unit
Coagulation/ Sedimentation	18 MLD	Add a third Actiflo® unit (identical to the existing units) and build an extension to the existing building



Process/System	Proposed Capacity	Proposed Upgrades
Filtration	17 MLD	Build two (2) new filters in an extension to the existing building. Each filter will have a filtration surface each of 27 m ² . The addition of two (2) new filters will provide an "n+1" configuration, which has become industry standards and is a MOECC Guideline.
Filter backwash wastewater and Actiflo® residuals	Based on continuous discharge from the Actiflo® units and maximum number of filter backwashes per day	Modify the existing configuration to transform the tanks as equalization tanks and modify the existing pump systems. This needs to be synchronized with the installation of the DAF unit at the WWTP.
Treated Water Storage (clearwell)	17 MLD	Construct a third cell with a capacity of 1590 m ³ .
High Lift Pumps	17 MLD (with the largest unit out of service)	Replace one pump with a larger unit.

Process/System	Proposed Capacity	Proposed Upgrades
Coagulant storage and dosing system	For a maximum raw water flow of 18 MLD	Add a third coagulant pump and add a fourth coagulant tank
Polymer preparation and dosing system	For a maximum raw water flow of 18 MLD	Add a second polymer preparation system, a third day tank and a third metering pump
Hydrofluoric acid storage and dosing system	For a maximum treated water flow of 17 MLD	No upgrades required
Chlorine storage and dosing system	For a maximum treated water flow of 17 MLD	Add a third chlorinator to improve redundancy
Lime preparation and dosing system	For a maximum treated water flow of 17 MLD	Replace existing system with a soda ash preparation and dosing system

Process/System	Proposed Capacity	Proposed Upgrades
Electrical system	n/a	Modifications to the existing electrical power supply, MCCs and electrical distribution
Back-up power	n/a	Replace the existing back-up generator with a larger generator designed for outdoor installation
HVAC and plumbing	n/a	New systems for the building extensions

PROPOSED UPGRADES WASTEWATER TREATMENT PLANT

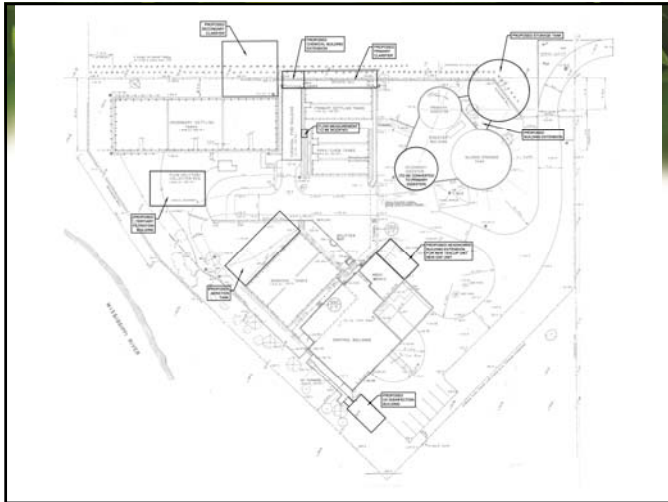
Process/System	Proposed Capacity	Proposed Upgrades
Inlet sewer	n/a	Integration of the two (2) 350 mm diameter force mains from the Highway 7 Pumping Station.
Fine screening	30 MLD	No work proposed.
Sewage lift pumps	30 MLD (n+1 configuration)	Replace all existing pumps with new dry pit submersible pumps, complete with associated mechanical process, electrical, I&C and SCADA.
Degritting	30 MLD	Install a third TeaCup degritter in the headworks building extension identical to the two (2) existing ones complete with associated mechanical process, electrical, I&C and SCADA work.

Process/System	Proposed Capacity	Proposed Upgrades
Primary clarifiers	15.6 MLD	Build a third primary clarifier identical to the two (2) existing ones complete with associated civil, structural, mechanical process, electrical, I&C and SCADA work.
Physical-chemical clarifiers	11.6 MLD	No work proposed.
Aeration tanks	11.8 MLD	Build a fourth aeration tank slightly bigger than tanks Nos. 2 and 3 complete with associated civil, structural, mechanical process, electrical, I&C and SCADA work.
Secondary clarifiers	15.6 MLD	Build a fourth secondary clarifier identical to the three (3) existing ones complete with associated civil, structural, mechanical process, electrical, I&C and SCADA work.

Process/System	Proposed Capacity	Proposed Upgrades
Tertiary treatment (UV disinfection)	27.2 MLD	Build a new building (adjacent to the existing building) which will house a new UV disinfection system complete with associated civil, structural, architectural, mechanical process, electrical, HVAC, I&C and SCADA work.
Tertiary treatment (Filtration)	27.2 MLD	Build a new building which will house a new filtration system complete with associated civil, structural, architectural, mechanical process, electrical, HVAC, I&C and SCADA work.
Primary digester	880 m ³	Modify the primary digester piping system so that digested sludge can be transferred to the existing storage tank or to the proposed storage tank.
Secondary digester	826 m ³	Transform the secondary digester into a primary digester complete with associated structural, mechanical process, electrical, I&C and SCADA work.

Process/System	Proposed Capacity	Proposed Upgrades
Storage tank	1,900 m ³	Build a new bio-solids storage tank complete with associated civil, structural, mechanical process, electrical, I&C and SCADA work.
DAF unit	n/a	Install a new DAF in the headworks building extension complete with associated mechanical process, electrical, I&C and SCADA work to manage the WTP residuals.
Headworks building	n/a	Build an extension to the existing building to house the new degritter and the new DAF unit complete with associated civil, structural, architectural, mechanical process, electrical, HVAC, I&C and SCADA work.
Chemical storage building	n/a	Build an extension to the existing building complete with associated civil, structural, architectural, mechanical process, electrical, HVAC, I&C and SCADA work.
Electrical	n/a	Modify main electrical entrance and MCCs and replace the existing backup generator and transfer switch to reflect additional loads.





DEVELOPMENT CHARGES

Water/wastewater charges

ROADS AND RECREATION

2018

Carleton Place is a growing community and has had a long standing policy to ensure that the growth (Developers) fund their fair share of the costs that are associated with growth. The province places strict controls that limit municipality's authority to impose fees on Developers. However, most major infrastructure, related to growth, remains eligible for funding.

Carleton Place uses two sections of provincial legislation for authority to impose fees on development. Water and Wastewater projects are authorized by the Municipal Act Section 391 (1) and all other eligible projects are authorized by the Development Charges Act.

PROJECT	DESCRIPTION
INFRASTRUCTURE	
Expand Cavanagh Road	- Preliminary design and partial construction to expand capacity of Cavanagh Road.
Coleman/Lansdowne Avenue	- Add left turn lanes and signals to accommodate increased traffic volumes.
New Public Works Facility	Relocate and expand the Franklin Street Public Works Yard, the Compost Yard and the Hooper St. snow storage area all to new facility on Bates Ave.
Add new rolling stock to increase Public Works Fleet	New Snow Plow, Pick-up and Sidewalk Plow.

PROJECT	DESCRIPTION
RECREATIONAL AND CULTURAL	
Beckwith Ice Surface	- Fund share of Capital cost. Brought forward from 2008 By-law.
Equipment Storage	- Add 3,100 sq. ft. storage.
Community Centre	- Expand parking at Carambeck Community Centre and predevelopment work for new Community Centres.
Regional Parkland Development	- Develop Carleton Junction and more facilities in other parks
Trails	- Construct 3 km of new trails
Sports Fields	- Develop 4 new playing fields
Neighbourhood Parks	- Develop 4 neighbourhood parks

Description	Development Charge	Water/Wastewater Charge	Total
1) Single detached, Semi-detached and Duplex	\$4,072.64	\$6,200.00	\$10,272.64
	<i>\$4,301.64</i>	<i>\$5,750.00</i>	<i>\$10,051.64</i>
1) Multiples including Town Houses, Garden Homes, Row Houses, a Triplex or other multiple type dwelling units where no other dwelling unit is located above or below it.	\$3,823.59	\$6,200.00	\$10,023.59
	<i>\$3,664.36</i>	<i>\$5,750.00</i>	<i>\$9,414.36</i>
1) Multiples including apartments and other multiple type dwelling units where another dwelling unit is constructed above and/or below it and the said dwelling unit contains two or more bedrooms (or 1 bedroom + a den, family room etc.)	\$3,657.06	\$5,300.00	\$8,957.06
	<i>\$3,505.04</i>	<i>\$4,830.00</i>	<i>\$8,335.04</i>
1) Multiples - including bachelor apartments and one bedroom apartments.	\$2,160.99	\$5,300.00	\$7,460.99
	<i>\$1,911.84</i>	<i>\$4,830.00</i>	<i>\$6,741.84</i>
1) Multiples including seniors style which do not include kitchen or cooking facilities	\$1,662.30		\$1,662.30
	<i>\$1,593.21</i>		<i>\$1,593.21</i>
1) Non-Residential	\$22.34/m²	*****	
	<i>\$20.34/m²</i>	*****	

Bold – 2018 Charges

***** Charge collected on quarterly water bill

Italic – 2013 Charges

Water/Wastewater Charge Rules

Where non-residential space is being converted to residential space, the normal residential water/wastewater charges shall apply with the following exception:

~ An exemption from 100% of the water/wastewater charges for all residential units less than 60 units per Ha located in the Downtown District or on a Strategic Property as defined by the Official Plan. This exemption expires on June 27, 2023.

For new residential construction, in the Downtown District or on a Strategic Property, an exemption from 100% of the water/wastewater charges for all residential units less than 60 units per Ha. This exemption expires on January 2, 2020.

The Water/Wastewater Charge, imposed in the 2018 By-law, will be indexed and increased on January 1st of each year.



DEVELOPMENT CHARGES RULES

An exemption from 100% of all Development Fees for all residential units less than 60 units per Ha and located in the Downtown District or on a Strategic Property, as defined in the Official Plan, to encourage development in these areas and provide incentive for certain contaminated properties: (NOTE – the fees not collected due to this exemption shall be funded by setting aside future increased taxes internally within the Town's financial records.)

This exemption expires on January 2nd, 2020.



COMMENTS

Please provide any comments related to;
Water/Wastewater Resiliency Plan
Water/Wastewater Master Plan
Development Charges

To Christian Thibault cthibault@jrichards.ca
Or
Paul Knowles pknowles@carletonplace.ca

Please provide comments by May 25th, 2018

COMMUNICATION 129200

Received from Paul Knowles, Town Engineer
Addressed to Corporate Services Committee
Date May 15, 2018
Topic Water and Wastewater Resiliency Plans Update to Communication 129181

SUMMARY

The Town of Carleton Place (the Town) has identified a need to develop a Resiliency Plan for both the Water Treatment Plant (WTP) and the Wastewater Treatment Plant (WWTP) based on previous observations of climatic related events. These events included a very dry season in the summer of 2016 that stressed the WTP and a very wet 2017 spring season that stressed the WWTP.

J.L. Richards & Associates Limited (JLR) was retained by the Town in January 2018 to assist in undertaking a review of both of these facilities in order to assess their vulnerability to current and future projected climatic conditions and to identify measures that could be considered to ensure both facilities have sufficient “resiliency” to accommodate these conditions.

Climate change has become a reality with impacts experienced across the globe and locally. Temperatures are warming everywhere causing hotter, drier periods of drought and water shortages. This is also creating conditions for more severe and frequent storm events leading to flooding. The Ontario Ministry, in charge of managing and protecting our environment, has fully recognized this reality as it was made very evident by changing their organization name in June 2014 to the Ministry of the Environment and Climate Change (MOECC). New climate change related initiatives, including formal legislation, guidance documents and manuals and action plans have been developed within Ontario and Canada in recent years with the overarching goal of ensuring long-term sustainability of our way of life through protection of both the natural and manmade environments.

A part of these initiatives includes reviewing existing manmade infrastructure (e.g. transportation, energy supplies, water supplies, etc.) assessing vulnerabilities, and then developing Resiliency Plans to ensure robustness, redundancy and to mitigate impacts from changing climatic conditions that will result in more reliable and uninterrupted services as well as long term economic benefits. As noted in *Climate Ready – Ontario’s Adaptation Strategy and Action Plan (2011 to 2014)*, “Well targeted, early planning and meaningful investment to improve the Province’s climate resilience are likely to be more effective than complex disaster relief efforts after the event”. Initiatives such as the *Water Conservation Act*, *Source Water Protection*, *Ontario’s Five-Year Climate Change Action Plan (2016-2021)* and *Optimization Guidance Manual for Sewage Works* have all been undertaken with some of their focus (if not all) on the long-term resiliency of water supply and wastewater management services.

The Town of Carleton Place owns, operates and maintains various assets that provide services to residents, including a communal water supply system and a communal wastewater management system. In recent years, impacts to these facilities from both water shortages and flooding events have occurred.

CLIMATE CHANGE ANALYSIS

Climate change has the potential to alter weather patterns that in turn can affect the ability of the plants to maintain their current performance. For example, one of the biggest impacts in the case of the WTP could be on the source water – the Mississippi River. Changing precipitation patterns, temperatures and other climatic conditions could affect the flow and precipitation patterns, temperatures and other climatic conditions could affect the flow and possibly the quality in the Mississippi River. Another example is that increasing temperatures could affect overall and peak treated water usage within the Town. Climate change impacts associated with the following specific conditions have been analyzed:

1. Changes in Precipitation
2. Changes in Temperatures
3. Changes in Frequency and Severity of Wind/Storms

Discussion of Findings

Available information relating to climate change within the vicinity of Carleton Place suggest that temperatures will increase and the total precipitation in the region could marginally increase or decrease over the next 50 years. Storm events may also become more severe and/or more frequent. Generally, the winters will be wetter (and with the increasing winter temperature more of the precipitation will be rain instead of snow) and the summers will be dryer. These conditions have the potential to affect the raw water source as well as increase treated water demand in the system.

Based on a review of the available climate change information and a review of the current configuration of the plants, the predicted effects are not considered to be “severe” to say an extent that would require investment significantly beyond what would be planned for a future expansion. There are, however, some resiliency measures that would be prudent for the Town to plan for in the future either as a separate undertaking and/or as part of the planning of a future plant expansion.

POTENTIAL IMPACTS TO WATER TREATMENT PLANT (WTP)

CLIMATE CHANGE EFFECT	POTENTIAL IMPACTS TO WTP	POSSIBLE RESILIENCY MEASURES
Changes to Precipitation (both increases and decreases)		
Very low flows in the River during the summer.	The projected low flow of 1.35 m ³ /s would still provide sufficient water supply. The new design	- Provide additional treated water storage at the WTP and within the distribution

CLIMATE CHANGE EFFECT	POTENTIAL IMPACTS TO WTP	POSSIBLE RESILIENCY MEASURES
	capacity of the WTP (18 MLD or 0.208 m ³ /s) represents only 15% of the projected extreme low flow in the river and the river is fed by Mississippi Lake which is a very large water reservoir.	<p>system as part of a future plant expansion.</p> <ul style="list-style-type: none"> - Continue to enforce watering by-laws and amplify efforts under extreme conditions. - Prepare an emergency preparedness plan which would include public communications protocols under sever conditions. - Implement contingency measures for alternative water sources for fire protection.
Very low water levels in the River during the winter	Potential formation of frazil ice at the intake structure.	<ul style="list-style-type: none"> - Install a line from the high lift pump system to allow for a reverse of flow through the raw water pipe and intake system.
Higher flows in the River during the spring	Predicted high flows are not anticipated to be a problem in terms of flooding	<ul style="list-style-type: none"> - No action required.
Increases to Temperatures		
Water temperature increases in the upstream lake during very hot summers combined with low water levels.	Could cause occasional episodes of algae blooms and the development of cyanotoxins in the lake water that could eventually reach the WTP raw water intake. Algae blooms can also be a potential cause of taste and odor in the treated water.	<ul style="list-style-type: none"> - Consider installation of a PAC (Powdered Activated Carbon) system in front of the three (3) Actiflo[®] units. A contact chamber could be installed upstream of the Actiflo[®]. The chamber would be equipped with a mixing system. A new PAC dosage system would be required. The system would be activated during algae blooms episodes.
Water temperature increases in the lake during very hot summers.	Could promote occasional episodes of zebra mussels.	<ul style="list-style-type: none"> - Put into operation the existing zebra mussel control system at the WTP.

CLIMATE CHANGE EFFECT	POTENTIAL IMPACTS TO WTP	POSSIBLE RESILIENCY MEASURES
Warmer lake water in the summer.	Could impact chlorine residuals in the distribution system. Free chlorine depletion could be accelerated in the distribution system with warmer water in the water tower.	<ul style="list-style-type: none"> - There is a possibility to increase the free chlorine residual at the outlet of the WTP. - A better strategy would be to add chlorine at the outlet of the water tower. - Consider putting existing chloramination system into service.
Unexpected worsening of the microbial quality of the raw water due to anthropologic pollution.	More stringent log-removal for disinfection would be required for Giardia, Cryptosporidium and viruses.	<ul style="list-style-type: none"> - Additional disinfection for Cryptosporidium and Giardia could be achieved through the installation of installation of UV reactors on the filter effluent pipes or on the common filter effluent pipe or on the common discharge of the high lift pumps.
Increased air temperatures causing hotter and drier summers.	Increased water demand from residents for longer periods of time.	<ul style="list-style-type: none"> - Provide additional treated water storage at the WTP and within the distribution system as part of a future plant expansion. Storage is currently located at the WTP and at the water tower. The Town is already considering additional storage on the north side of Mississippi River. - Continue to enforce watering by-laws and amplify efforts under extreme conditions. - Prepare an emergency preparedness plan which would include public communications protocols under sever conditions. - Implement contingency measures for alternative

CLIMATE CHANGE EFFECT	POTENTIAL IMPACTS TO WTP	POSSIBLE RESILIENCY MEASURES
		water sources for fire protection.
More Severe Winds/Storms		
Summertime rainstorms in the upstream watershed.	This situation could produce rapid turbidity spikes at the raw water intake.	<ul style="list-style-type: none"> - The WTP will be equipped with three (3) Actiflo® units after the expansion and the ballasted floc clarification technology is known to be very efficient against rapid spikes of turbidity in the raw water. Do nothing.
Severe storms in the region during the summer and/or ice storms during the winter.	Interruption of access to the WTP such as chemical deliveries and/or interruption of electrical grid for extended periods of time.	<ul style="list-style-type: none"> - Develop appropriate contingency plans. - Provide enough storage for each chemical and secure an alternative chemical supplier. for each chemical utilized. - Review backup power system capacity and flexibility and upgrade as required.
Stronger runoff into the lake and river system from storms.	Could provoke an increase in DOC and TOC levels in the raw water at the WTP intake. This could be more significant during seasons with high occurrences of forest fires.	<ul style="list-style-type: none"> - The coagulation/sedimentation process at the WTP could be operated in an enhanced-coagulation mode with the addition of caustic soda or soda ash.
Severe storms in the region during the summer and/or ice storms during the winter.	The WTP is located near a school and future regulations related to climate change could force the Town to replace the existing gas chlorine system with a less hazardous system.	<ul style="list-style-type: none"> - Replace the gas chlorine system with a sodium hypochlorite system.

POTENTIAL IMPACTS TO WASTEWATER TREATMENT PLANT (WWTP)

CLIMATE CHANGE EFFECT	POTENTIAL IMPACTS TO WWTP	POSSIBLE RESILIENCY MEASURES
Changes to Precipitation (both increases and decreases)		
Higher overall precipitation amounts throughout the year	Increase to inflow and infiltration increasing peak flows received at the plant	<ul style="list-style-type: none"> - Implement plant expansion. - Ensure sufficient emergency by-pass capacity. - Continue efforts to reduce Inflows and Infiltration in the collection system.
Lower precipitation amounts in the summer	Lower river flows resulting in lower assimilative capacity which could trigger the need for more stringent treated effluent limits	<ul style="list-style-type: none"> - Implement tertiary treatment as part of a plant expansion project.
Higher precipitation in the spring causing higher flows in the River	Predicted high flows are not anticipated to be a problem in terms of plant flooding	<ul style="list-style-type: none"> - No action required.
Increases to Temperatures		
Increase in the air temperature	Could impact the plant's aeration system.	<ul style="list-style-type: none"> - Ensure sufficient aeration system capacity as part of a future plant upgrade.
Increase in the air temperature	Additional odour generation from the plant	<ul style="list-style-type: none"> - Provide additional odour control systems as part of a future plant expansion.
Increases in the air temperature causing early spring melts and/or more melts in the winter	Increased need to bring wet weather treatment system into service throughout the year	
More Severe Winds/Storms		
Severe storms in the region during the summer and/or ice storms during the winter	Interruption of access to the WTP such as chemical deliveries and/or interruption of	<ul style="list-style-type: none"> - Develop appropriate contingency plans - Provide enough storage for each chemical and secure an alternative

CLIMATE CHANGE EFFECT	POTENTIAL IMPACTS TO WWTP	POSSIBLE RESILIENCY MEASURES
	electrical grid for extended periods of time	chemical supplier for each chemical utilized. - Review backup power system capacity and flexibility and upgrade as required.
Larger storms causing larger precipitation and inflow in the collection system	Larger wet weather flows received at the plant	- Implement plant expansion. - Ensure sufficient emergency by-pass capacity. - Continue efforts to reduce Inflows and Infiltration in the collection system with program such as sewer lining and continuous flow monitoring for example.

CONCLUSIONS / RECOMMENDATIONS

The following are some of the conclusions and recommendations resulting from a review of the Town of Carleton Place WTP and WWTP in terms of potential impacts from future climate change:

Water Treatment Plant (WTP)

- The WTP capacity will need to increase in the future to accommodate population growth. This growth needs consideration when evaluating the effects of climate change as both will impact the facility in a similar manner. Some of the infrastructure required to accommodate growth could assist in establishing a facility that is more resilient to climate change;
- The predicted effects of climate change alone on the operation of the Town’s WTP are not considered to be overly severe (particularly compared to the impacts from growth) and should not result in investment significantly beyond what may be planned for growth in the future;
- The measures outlined in the chart above are some measures that could be undertaken by the Town to improve the WTP’s resiliency to climate change. It is recommended that the Town consider implementation of these measures at the appropriate time;
- The core of the water treatment process train at the WTP consisting of the coagulation/sedimentation and filtration processes will be significantly reinforced during the next plant expansion. Additional redundancy will be incorporated in the process train and this will contribute in increasing the overall resiliency of the

facility as for its capacity to sustain episodes of higher water demands and episodes of rapid and extreme raw water quality changes.

- The Class EA process that will need to be undertaken prior to the next expansion will offer an opportunity to study and identify potential additional resiliency measures based on additional data that will be available at the time. For example, the need for a second raw water intake structure and raw water pipe could be considered.

Wastewater Treatment Plant (WWTP)

- The WWTP capacity will need to increase in the future to accommodate population growth. This growth needs consideration when evaluating the effects of climate change as both will impact the facility in a similar manner. It has been determined that some of the infrastructure required to accommodate growth could assist in establishing a facility that is more resilient to climate change;
- The predicted effects of climate change alone on the operation of the Town's WWTP are not considered to be overly severe (particularly compared to the impacts from growth) and should not result in investment significantly beyond what may be planned for growth in the future;
- The measures outlined in the chart above could be undertaken by the Town to improve the WWTP's resiliency to climate change. It is recommended that the Town consider implementation of these measures at the appropriate time;
- The Class EA process that will need to be undertaken prior to the next expansion will offer an opportunity to study and identify potential additional resiliency measures based on additional data that will be available at the time.

COMMENT

The Resiliency Plans will be presented at the Open House and Public Meeting on May 15th, 2018.

FINANCIAL IMPLICATION

The recommended improvements outlined by J.L. Richards will need to be incorporated into the Development Charges By-law, the By-law to Establish a Special Water and Sewer Rate and future capital and operating budgets.

UPDATE

An Open House to review the proposed Water/Wastewater Resiliency Plans with the Public was held on May 15, 2015. Comments from the Public are to be submitted by May 25, 2018.

STAFF RECOMMENDATION

THAT Staff present the proposed Water/Wastewater Resiliency Plans to Council; and

THAT Staff compile comments from the public and report back on the Water/Wastewater Resiliency Plans June 5, 2018.

COMMUNICATION 129201

Received From: Paul Knowles, Town Engineer

Addressed To: Corporate Services Committee

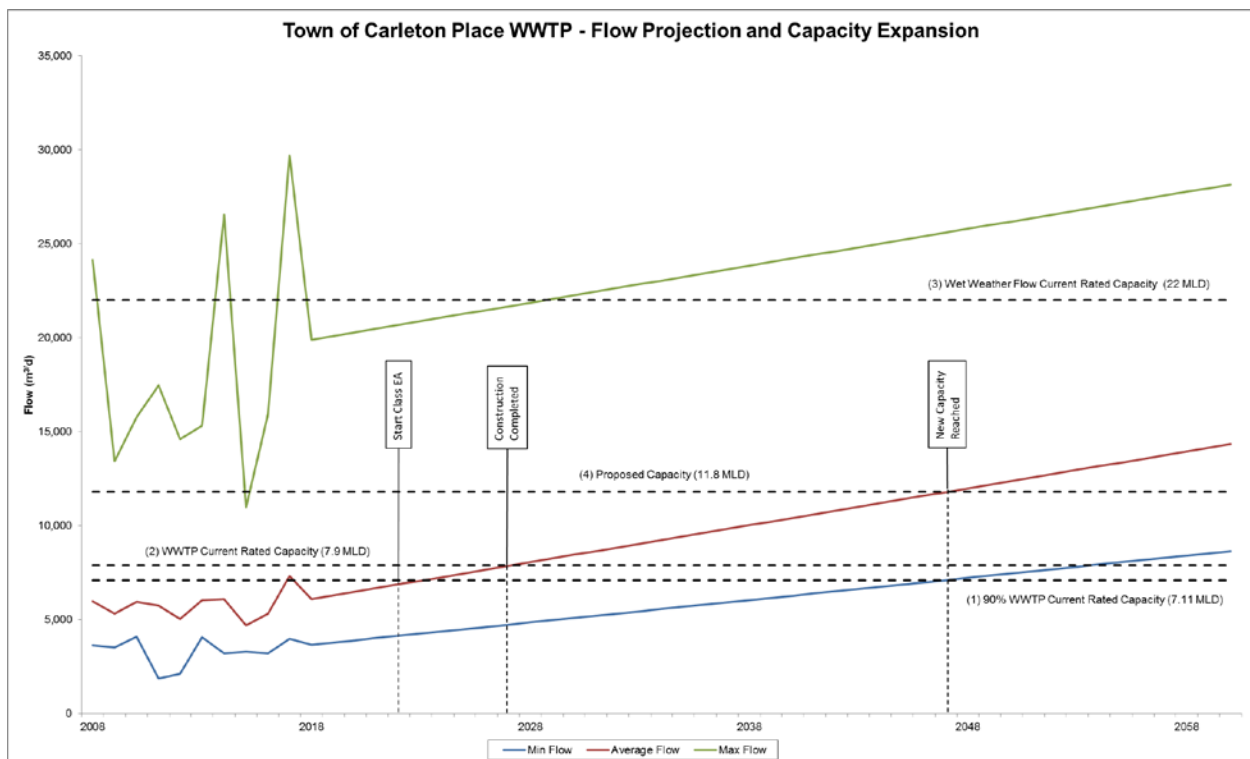
Date: May 15, 2018

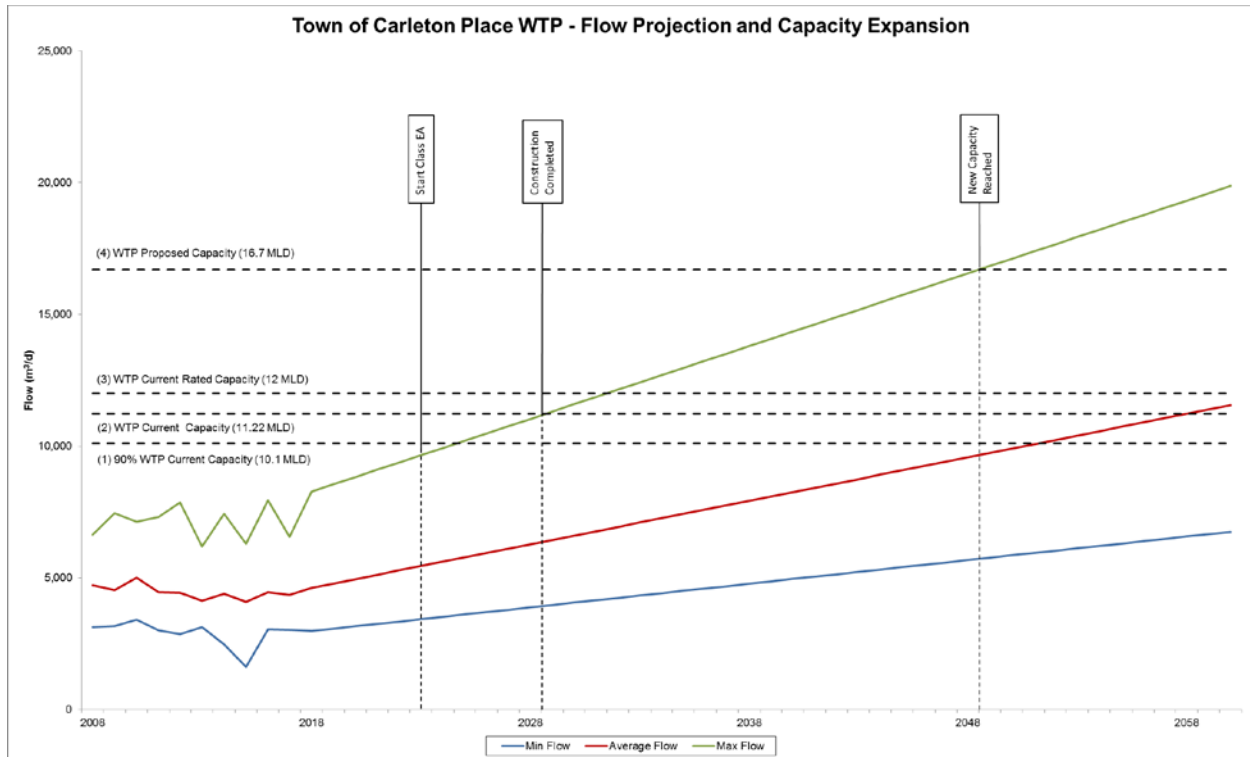
Topic: Water/Wastewater Capacity Expansion Assessment Reports Update to Communication 129182

SUMMARY

The Town's current Master Plan for the Water/Wastewater Treatment Plants was prepared in 2011. With the pace of growth and other changes, this Master Plan needs to be updated.

J.L. Richards was retained in January 2018 and has produced Capacity Expansion Assessment Reports for the Water and Wastewater Treatment Plants. These reports review historical flows to/from the plants and use the growth of 150 residential units per year to predict future flow demands at the plants. The figures below illustrate flows and when expansion of the plants will be required.





The reports then identify the expansion projects that will be required to increase the capacity of the plants to accommodate the flows from the growth. These projects are listed in Communication 129181 (Water and Wastewater Resiliency Plans).

COMMENT

The Capacity Expansion Assessment Reports will be presented at the Open House and Public Meeting on May 15th, 2018.

FINANCIAL IMPLICATIONS

The recommended improvements outlined by J.L. Richards will need to be incorporated into the Development Charges By-law, the By-law to Establish a Special Water and Sewer Rate and future capital and operating budgets.

UPDATE

An Open House to review the proposed Water/Wastewater Capacity Expansion Assessment with the Public was held on May 15, 2015. Comments from the Public are to be submitted by May 25, 2018.

STAFF RECOMMENDATION

THAT Staff present the proposed Water/Wastewater Capacity Expansion Assessment to Council; and

THAT Staff compile comments from the public and report back on the Water/Wastewater Capacity Expansion Assessment June 5, 2018

COMMITTEE DECISION

COMMUNICATION 129202

Received from Paul Knowles, Town Engineer
Addressed to Corporate Services Committee
Date May 15, 2018
Topic Development Charges Update to Communication 129183

SUMMARY

Carleton Place is a growing community and has had a longstanding policy to ensure that growth (Developers) funds its fair share of the costs that are associated with growth. The province places strict controls that limit a Municipality's authority to impose fees on Developers. However, most major infrastructure related to growth remains eligible for funding.

Carleton Place uses two (2) sections of provincial legislation for authority to impose fees on development. Water and Wastewater projects are authorized by the Municipal Act Section 391 (1) and all other eligible projects are authorized by the Development Charges Act.

COMMENT

When the current by-laws were developed in 2013 there was a desire to encourage development in the Downtown and on Strategic Properties. There was also a recognition that development in these areas faced certain challenges (brownfields) and, to provide an incentive to owners, a special exemption for new development in the Downtown or on a Strategic Property was included. The current by-laws do not require new development in these specific areas to pay any development fees. Instead, the intent was for the Town to pay any development fees and then use the extra taxes collected from the re-developed properties to fund the payment of these development fees.

In the spring of 2017, the province changed the tax ratios for multi-residential properties reducing the tax ratio from 2.28 to 1.0. This means that the taxes the Town collects from multi-residential units will decrease dramatically.

<u>Typical multi-res unit</u>	<u>Local share of taxes</u>
Assessed value \$100,000	Prior to April 2017 \$1,472.48
	After April 2017 \$661.42

Also, the billing formula for policing cost has changed. In the past, the cost of policing was based on the actual cost of the officers assigned to police the community. This meant that sometimes there could be growth in the community without an increase in the cost for policing. The province now charges for policing based on households and calls for service. Currently the Town is invoiced \$482.86/household for policing. With the local share from multi-residential of only \$661.42 there is little extra funds with which to fund the waived development fees for the development of Downtown and Strategic Properties.

As an interim measure, in December 2017, the 2013 Water / Wastewater By-law was amended so that historic flows from existing buildings on Strategic Properties was recognized and no water/wastewater charges were payable (by either the Developer or the Town) for conversion of the space within existing buildings into a residential use.

The proposed 2018 by-law continues this exemption. However, the exemption expires on June 27, 2023 when the by-law expires.

Furthermore, the proposed by-law imposes a cap of 60 Units/Ha for the exemption. The impact of this cap is illustrated below.

PROJECT	UNITS	SIZE (Ha)	UNITS/Ha
Joanne's Court	148	1.589	93
Market Square	51	.364	140
Cinnamon Suites	46	.753	61
12 Moore Street	6	.1003	60
Carambeck	40	.5299	75
Albert Street	7	.131	60
South Shore	145	2.43	60

The 2013 exemption from Development Charges for new construction in the Downtown and on Strategic Properties is proposed to expire on January 2, 2020. This allows developers 18 months to submit their application and qualify for the exemption.

FINANCIAL IMPLICATIONS

With the anticipated growth of 150 units/1,500m²/year, the proposed charges will collect \$34,200,000 to contribute towards the identified growth projects. It will be important to monitor growth and cashflow so projects are not constructed before the funds from growth are available. The remaining non-development portion of capital costs will need to be included into the 10-year capital forecast and the Asset Management Plan will need to be revised and funding allocated to provide for the future operating / maintenance cost associated with the growth projects.

UPDATE

An Open House to review the proposed Development Charges with the Public was held on May 15, 2015. Comments from the Public are to be submitted by May 25, 2018.

STAFF RECOMMENDATION

THAT Staff present the proposed Development Charges to Council; and

THAT Staff compile comments from the public and report back on Development Charges June 5, 2018.

COMMITTEE DECISION

COMMUNICATION 129203

Received from Paul Knowles, Town Engineer
Addressed to Corporate Services Committee
Date May 15th, 2018
Topic Works on Ottawa Valley Rail (OVR) Trail and Carleton Junction

SUMMARY

The following is an update on the various components of the OVR Trail and Carleton Junction.

Viewing Platform Over Mississippi River

- ▶ work has now been completed at a cost of \$50,000

Parking

- ▶ Original Budget \$11,000
- ▶ Recommend construction of two small granular parking areas for estimated cost of \$9,000

Ice Rink

- ▶ Original Budget \$0 (considered a future project)
- ▶ Recommend placing topsoil and seed on the area at a cost of \$6,000. Further work can proceed when funding is available.

The 2018 plans included allocating space for an ice rink on a concrete slab that can be constructed in the future. This area will be rough graded and could then be left as is until development of the rink proceeds at no cost. Before the concrete ice surface can be constructed, a proper granular base would need to be installed at a cost of \$100,000. This granular base could be installed in 2018 and the ice rink could then operate on the granular surface until the concrete slab is installed.

Alternatively, the area could have topsoil placed and seeded at a cost of \$6,000. When the concrete ice surface proceeds, the grass/topsoil would be removed and the granular base installed. For construction purposes, the ice rink area can be accessed through the Coleman Street granular parking lot without significant disruption to the Carleton Junction area in the future.

Pump Track/Skateboard

- ▶ Original Budget \$100,000
- ▶ Recommend grading the area, constructing a 12m x 27m concrete pad for skateboards and a granular base and surface on the remainder of the area for the installation of a future pump track at a cost of \$115,000.
- ▶ Recommend that \$125,000 be included in the 2019 budget to construct the actual pump track.

A space 60m x 30m has been reserved on the site for the BMS/Skateboard and/or pump track. At an onsite meeting with Ontario Bike Park Construction (a company that constructs these types of facilities), it was determined that the reserved space would be suitable for a pump track with a skateboard area in the middle of the track. An elevated entrance (1.2m) into the pump track is required and the grading for the pathway near the Dance Studio can be adjusted to provide this elevated entrance. Grading the area, constructing a 324m² concrete pad for skateboards and granular base and surface on the remainder of the area will cost \$115,000.

Constructing the actual pump track, in the future, will cost approximately \$125,000.

Pavilion

- ▶ Original budget \$60,000 (which includes \$5,000 from fundraising).
- ▶ Renwick/Smith (lowest bidder) has been engaged to prepare design drawings for the pavilion at a cost of \$6,350;
- ▶ Recommend proceeding with the underground services, the foundation and the floor slab for the pavilion so they are constructed in conjunction with other planned site works in 2018 (\$80,000);
- ▶ Recommend that further funding, grants and donations to a total of \$100,000 be pursued so that the pavilion building can be constructed in late 2018 or early 2019 as part of the 200th anniversary celebrations.

The size and scope of work for the pavilion has changed since the original budget was prepared. As discussed at the previous meeting with the Committee, staff obtained proposals for the design of the Pavilion/Time Capsule based on the following criteria:

The Town is interested in constructing a small Pavilion in the new Carleton Junction area along the OVR trail behind the Woolgrowers. This would be a small building that includes;

- *Two barrier free washrooms*
- *A small change room – (an ice rink will be nearby so an area to change skates would be useful)*
- *A small storage room which would contain*
 - o *Electrical panel*
 - o *Water supply into the building with a 1 1/2" connection to flood the rink*
 - o *Storage for hose to flood rink*
 - o *Sewage pump to pump sewage to Coleman St*
 - o *Cleaning/maintenance supplies*
- *An elevated hard surface (interlock brick) exterior performing space (24 ft. X 24 ft.) will be constructed adjacent to the pavilion. The pavilion wall will form the rear of the stage and will include electrical outlets to provide power to the stage area. Doors to access the washrooms, storage and change rooms will be located in other walls.*

- A drinking water fountain/water bottle filling station accessible from the exterior will be included.
- The roof for the pavilion should extend out over the performing space.
- Lighting for the stage area and perimeter of the pavilion will be provided.
- The pavilion building should “look” like the historical buildings that were previously on the site (see attached)
- Electrical, plumbing and sewage pump design by others

The Town also wishes to construct a Time Capsule as part of the 200th anniversary in 2019. The Time Capsule should resemble the historical water tank that was once located on the site to fill steam trains (see attached). The water tank would be the Time Capsule and this could be somehow incorporated into the Pavilion/Stage or could be a separate structure located nearby.

The following responded to the RFP and Renwick/Smith was retained:

COMPANY	CONCRETE/FLOOR PLAN	FINAL DESIGN	TOTAL
Larry Gaines	\$5,400	\$6,500	\$11,900
Geoff Hodgins	Did Not Submit		
Janie Leduc	\$3,800	\$5,150	\$8,950
Renwick/Smith	\$2,550	\$3,800	\$6,350
David Lashley	Did Not Submit		

The above proposals do not include a structural engineer. The budget will include an allowance of \$2,500 to retain an engineer, if required.

Staff has now investigated and based on that investigation, estimates that the underground services, the foundation and the floor slab for the above building can be constructed for \$80,000. Furthermore, staff notes that the Market Square building (above the concrete slab), which includes one washroom, electrical, small storage room and a large roof was constructed for \$163,178. A budget of \$100,000 should be sufficient to complete the pavilion.

OVR Trail

- ▶ Original Budget \$400,000 Asphalt + \$80,000 granular/top soil = \$480,000
- ▶ Recommend – Construct asphalt and granular trail from Coleman to Townline Road with top soil and grass seed adjacent.

When the original budget was prepared, it was assumed that the County would be constructing a granular trail that included a granular base on which the Town could add asphalt to create a paved trail from Carleton Place to Almonte. At the request of the Town to the County, the Town will be responsible for all work between Coleman Street and Townline Road and the County will provide a contribution equal to what their cost would have been for their planned granular trail work. The County will also construct a granular trail beyond the limits of the Town’s work.

Separate granular and paved trails are planned between Coleman Street and Townline Road. From Coleman Street to Moore Street, the granular and paved trails will be on opposite sides of Carleton Junction with landscaping and recreational features between the trails. From Moore Street to just south of the bridge, a 13.0m wide trail corridor will be developed that includes a 4.5m granular trail, 2.5m paved trail and a 6.0m grass/landscaped space. Further clearing/planting will be discussed with adjacent owners/public at an Open House on May 28th, 2018.

Over the bridge, all users will share a paved trail that varies from 3.5m – 5.0m.

From just north of the bridge to Townline Road, a 7.0m trail corridor will be developed that includes a 4.5m granular trail and a 2.5m paved trail. Trees, identified outside the 7.0m corridor by the Urban Forest/River Corridor Committee, will be protected but other trees/brush will be removed. Fill will be added to provide a gradual slope and will then be grass seeded. A grassed area will also be created at Townline Road.

This work is estimated to cost \$480,000.

Drainage

- ▶ Original Budget \$80,000
- ▶ Recommend extending 750mm diameter storm sewer and construct two ponds for \$80,000
- ▶ Recommend – THAT a sign be prepared that explains the importance of managing storm water volumes in an urban area.

Approximately \$21,000 of work from 2017 remains to be funded. The work remaining in 2018 includes extending the 750mm diameter storm sewer at Lansdowne/Coleman Streets, constructing two (2) ponds and confirming the storm water management system at the estimated cost of \$59,000 for a total cost of \$80,000. There is a \$60,000 Clean Water and Wastewater Fund grant associated with this work.

It is important to note that the Carleton Junction area has historically functioned to manage stormwater volumes. Significant drainage areas outlet at the north end of the property, then flow slowly/infiltrate and are stored on the site before the flow leaves the property via one catchbasin at Moore Street.

The ability to manage storm water volumes must be maintained and everyone should realize that, following large rain events, water will continue to be stored on the site for some time before it drains into the catchbasin.

With the installation of recreational facilities, the stored water will become more visible.

Illumination

- ▶ Original Budget \$80,000
- ▶ Recommend ordering lights for Carleton Junction - \$45,000
- ▶ Recommend ordering lights for Carambeck Dog Park - \$10,000
- ▶ Recommend ordering lights for OVR if funds from County for constructing their share of the OVR trail are sufficient - \$85,000

Decorative light fixtures similar to the fixtures in the Downtown area cost approximately \$5,000/light to purchase and install. In addition to this price, electrical supply must be installed and this would be expensive in areas that are remote from electrical power lines. As an alternative, staff has obtained prices for solar lights;

MANUFACTURER	MODEL	FIXTURE	POLE	INSTALL	TOTAL
Firstlight	SCL2-SPMA-BZ	\$3,215.28	\$958.33	\$500.00	\$4,673.61
Firstlight	1PL-PTM-BZ	\$2,520.83	\$958.33	\$500.00	\$3,979.16
Selux	4V4LS=R3N-1-L35	\$11,555.56	included	\$500.00	\$12,055.56
Sepco	SEPA300-QM-VPR50VQM5K	\$12,475.00	\$958.33	\$500.00	\$13,933.33

In 2017, a Firstlight 1PL-PTM-BZ solar light was installed in Roy Brown dog park as a test site. This light provides decent illumination in the area of the gate into the dog park. During the summer, the internal battery provides enough power to operate the light all night. In the winter, on cold days with little sun and long nights, the battery provided enough power to operate the light until late (after 11:00 pm) but there was not enough energy to power the light until morning. However, given the location in a dog park, the lighting provided is acceptable.

The products from the various manufacturers offer different styles and use different technologies. Firstlight uses a solar panel that is integrated into the top of their shoebox style fixture whereas the other manufacturers install a separate solar panel that is used to power a variety of fixtures.

Firstlight's SCL2-SPMA-BZ model offers the best value for lighting along a trail. Staff obtained a lighting design which recommended 22 lights in the Carleton Junction area and an additional 44 lights between Moore Street and Townline Road to provide lighting consistent with streetlighting standards. However, this has been re-assessed to allow for spillover lighting from existing lights and reduced lighting on straight sections of the trail where people can at least walk towards a visible light. The revised lighting design recommends nine (9) lights in Carleton Junction and 18 between Moore Street and Townline Road.

Firstlight's SCL2-SPMA-BZ model also offers the best value for lighting the dog park. Two (2) lights would be purchased, one (1) to be installed in the parking area and one (1) at the entrance into the dog park at Carambeck. The short path between the parking area and the dog park is very difficult to light as the mature pine trees block the sun in this area and solar lighting will not work. However, people will be able to walk towards either the light in the dog park or the light in the park area.

Solar lighting also offers the advantage that it can be staged and, if the lighting once installed, is deemed inadequate, additional lighting can be installed.

Installing this lighting would cost:

AREA	LIGHTING REQUIRED AND COST	
Carleton Junction	9 lights @ \$4,673.61 = 42,062.49	Say \$45,000
OVR Moore to Townline	18 lights @ \$4,673.61= 84,124.98	Say \$85,000
Dog Park	2 lights @ \$4,673.61 = \$9,347.22	Say \$10,000

Landscaping Concept Plan

- ▶ Original Budget \$0
- ▶ Recommendation – Engage landscape architect to prepare a conceptual landscape plan for Carleton Junction within the approved \$10,000

Earlier Council agreed to provide \$10,000 to engage a Landscape Architect to prepare a conceptual landscape plan for Carleton Junction. The location of the asphalt and granular pathways, the two small drainage ponds, the ice rink, parking and BMX/skateboard are basically fixed and will be designed by others. However, there is an opportunity to landscape;

- Along the pathways and around the small drainage pond between Moore Street and the BMX/skateboard – likely some pavers, grass, trees, rocks, benches, etc.
- Along the asphalt pathway and around the small drainage pond between the corner of Lansdowne/Coleman Streets and the Ice Slab/Parking (area between granular path and Lansdowne Street is not our property) - likely some pavers, grass, trees, rocks, benches, etc.
- Between the Ice Slab and the BMX/Skateboard. Again, the pathway locations are fixed and the area must remain basically flat surrounded by the elevated pathways. The Pavilion will be located at the south end adjacent to the path near the ice slab. An open area to the north of the pavilion/stage will be required. A short section of existing railway tracks remains on the east side. A railway themed play structure is planned likely at the north end of the area near the BMX/Skateboard.

Proposals from Landscape Architects will be obtained and a Landscape Architect engaged to design this work.

FINANCIAL IMPLICATIONS

The original budget for this project was \$919,000 which includes \$5,000 in donations, \$100,000 grant from Ontario Municipal Commuter Cycling program and \$60,000 from CWWF for drainage. The donations have not yet been obtained so the funds are not available at this time. However, there has been a further grant of \$45,059 so the budget should be adjusted to;

DESCRIPTION	AMOUNT
Reserve	\$198,650
Grants, Donations	\$165,000
Development Charge Fund	\$555,350
TOTAL	\$919,000

DESCRIPTION	AMOUNT
Original Budget	\$919,000
(Less Donations)	(\$5,000)
New Downtown Grant	\$47,062
New Budget	\$951,062

Completing the above work will cost:

DESCRIPTON	COST
Viewing Platform	Paid in 2017
Parking	\$9,000
Ice Rink	\$6,000
Pump Track Base/Skateboard	\$115,000
Pavilion (slab only)	\$80,000
OVR Trail	\$480,000
Illumination	\$45,000
Drainage	\$80,000
Landscaping Concept Plan	\$10,000
Play Structure	\$126,062
Total	\$951,062

ITEMS NOT ADDRESSED	COST ESTIMATE
Fencing at the police station – 130 m @ \$100	\$13,000
Extending sidewalks (407 m ² @ \$150) and curbs (50 m @ \$75) at cross streets	\$65,000 – \$75,000
The following work should also be scheduled in 2018 or 2019 to complete this project	
Landscape, trees, benches etc. (grass seed is included above) along the trail	\$30,000
Landscape, pavers, signage, benches and entrance features around ponds at Coleman St and Moore St	TBD upon completion of Concept Plan
Illumination between Moore St and Townline R	\$85,000
Pump Tract	\$125,000
Pavilion building and Time Capsule	\$100,000 less grants and fundraising
TOTAL	\$418,000 - \$428,000

and in the longer term – concrete slab for ice surface

STAFF RECOMMENDATION

THAT the following work be completed in 2018 as Phase I funded from the existing budget.

DESCRIPTION	COST
Parking	\$9,000
Ice Rink	\$6,000
Pump Track Base/Skateboard	\$115,000
Pavilion (slab only)	\$80,000
OVR Trail	\$480,000
Illumination	\$45,000
Drainage	\$80,000
Landscaping Concept Plat	\$10,000
Play Structure	\$126,062
Total	\$951,062

THAT the fencing at the Police Station be installed at a cost of \$13,000 with the cost funded from the Police Building Maintenance Reserve; and

THAT the curbs/sidewalks on cross streets be extended to connect to the Ottawa Valley Rail (OVR) Trail at a cost of approximately \$75,000 with the cost funded from the Hydro Reserve; and

THAT adjacent owners to the OVR trail/Carleton Junction area and the community be invited to attend an Open House to view plans for the OVR Corridor on Monday, May 28th, 2018; and

THAT a sign be prepared that explains the importance of managing storm water volumes in an urban area; and

THAT staff meets with County staff to discuss:

- the lease for Carleton Junction;
- construction timing and maintenance for the remainder of the OVR Trail;
- compensation the Town will receive for constructing the granular trail for the County from Coleman Street to Townline Road;
- signage/markings at cross streets (both on the OVR Trail and on the cross streets);
- Detectable Warning Systems (TWSI) at each cross street;
- Mile markers, historical signs, etc.; and

THAT funds be included in the 2019 budget for Phase 2 as follows:

DESCRIPTON	BUDGETED AMOUNT
Install solar lighting from Moore Street to Townline Road	\$85,000
Construct Pavilion Building and Time Capsule	\$100,000 Less fundraising and grants

Construct landscape features as per landscape conceptual plan	\$ TBD after plan is completed
Construct Pump Track	\$125,000

COMMUNICATION 129204

Received From: Trisa McConkey, CPA, CGA, Treasurer
Addressed To: Corporate Services Committee
Date: May 15, 2018
Topic: 2018 Public Sector Accounting Board (PSAB) Budget

SUMMARY:

The attached report provides a restatement of the 2018 budget to conform to O. Reg. 284/09. The restatement results in an accounting surplus of \$10,837,235 for 2018.

COMMENT:

The Public Sector Accounting Board (PSAB) has required the adoption of the full accrual basis of accounting by municipalities since 2009. This resulted in a change from the reporting of expenditures to the reporting of expenses.

Expenditures represent outlays of assets, such as cash, to purchase goods and services; however, under the full accrual basis of accounting, expenses are charged as the goods and services are utilized or consumed. As a result, amounts are to be reported for non-cash expenses including, amortization, tangible capital asset additions and disposals, post-employment benefits expenses and principal paid on debt.

Section 290 of the Municipal Act, 2001 requires municipalities to prepare zero balanced, or cash-based, budgets which include all expenditures and revenues for the taxation year. Council approved under Motion No. 1-128-07, the 2018 zero-based Budget as presented in Communication 127428.

Ontario Regulation 284/09, Budget Matters – Expenses, allows municipalities to exclude from the budgets prepared under Section 290, estimated amounts for non-cash expenses. The regulation then requires that a report be prepared about the excluded expenses and the estimated change in the accumulated surplus of the municipality and that the report be adopted by Council resolution. This report is attached.

FINANCIAL IMPLICATIONS

There are no financial implications resulting from this report.

STAFF RECOMMENDATION

THAT Council approve the 2018 Public Sector Accounting Board (PSAB) Budget prepared by the Treasurer as required by the Municipal Act, 2001 O. Reg. 284/09.

Town of Carleton Place
PSAB Statement
Report on Excluded Revenue & Expenditures

	Budget 2017	Budget 2018
Traditional Surplus (Deficit)	\$ -	\$ -
PSAB Additions		
Net Change in Capital Assets	\$ 14,750,000	\$ 17,126,933
Principal Paid on Debt	\$ 412,000	\$ 559,839
Funding of Unfinanced Capital	\$ 468,000	\$ 605,347
PSAB Deductions		
Post Employment Benefits	(\$ 30,000)	(\$ 10,178)
Increase in Debt/Unfinanced Capital	(\$ 1,904,000)	(\$ 710,000)
Amortization	(\$ 3,500,000)	(\$ 4,183,882)
Net Change in Reserves	(\$ 5,480,000)	(\$ 2,550,824)
PSAB Surplus (Deficit)	4,716,000	10,837,235

COMMUNICATION 129205

Received From: Trisa McConkey, CPA, CGA, Treasurer
Addressed To: Corporate Services Committee
Date: May 15, 2018
Topic: Insurance Renewal

SUMMARY:

The Town of Carleton Place has received its insurance policy renewal for the year 2018/2019. The annual premium for the policy providing the same levels of coverage as prior years is \$201,027 plus PST, an increase of 0.74% over the previous year.

COMMENT:

The Town of Carleton Place last issued an RFP for Insurance services in 2015. Upon evaluation of the proposals received, Arthur J. Gallagher was selected as the successful broker with Frank Cowan as the insurance provider. The table below details the history of premiums and the percentage increases by policy year. Increases have remained below inflation, since the 2015/16 agreement was accepted.

POLICY YEAR	PREMIUM (+ PST)	% INCREASE OVER PREVIOUS YEAR
2018/19	\$ 201,027	0.74%
2017/18	\$ 199,554	1.62%
2016/17	\$ 196,364	0.60%
2015/16	\$ 195,197	

Staff believes that RFPs for insurance services should be issued every 5 years. As the last RFP was issued in 2015, Staff will commit to seeking insurance pricing in 2019.

OPTIONAL ADDITIONAL COVERAGE:

In addition to the insurance coverages offered by Frank Cowan Insurance in the policy discussed above, the company has presented three additional items for consideration as follows:

1. The current policy provides a total limit of liability of \$25 million. Cowan has suggested that the limit could be raised to \$50 million for an additional cost of \$5,000 plus PST. Staff feels the current limit is sufficient.
2. Frank Cowan offers a revenue-neutral solution that provides insurance coverage to facility users. Currently, staff requires a certificate of insurance from facility users to prove that they have sufficient coverage for their event. This process is often labour intensive and prone to error. The Facility User Policy provides insurance to facility users at reasonable rates. The program is administered by the Town thereby guaranteeing that appropriate coverage is in fact in place. The Town would be

required to provide a deposit, equal to an estimate of annual revenue, to the insurance company. The deposit will be calculated after we provide facility revenue history to the insurance company. At the end of the year the revenue for the policies sold is reconciled with the deposit and any excess revenue is remitted to the insurance company.

Below is an example of the premium costs for \$2,000,000 limit of liability for users:

# OF PARTICIPANTS	TYPE OF EVENT	RATE/HOUR
1 to 50	No Alcohol, non-sporting event	\$3.00
1 to 25	Low risk sporting event (i.e. dance lessons, public skating, curling, tennis, badminton, horseshoes)	\$2.50
1 to 25	Medium risk sporting event (i.e. floor hockey, basketball, soccer, baseball, other non-contact sports)	\$4.00
1 to 50	Alcohol, non-sporting event	\$12.00
51 to 100	Alcohol, non-sporting event	\$20.00

3. Cowan also suggested we obtain Cyber Liability coverage however no quote was provided at this time. Cyber Liability coverage includes protection from the following:
- Loss and/or business restoration expense due to a security breach resulting in network system failure (business interruption, extra expense, forensic services)
 - Threats to release sensitive information following a computer attack (investigation and settlement of threats)
 - Information asset loss and restoration extortion including software, electronic data, customer information, competitive information, and confidential/private information that is stored electronically (costs to restore information assets resulting from a failure of security, costs to recollect information assets)
 - Crisis Management expenses related to restoring the insured's reputation following a security breach (costs to retain the services of a public relations firm, costs to notify customers of a breach, costs to provide credit-monitoring services and, forensic investigations expenses)
 - Privacy & network security liability from the disclosure of confidential information due to security breach (violation of federal or provincial privacy legislation; regulatory violations, failure to protect network security/unauthorized access, failure to protect/wrongful disclosure of private or confidential corporate information)
 - Media liability arising out of the content on the insured's website or other forms of media (copyright or trademark infringement, libel/slander, invasion of privacy)

To obtain a quote for this coverage staff would need to implement policies and procedures relating to the following:

- Disaster Recovery and Incidents
- Business Continuity
- User and Passwords
- Privacy
- Document Retention and Destruction
- Remote and Mobile Device Computing

Staff will bring forward further information regarding the Cyber Liability Coverage as further progress is made with regard to the noted policies and procedures.

FINANCIAL IMPLICATIONS

The portion of the premium, including non-refundable taxes, for June 15th 2018 to December 31st, 2018 is \$117,529.71 and the portion of the 2017/18 policy that was prepaid for the January 1st to June 14th, 2018 period was \$98,039.85. Therefore, the total expense for 2018 is \$214,994.41 which is within the \$215,065 budget approved for insurance coverage under this policy. Note that insurance coverage is only subject to 8% PST and not 13% HST and that no portion of the tax is refundable.

STAFF RECOMMENDATION

THAT Council accepts the quote from Arthur J. Gallagher, Insurance Broker for Frank Cowan Insurance for the period June 15, 2018 to June 15, 2019 at the quoted price of \$201,027 + PST;

THAT Council authorizes proceeding with the Frank Cowan Facility User Policy to be able to offer insurance coverage to Town facility users; and

THAT Council direct staff to bring forward a proposal for Cyber Liability coverage once the required policies and procedures are implemented.

COMMUNICATION 129206

Received from Trisa McConkey, CPA, CGA, Treasurer
Addressed to Corporate Services Committee
Date May 15, 2018
Topic Establish Final Tax Rates for 2018

SUMMARY:

Final tax rates, along with approved tax ratios, have now been received from the Ministry of Education and the County of Lanark.

DESCRIPTION	2018 TAX RATE	2017 TAX RATE	TAX RATE CHANGE
Residential	0.01200122	0.01217050	-1.39%
Multi-Res	0.02447941	0.02497543	-1.99%
Commercial	0.03124838	0.03124439	0.01%
Industrial	0.03995137	0.04087920	-2.27%

COMMENT:

The Town of Carleton Place has experienced an overall real tax increase of 1.97% on the municipal portion of the taxes once assessment changes and growth are accounted for. However, the overall residential tax rate decreased by 1.39%. This overall rate decrease is made up of the following:

- Municipal Residential Rate - 0.20%
- County Residential Rate - 1.75%
- Education Residential Rate - 5.03%

FINANCIAL IMPLICATIONS

There are no financial implications resulting from this report.

STAFF RECOMMENDATION

THAT the 2018 Tax Rate By-law be forwarded to Council for approval.

COMMUNICATION 129207

Received From: Ontario Clean Water Agency
Addressed To: Corporate Services Committee
Date: May 15, 2018
Topic: 2017 Operating Fund Adjustment

SUMMARY:

The Ontario Clean Water Agency's (OCWA) operations of the Town's Sewer and Water Plants for 2017 has resulted in a surplus of \$78,639.65 (\$62,575.31 for the Waste Water Plant and \$16,064.34 for the Water Plant).

COMMENT:

The contract with OCWA for the operation of Carleton Place waste water and water treatment plants contains the following provision (Schedule D, section 2):

At the end of each calendar year, OCWA will determine the actual charges for providing the Services to the Client for that year (the "Actual Charges") which, as indicated may include an increase in premium for the Insurance. If the Estimate paid by the Client for the year exceeds the Actual Charges, OCWA will pay the Client the difference within thirty (30) days of OCWA making the determination. If the Actual Charges exceed the Estimate paid by the Client, the Client shall pay OCWA the difference within (30) days of OCWA notifying the Client in writing of the determination.

FINANCIAL IMPLICATIONS

The credit received from OCWA will be applied to 2018 operations. An estimate of this credit was considered in the 2018 Budget in the amount of \$51,100. The remaining \$27,539.65 becomes an actual surplus for the Town in 2018 and will be transferred to the Sewer & Water Reserve at year end.

STAFF RECOMMENDATION

THAT Council receive the Treasurer's Report dated May 15, 2018 regarding the 2017 Operating Fund Adjustment related to the Town's contracts with the Ontario Clean Water Agency for the operation of the Waste Water and Water Treatment Plants as information.

COMMUNICATION 129208

Received from: Diane Smithson, CAO
Date Received: May 15, 2018
Addressed to: Corporate Services Committee
Topic: Letter of Municipal Significance from Council re Poker Run for Guide Dogs/Motorcycle Show and Shine Event

SUMMARY:

The organizers of the Poker Run for Guide Dogs / Motorcycle Show and Shine event scheduled to take place on Saturday, May 26, 2018 at Market Square are applying for a special event permit from the Alcohol and Gaming Commission of Ontario (AGCO). In order to qualify for the special event permit, the AGCO requires a municipal resolution or letter from a delegated municipal official designating the event as "Municipally Significant".

COMMENT:

The proceeds from this event will be donated to the Lions Foundation of Canada Guide Dogs which is a national charitable foundation that assists Canadians with a medical or physical disability by providing them Dog Guides at no cost.

STAFF RECOMMENDATION:

THAT the Poker Run for Guide Dogs / Motorcycle Show and Shine event taking place at the Market Square on Saturday, May 26, 2018 be deemed a municipally significant event; and

THAT the Clerk be authorized to forward a letter to the Alcohol and Gaming Commission of Ontario advising them of this fact on behalf of the Municipality.