



The Township of North Huron 2017 Business Plan Public Works

Public Works Consolidated Business Plan

The Public Works Business Plan for 2017 focuses on operations and capital programs typical to past years. The 2017 capital budget for Roads, Water and Sewer has carry over items from 2016, and some new items to replace and optimize a few pieces of aging equipment. A few things to note about the operations program for 2017. The 2017 Operational budget incorporates internal vehicle rental charges attributed directly to the job area. Additionally, staff wages are allocated directly to the job area. This is done to gain a qualified perspective of the effort to complete certain job tasks. This is the first step in analyzing the business functions of Public Works to identify opportunities for efficiency and to quantify Levels of Service related to operations. A few of the administrative deliverables in the 1-2 year timeframe include the following:

RFQ Trade Services	By-Law/Policy Development - Road Occupancy	Updated Fleet Management Strategy
RFT Maintenance Gravel	By-Law/Policy Development - Water	Winter Operations Plan
RFP Curbside Collection for Garbage and Recyclables	By-Law/Policy Development - Wastewater	Minimum Maintenance Standards Program
RFT Surface Treatment	By-Law/Policy Development - Solid Waste and Recycling	Pavement Management (HCB and LCB) Strategy
RFP Plow Truck and Backhoe Loader	Service Line (R, W, WW, SW, C) Business Review	Asset Management Policy
RFP Howson - Dam Safety Analysis	Master Plans for Water and Wastewater	Asset Management Plan - Risk based Prioritization
RFQ CCTV/Sewer Camera	Water/Wastewater Service Repair Policy	Asset Management - Condition Assessment Programs

Roads							
Project	Status	Budget	Actual				
			YTD Total	Q1	Q2	Q3	Q4
LCB-Surface Treatment Program		\$ 105,000	\$ -				
Phase 1 - Industrial Land Strategy		\$ 95,000	\$ -				
Westmoreland Reconstruction		\$ 300,000	\$ -				
Patrick Street		\$ 32,000	\$ -				
Howson Dam EA/Dam Safety Investigation		\$ 100,000	\$ -				
Equipment Attachments		\$ 20,000	\$ -				
Plow Truck		\$ 270,000	\$ -				
Backhoe Loader		\$ 120,000	\$ -				
Facility Condition Assessment/Space Needs		\$ 15,000	\$ -				
Operations - Budget		\$ 1,857,342	\$ -				
Streetlight Conversion (Phase 1 and 2)		\$ 540,000					

Water							
Project	Status	Budget	Actual				
			YTD Total	Q1	Q2	Q3	Q4
Westmoreland Reconstruction		\$ 135,000	\$ -				
Arthur Street		\$ 95,000	\$ -				
Wingham Standpipe EA and Detailed Design		\$ 200,000	\$ -				
Equipment		\$ 30,000	\$ -				
Blyth Road Development		\$ 30,000	\$ -				
Operations - Budget		\$ 1,231,664	\$ -				
Master Plan (CWWF)		\$ 60,000					



The Township of North Huron 2017 Business Plan Public Works

Wastewater							
Project	Status	Budget	Actual				
			YTD Total	Q1	Q2	Q3	Q4
CCTV/Sewer Camera Work		\$ 100,000	\$ -				
Arthur Street		\$ 37,500	\$ -				
Blyth STP Clarifier Weir Replacement		\$ 32,500	\$ -				
Wingham STP UV Replacement		\$ 105,000	\$ -				
Wingham STP Sludge Holding Cell		\$ 180,000	\$ -				
Equipment		\$ 7,500	\$ -				
Operations - Budget		\$ 969,268	\$ -				
Master Plan (CWWf)		\$ 60,000	\$ -				

Solid Waste							
Project	Status	Budget	Actual				
			YTD Total	Q1	Q2	Q3	Q4
Operations - Budget		\$ 522,975	\$ -				

Cemetery							
Project	Status	Budget	Actual				
			YTD Total	Q1	Q2	Q3	Q4
Operations - Budget		\$ 152,428	\$ -				



The Township of North Huron 2017 Business Plan Public Works

Budget and Structure								
Total Public Works FTE		14.5						
Total Public Works Salary/Wage Impact		\$ 799,682						
Total Public Works Benefits Impact		\$ 217,698						
TOTAL Salary/Benefits (Base)		\$ 1,017,380						
2016	Budget				Actuals			
	Operating	Capital	Total	Balance to Tax	Operating	Capital	Total	Balance to Tax
Roads	\$ 1,503,977	\$ 712,399	\$ 2,216,376	\$ 1,616,101	\$ 1,746,330	\$ 289,744	\$ 2,036,074	\$ 1,512,888
Water	\$ 1,000,341	\$ 1,126,264	\$ 2,126,605	\$ -	\$ 933,291	\$ 782,993	\$ 1,716,284	\$ -
Wastewater	\$ 835,369	\$ 232,895	\$ 1,068,264	\$ -	\$ 878,417	\$ 50,284	\$ 928,702	\$ -
Solid Waste	\$ 436,255	\$ -	\$ 436,255	\$ 232,255	\$ 490,800	\$ -	\$ 490,800	\$ 170,656
Cemetery	\$ 100,453	\$ 62,000	\$ 162,453	\$ 75,903	\$ 108,957	\$ 32,411	\$ 141,367	\$ 27,531
Streetlights	\$ 144,848	\$ 9,200	\$ 154,048	\$ 138,786	\$ 159,910	\$ 9,858	\$ 169,769	\$ 152,781
	\$ 4,021,243	\$ 2,142,758	\$ 6,164,001	\$ 2,063,045	\$ 4,317,706	\$ 1,165,290	\$ 5,482,996	\$ 1,863,856
Roads	The Roads department was under-resourced administratively in 2016 to address the Shared Service structuring and deliver the capital outlay. Operating costs increased for additional staff wages. There were additional costs for shared service staff time (contracted services line). These were offset through by a shared service revenue line. Two facility repair and reclamation items were undertaken at EW Shed and Blyth Shed, with both going over preliminary anticipated budgets. Finally, the equipment repair budget saw a significant cost to get ready for the 2016/17 winter season, and deal with major repairs necessary to be reliably operational for winter. Overall, the Roads impact to taxation was less than anticipated from 2016 Budget to Actuals mostly due to capital component expenditures not being realized.							
Water	The Water department in 2016 had a partial year of in-house staff and contractor performing operations and maintenance activities with the Veolia contract starting in April. Staff met with Veolia management and operations staff continually throughout the year to review activities and acquaint with the contract terms. The capital outlay was not delivered in full, however some of the projects listed were initiated for procurement. The Blyth Road watermain extension was completed, with partial carry forward for finishing items. The Blyth well was tendered over-budget and had some operational issues that needed resolved before commissioning in December. The Westmoreland Street project was delayed due to approvals not being in place from the Ministry.							
Wastewater	The Wastewater department in 2016 had a standard year and was typical to the year for the Water department. The capital outlay was not realized in full, with one of the major items being CCTV/sewer camera work to determine condition assessments.							
Solid Waste	The Solid Waste department in 2016 had increased revenue stream from tipping fees. This was largely due to material received from a fire. This material was stockpiled at the landfill, and will need to be dealt with in 2017.							
Cemetery	The Cemetery Budget in 2016 included capital items for Niche wall construction. This was completed in Blyth. The revenues increased in 2016 as a result of the revenue from other municipalities.							
Streetlights	We had a number of maintenance issues related to streetlights, which is common with older lighting systems. The cost of consumption has increased and has impacted the operational budget.							
2017	Budget							
	Operating	Capital	Total	Balance to Tax	% increase			
Roads	\$ 1,857,342	\$ 1,057,000	\$ 2,914,342	\$ 1,752,042	8%	Note: The "Balance to Tax" line is a summation of anticipated revenues against expenditures (capital and operating). The percentage increase noted is the increase of the balance to taxation from 2016 Budget to the proposed 2017 Budget for that particular department.		
Water	\$ 1,231,664	\$ 490,000	\$ 1,721,664	\$ 0				
Wastewater	\$ 969,268	\$ 462,500	\$ 1,431,768	\$ 0				
Solid Waste	\$ 522,975	\$ -	\$ 522,975	\$ 280,975	21%			
Cemetery	\$ 152,428	\$ -	\$ 152,428	\$ 62,878	-17%			
Streetlights	\$ 155,712	\$ 540,000	\$ 695,712	\$ 149,195	7%			
	\$ 4,889,388	\$ 2,549,500	\$ 7,438,888	\$ 2,245,089				



The Township of North Huron

2017 Budget

Project Charter

Capital Number

1.0 Project Identification		
Department	Streetlights	
Project Manager	Jeff Molenhuis	
Project Name	LED Streetlight Conversion	
Additional Resources		

2.0 Project Location/Figure
This project is proposed in Wingham, Blyth and the hamlets within North Huron that have streetlights that have not already been converted to LED.

3.0 Business Case
In 2016, the Township received a proposal for a turn-key LED conversion solution for streetlights. The proposal included an invest grade audit (Phase 1) and preliminary conversion plan (Phase 2). The proposal included administration to switch over information with the LDC's (Hydro One and Westario) for billing purposes. The estimate, at the time of the proposal, was approximately \$590,000, which does not include the IESO incentive estimated at \$70,000 in early 2016. Council should be aware the IESO incentive is subject to change and be reduced at the sole discretion of the Local Distribution Company. Staff worked with LAS/Realterm in 2015 and 2016 to ensure that the Township could still be eligible for the incentive program, however, at the time of this report, the current IESO has not been confirmed.

4.0 Project Objectives
The objective of this project is to realize energy savings through the use of LED lighting, which has reduced consumption. The Township's current consumption costs for the major centres (Wingham and Blyth) are around \$140,000 (570,000 kWh). The conversion program estimates a reduced consumption of approximately 65% (201,000 kWh), where the proposal estimates a conservative annual savings of \$70,000. This number would be further refined after Phase 1 - audit. The program would also reduce maintenance costs, with the current being around \$15,000 for the Township. These are estimated at 80% savings, or \$13,000. In total, annual savings are estimated at \$83,000. With a project cost of \$530,000, the payback period is approximately 6.5 years.

5.0 Project Scope
The project is proposed in two phases, with the conclusion of the first phase allowing for the Township to choose whether to proceed with the second phase or not. The first phase is an inventory of the assets for streetlights for an investment grade audit. This will determine/refine the business case details for the Township's streetlights. The second phase is the turnkey conversion program, including LDC billing change overs.



The Township of North Huron

2017 Budget

Project Charter

Capital Number

1.0 Project Identification		
Department	Streetlights	
Project Manager	Jeff Molenhuis	
Project Name	LED Streetlight Conversion	
Additional Resources		

6.0 Project Deliverables	
Identifier	Description
Phase 1	Audit Results and updated cost-estimate (~\$15,000)
Phase 2	Converted streetlight assets (~\$585,000)

7.0 Milestones/Schedule	
Date	Description
	Township Signs Letter of Intent to proceed (Council motion)
150 days from LOI	Audit Results and updated cost-estimate
TBD	Converted streetlight assets

8.0 Risk Elements
<p>One of the risk elements inherit with a proposal like this, is that it is dependent on our asset inventory. We are currently working towards populating our inventory database for all major asset groups. Streetlights are in need of inventory work. There may be additional cost once the audit is complete as we may find the current estimate of fixture assets is incorrect. As well, Phase 2 of the proposal includes a threshold percentage of re-wiring that may vary from fixture to fixture depending on the detailed inventory and audit. The IESO incentive, given that the program has been in place for quite a few years, may be subject to reduced funding, so Council should be aware the estimated incentive is very likely to decrease. Finally, the lighting standards required for the roadway will need to be maintained when converting to LED. The need for additional lighting or higher strength may be necessary to meet the lighting requirements for the roadway. These would all increase costs of the project overall.</p> <p>To mitigate this risk, the proposal allows for Phase 1 to be a break-off point should the Township decide not to proceed with the conversion. The Township would owe a fee (~\$15,000) to the proposal provider for the inventory and audit work performed. Regardless of choosing to proceed or not, the information collected in Phase 1 would be very useful to build into our inventory database and include in our Asset Management practices.</p>



The Township of North Huron

2017 Budget

Project Charter

Capital Number

1.0 Project Identification		
Department	Streetlights	
Project Manager	Jeff Molenhuis	
Project Name	LED Streetlight Conversion	
Additional Resources		

9.0 Success Factors
Reduced annual operations and maintenance costs for streetlights would reduce the impact to ratepayers, especially in the urban centres of the Township. A key success factor is achieving the reduced energy consumption and passing on that savings to the ratepayers. Additionally, Staff recommend taking a portion of the annual savings from the consumption reduction and dedicating to a road related reserve so as to help stabilize the road funding strategy in the long term. These reductions/savings should not be attributed to rate reductions or reserve transfers once realized after the 6.5 year payback period.

10.0 Funding		
Expenditure		
Sub Total	\$ 530,000	
Full HST	\$ 68,900	
TOTAL Expenditure	\$ 598,900	

Funding Source		
Asset Disposal		Council may wish to debenture the project, or use reserve funds to fund the project. As noted, the payback period is approximately 6.5 years, so there should be a commitment to allocate annually the cost-savings from streetlight consumption until the reserve is replenished. Alternatively, the proposal has options for funding and cost-sharing through Infrastructure Ontario or through the service provider.
Specific Reserve		
General Reserve	\$ 598,000	
Debenture		
Grant		
Other		
Taxation		
TOTAL Funds	\$ 598,000	



The Township of North Huron

2017 Budget

Project Charter

Capital Number

1.0 Project Identification

Department	Roads
Project Manager	Jeff Molenhuis
Project Name	Heavy Equipment Purchases
Additional Resources	

2.0 Project Location/Figure

These pieces of equipment are proposed for use throughout the Township. The plow truck would primarily be used in Wingham, but would also have use in Blyth and EW wards. The backhoe loader is proposed for use throughout the Township, and would also be useful for supporting cemetery activity, as well as water and wastewater support activities through the Roads department.

3.0 Business Case

In 2017, Township staff began a detailed inventory and condition assessment of equipment and attachments currently used or owned by the Public Works department. A good bulk of the inventory to date is at an advanced age approaching useful life, or beyond. The fleet contingent in general in late 2016 saw a significant increase in maintenance costs, largely due to the age of the fleet and the change in approach to maintenance activities. This trend is likely to continue considering the current condition of the fleet contingent. As such, this year's budget proposes replacement of two units. The GMC Snow Plow (01-95) is proposed for replacement in Wingham. It is beyond its service life and has some anticipated major repairs. The Case 570MXT Tractor (03-08) is also proposed for replacement. With both of these units, we are recommending replacement with that incorporates other operational needs that would allow the group to be more efficient (larger payload, less trips) and effective (backhoe/loader to support rural and urban needs, have staff perform duties in-house, reduce reliance on contractors). Ultimately both units will help build internal capacity to perform PW tasks that we currently rely on contractors to perform.

The internal capacity building also supports sustainability and long term financial planning of fleet, as well as the Roads department, as it reduces the need to pay outside forces (~\$20,000 annually) for backhoe work, which also requires staff time to oversee the outside forces. Annually we would generate the equivalent in internal rental charges, and keep the resource in-house.

4.0 Project Objectives

The objectives of this replacement are two-fold. First, the intent for fleet replacement would be to spread out the major purchases. We anticipate upcoming major unit replacements (trackless, streetsweeper), so it is recommended to purchase one unit significant, important operational unit now in hopes to avoid having a bulk of absolutely necessary replacements all at the same time. Additionally, these replacements are recommended to allow for staff to perform more tasks in-house to be operationally more effective, as well to allow for increased efficiency related staff time performing certain tasks (snow hauling).



The Township of North Huron
2017 Budget
Project Charter

Capital Number

1.0 Project Identification

Department	Roads	
Project Manager	Jeff Molenhuis	
Project Name	Heavy Equipment Purchases	
Additional Resources		

5.0 Project Scope

The units would be procured to be road ready when delivered. The units may need some after-delivery resources, such as radio equipment installation.

6.0 Project Deliverables

Identifier	Description
	Backhoe/Loader unit
	Snow Plow unit

7.0 Milestones/Schedule

Date	Description
Summer 2017	Delivery of Backhoe/Loader
Fall 2017	Delivery of Snow Plow

8.0 Risk Elements

The market may command additional cost depending on timing of RFP or unit details specified. The units may not be available on the schedule noted, depending on supplier workload. Staff would structure the RFP such that these details could be flushed out and be part of the recommendation for award.

9.0 Success Factors

Units that are priced within budget and can be delivered before their operational use is needed. Vehicles that perform and function more effectively for specific work tasks to allow reduced budget (NH labour, contractor costs).



The Township of North Huron
2017 Budget
Project Charter

Capital Number

1.0 Project Identification		
Department	Roads	
Project Manager	Jeff Molenhuis	
Project Name	Heavy Equipment Purchases	
Additional Resources		

10.0 Funding		
Expenditure		
Sub Total	\$ 240,000	Plow Truck
Sub Total	\$ 105,000	Backhoe/Loader
Full HST	\$ 44,850	
TOTAL Expenditure	\$ 389,850	

Funding Source		
Asset Disposal		The funding source is currently presented in reserve transfer and taxation; Council may decide to direct staff to debenture the purchases to reduce the direct impact to taxation (impact to taxation: P&I annualized ~\$30,000 over 10 years vs \$239,850 in 1 year). Through inventory of fleet equipment/attachments, Staff are hopeful to optimize the contingent and realize ~\$40,000 in unit sale revenue. These numbers are not currently presented in the budget, but would further offset taxation impacts or they would be transferred to PW reserve funds to replenish the reserve account.
Specific Reserve	\$ 150,000	
General Reserve		
Debenture		
Grant		
Other		
Taxation	\$ 239,850	
TOTAL Funds	\$ 389,850	



The Township of North Huron
2017 Budget
Project Charter

Capital Number

1.0 Project Identification		
Department	Solid Waste	
Project Manager	Jeff Molenhuis	
Project Name	Off-Site Impact Investigation	
Additional Resources		

2.0 Project Location/Figure
The off-site impact investigation would be conducted at the Wingham Landfill site, and adjacent properties.

3.0 Business Case
Additional work was undertaken in 2016 as a result of Reasonable Use Guideline (RUG) exceedances near the downgradient property boundary (along Reid Road). In consultation with the Township and the MOECC, we installed two monitoring wells on the north side of Reid Road in March 2016. The purpose of the wells was to determine if exceedances were occurring north of the Township road and to obtain additional information on the direction of shallow groundwater movement. The wells were sampled three times in 2016. The results showed exceedances in one of these new wells. In their letter of June 27, 2016, the MOECC requested steps be taken to address noncompliance with the RUG. Therefore, the consultant suggests that the 2016 status report contain a plan for addressing off-site impacts, and that the report be submitted to the MOECC for comment. This plan will be developed by Burnside, our operational consultant for landfills, with input from North Huron and the MOECC and may involve additional wells, sampling or geophysics.

4.0 Project Objectives
The objective of this project is to determine the extent of exceedances of landfill contaminants based on Reasonable Use, and to address those exceedances to bring back into compliance or mitigate the impact off-site.



The Township of North Huron

2017 Budget

Project Charter

Capital Number

1.0 Project Identification		
Department	Solid Waste	
Project Manager	Jeff Molenhuis	
Project Name	Off-Site Impact Investigation	
Additional Resources		

5.0 Project Scope
The scope is defined as investigation of the off-site impacts. Further scoping will be necessary once Ministry comment is received on the proposed scope (in the annual operations report). The scope may increase or decrease.

6.0 Project Deliverables	
Identifier	Description
Investigation Report	Investigation of off-site contamination from landfill

7.0 Milestones/Schedule	
Date	Description
mid 2017	MOE response on proposal
end 2017	draft investigation report

8.0 Risk Elements
The consultation with the Ministry will dictate the work program required. Burnside estimated the cost of this item based on previous experience with this particular work and previous Ministry responses.

9.0 Success Factors
Success in this regard will be determined by a cost-effective and administratively feasible solution to mitigate off-site impacts at the Wingham landfill.



The Township of North Huron
2017 Budget
Project Charter

Capital Number

1.0 Project Identification		
Department	Solid Waste	
Project Manager	Jeff Molenhuis	
Project Name	Off-Site Impact Investigation	
Additional Resources		

10.0 Funding		
Expenditure		
Sub Total	\$ 40,000	
Sub Total		
Full HST	\$ 5,200	
TOTAL Expenditure	\$ 45,200	

Funding Source		
Asset Disposal		
Specific Reserve		
General Reserve		
Debenture		
Grant		
Other		
Taxation	\$ 45,200	
TOTAL Funds	\$ 45,200	