



Wiarton Master Servicing Plan for Water, Wastewater and Stormwater Services FUTURE GROWTH PROJECTIONS



2011 census Population 2,291

Growth Area Description	Growth Units (@2.5ppu)	Growth Population	Area (m2)	Area (ha)	New Contributing Area (m2)	New Contributing Area (ha)
Division St	24	60	54,822	5.48	54,822	5.48
McNaughton St	50	125	17,337	1.73	0	0.00
Frank St 1	34	85	70,346	7.03	8,802	0.88
Elm St 1	28	70	64,423	6.44	60,057	6.01
William St	20	50	30,668	3.07	30,668	3.07
Elm St 2	16	40	34,796	3.48	0	0.00
Frank St 2	20	50	21,132	2.11	21,132	2.11
Centennial Cr	43	108	16,821	1.68	0	0.00
Retirement Subdvn	1,500	2,850	406,700	40.67	406,700	40.67
TOTALS	1,735	3,438	717,045	71.70	574,558	58.22

Growth Area Map



Α	ppendix	B - Futu	re Wate	er Demai	nds and	Wastewa	ter Flows



Wiarton Master Servicing Plan for Water, Wastewater and Stormwater Services DEMAND AND STORAGE REQUIREMENTS



Demands (MLD)									
Pressure Zone	Exis	ting Growth				Total Future			
	ADD	MDD	Pop.	ADD	MDD	ADD	MDD		
1 - Lower	0.9257	2.0828	3414	1.5364	3.0728	2.4269	4.8538		
2 - Upper	0.0413	0.0929	24	0.0112	0.0225	0.0525	0.1051		
Total	0.967	2.1758	3438	1.5476	3.0953	2.4794	4.9589		

^{*}oliphant not included in future

	ADD	MDD
Oxenden	0.0654	0.1472
Oliphant	0.0352	0.0792

^{*}storage not including oliphant or oxenden

Storage Requirements (ML) - MOECC							
Pressure Zone	Existing	Future					
1 - Lower	1.44	3.62					
2 - Upper	0.37	0.37					
Combined	1.60	3.66					

Storage Requirements (ML) - FUS						
Pressure Zone	Existing	Future				
1 - Lower	1.93	2.83				
2 - Upper	0.18	0.18				
Combined	1.96	2.86				

^{*}used commercial

*used residential - detached

Storage	Requirements pe	r MOECC	Storage F	Requirements	Per FUS
Combined	pop. 2291 *used 3000	future pop. 5729 *used 6000	Combined	existing	future
fire flow (L/s)	110	159	fire flow (L/s)	150	150
duration (hrs)	2	3	duration (hrs)	2	2
ff storage (ML)	0.792	1.717	ff storage (ML)	1.08	1.08
equaliz. (ML)	0.487	1.207	equaliz. (ML)	0.49	1.21
emerg. (ML)	0.320	0.731	emerg. (ML)	0.39	0.57
Total (ML)	1.599	3.655	Total (ML)	1.96	2.86
Lower Zone	pop. 2115 *used 3000	future pop. 5529 *used 6000	Lower Zone	existing	future
fire flow (L/s)	95	159	fire flow (L/s)	150	150
duration (hrs)	2	3	duration (hrs)	2	2
ff storage (ML)	0.68	1.72	ff storage (ML)	1.08	1.08
equaliz. (ML)	0.46	1.18	equaliz. (ML)	0.46	1.18
emerg. (ML)	0.29	0.72	emerg. (ML)	0.39	0.57
Total (ML)	1.44	3.62	Total (ML)	1.93	2.83
Upper Zone	pop. 176 *used 500-1000	future pop. 200 *used 500-1000	Upper Zone	existing	future
fire flow (L/s)	38	38	fire flow (L/s)	33	33
duration (hrs)	2	2	duration (hrs)	1	1
ff storage (ML)	0.27	0.27	ff storage (ML)	0.12	0.12
equaliz. (ML)	0.02	0.03	equaliz. (ML)	0.02	0.03
emerg. (ML)	0.07	0.07	emerg. (ML)	0.04	0.04
Total (ML)	0.37	0.37	Total (ML)	0.18	0.18

highest node elevation	211.5		
bottom of tank	232		
	20.5		
*FF + emergency	existing (MOECC)	future (MOECC)	
(area of tank = 196.07 m)	1.11	2.45	ML
196.07	5.67	12.49	m
	26.17	32.99	m

tank capacity (ML)

2.895

existing equalization	meters	
1.43	7.30	*cant use entire remaining storage as equal
future equalization		
future trigger	*existing pop	
370	2291	

^{*}use 159 (3 hours) for growth - 6000 population ff requirement

^{**}use 144 (2 hours) for triggers - 5000 population ff requirement

^{***}use 151.5 (2.5 hours) for sensitivity - 5491 population ff requirement



Wiarton Water, Wastewater and Stormwater Master Servicing Plan Growth Population Design Criteria Wastewater Flows



EXISTING SERVICE AREA - FLOWS

Area Description	ADWF (I/s)	Harmon PF	PDWF (I/s)	Area (ha)	I/I (I/s)	PWWF (I/s)
Whole Service Area	11.93	3.54	42.2	181.0	124.9	167.1
Existing West Area						70.0

approximated from model

GROWTH - PLANNING DATA

Growth Area Description	Growth Units (@2	Pop Density (ppu)	Growth Populatio	New Contributing	New Contributing	Total Area (m2)	Total Area (ha)
Division St	24	2.50	60	54,822	5.48	54,822	5.48
McNaughton St	50	2.50	125	0	0.00	17,337	1.73
Frank St 1	34	2.50	85	8,802	0.88	70,346	7.03
Elm St 1	28	2.50	70	60,057	6.01	64,423	6.44
William St	20	2.50	50	30,668	3.07	30,668	3.07
Elm St 2	16	2.50	40	0	0.00	34,796	3.48
Frank St 2	20	2.50	50	21,132	2.11	21,132	2.11
Centennial Cr	43	2.50	108	0	0.00	16,821	1.68
Retirement Subdvn	1,500	1.90	2,850	406,700	40.67	406,700	40.67
Total	1,735		3,438	574,558	58.22	717,045	71.70

GROWTH - FLOWS

Growth Area Description	ADWF (L/s)	Harmon PF	PDWF (L/s)	Area (ha)	I/I (L/s)	PWWF (L/s)
Division St	0.31	4.00	1.25	5.48	1.26	2.51
McNaughton St	0.65	4.00	2.60	0.00	0.00	2.60
Frank St 1	0.44	4.00	1.77	0.88	0.20	1.97
Frank St 2	0.26	4.00	1.04	2.11	0.49	1.53
William St	0.26	4.00	1.04	3.07	0.71	1.75
Centennial Cr	0.56	4.00	2.25	0.00	0.00	2.25
Retirement Subdvn	14.84	3.46	51.38	40.67	9.35	60.73
Elm St 1	0.36	3.39	1.24	6.01	1.38	2.62
Elm St 2	0.21	4.00	0.83	0.00	0.00	0.83
Total	17.91	3.39	60.73	58.22	13.39	74.12

Growth Areas in Southwest Wiarton (south of Elm St, west of Berford St)

Growth Area Description	ADWF (L/s)	Harmon PF	PDWF (L/s)	Area (ha)	I/I (L/s)	PWWF (L/s)
Retirement Subdvn	14.84	3.46	51.38	40.67	9.35	60.73
Elm St 1	0.36	3.39	1.24	6.01	1.38	2.62
Total	15.21	3.45	52.50	46.68	10.74	63.24

Growth Areas Tributary to West Catchment Areas

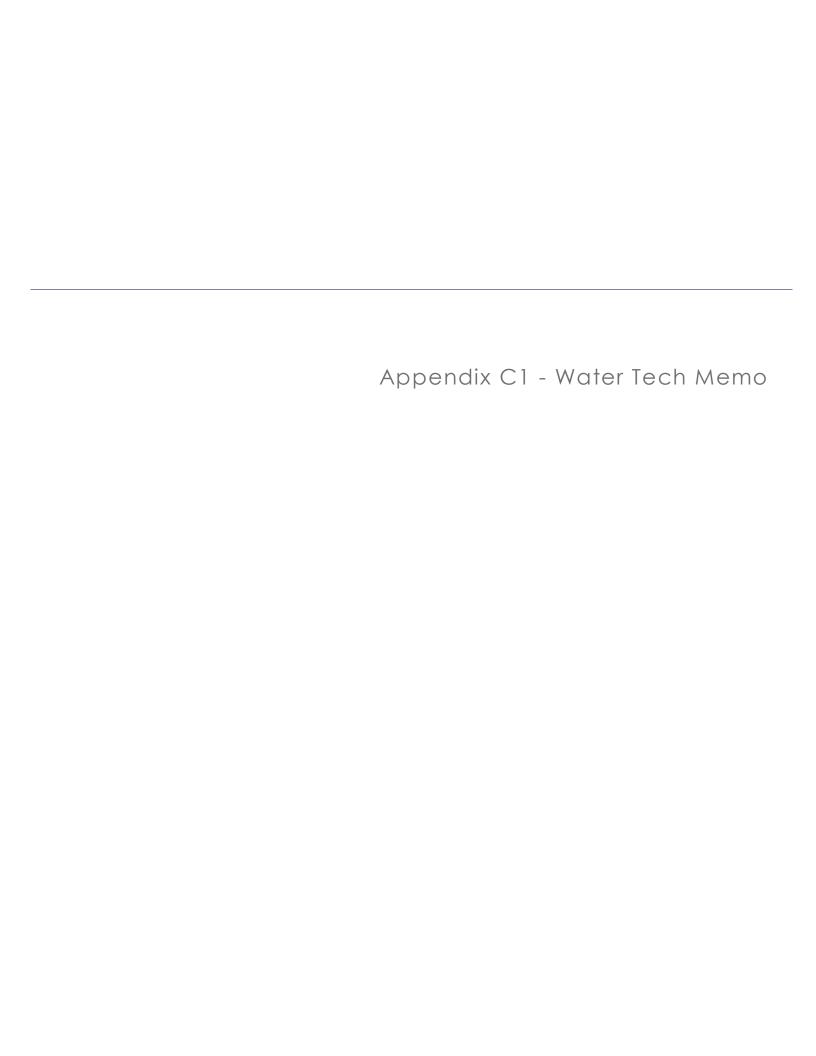
Growth Area Description	ADWF (L/s)	Harmon PF	PDWF (L/s)	Area (ha)	I/I (L/s)	PWWF (L/s)
Division St	0.31	4.00	1.25	5.48	1.26	2.51
McNaughton St	0.65	4.00	2.60	0.00	0.00	2.60
Frank St 1	0.44	4.00	1.77	0.88	0.20	1.97
William St	0.26	4.00	1.04	3.07	0.71	1.75
Total	1.67	4.00	6.67	9.43	2.17	8.84

	TSBP Desi	gn Criteria	Existing*
Population	DWF (L/cap/d)	I/I (L/s/ha)	I/I (I/s/ha)
3,438	450	0.23	0.69

Growth Areas Map









Date: 1/20/2015 File: 214128

To: Town of South Bruce Peninsula

From: GM BluePlan

Project: Wiarton Master Servicing Plan

Subject: Water Baseline and Future Criteria Summary

TECHNICAL MEMO

1 Introduction

In relation to the water system, this memo summarizes the existing baseline capacity, the design criteria, the proposed growth, and future capacity needs of the system.

2 Existing Facilities and Capacities

The Wiarton Water Treatment Plant is located at the north end of Bayview St. at Colpoy's Bay (Georgian Bay). The plant is operated by Ontario Clean Water Agency (O.C.W.A.).

The Water Treatment Plant (WTP) treats raw water from the Georgian Bay and distributes to Wiarton, Oxenden (via the Wiarton system), and Oliphant via truck transportation. The facility has a design capacity of 5,400 m³/day. The final treated water is discharged to the distribution system via a high lift pump with a capacity of 5,140 m³/day; a standby pump is also available.

The Upper Zone Booster Station is located north of Jenny St. and east of Berford St. and services approximately 80 homes in the Gould St., Daniel St., and Jenny St. area. This facility is equipped with one duty pump and three fire pumps for a total rated capacity of 3,920 m³/day. The pumps boost pressure to approximately 52 psi to service these homes that are above elevation 212 meters (above seas level).

The Water Storage Standpipe is located on Gould St., adjacent to the booster station, and has a capacity of 2,895 m³. The bottom elevation of the standpipe is 232 m and the approximate top water level is 246.8 m.

Facility	Rated Capacity
Water Treatment Plant	5,400 m ³ /d
High Lift Pumps (WTP)	5,140 m ³ /d
Upper Zone Booster Pump Station	3,920 m ³ /d
Water Storage Standpipe	2,895 m ³ /d

3 Water Design Criteria and Capacity Planning Approach

- Water average day demand (MDD) is residential equivalent.
- ADD is based on 450 L/cap/d.
- MDD is peaked based on MOECC peaking criteria of 2.0 (for communities of size 3,001-10,000).
- PHD is peaked based on MOECC peaking criteria of 3.0 (for communities of size 3,001-10,000).
- Unbilled water consumption to remain unchanged.
- Person per unit multiplier (1.9 for retirement subdivision, 2.5 for remaining growth areas).
- Unit growth projections provided by the Town.
- Fire Flow Criteria

Single-Family Homes = 37 L/s
 Multi-Family Home = 75 L/s
 Town Center = 120 L/s

- Treatment Plant capacity needs will be based on Maximum Day Demands.
- High Lift Pumps (at the treatment plant) capacity needs will be based on Maximum Day Demands.
- Upper Zone Booster Pump Station capacity needs will be based on the greater of Peak Hour Demands or Maximum Day Demands + Fire Flow.
- Water Storage Standpipe capacity needs will be based on the Ministry of Environment and Climate Change (MOECC) storage requirement criteria
- System Fire Flow requirements will be based on MOECC criteria.



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4 Existing Demands

Existing demands are summarized below based on recorded data at the treatment plant and meter data collected by the Town.

The following table provides the average monthly and maximum average daily production data recorded at the treatment plant.

Month		Flows - Treated Water (m³/d)				
	20	12	20	13	2014	
	ADD	MDD	ADD	MDD	ADD	MDD
January	1000	1368	829	1096	813	1011
February	991	1064	843	953	899	1261
March	993	1195	827	951	1043	1495
April	1056	1401	824	986	1012	1402
May	1215	1578	898	1189	894	1377
June	1410	1932	967	1332	1044	1647
July	1360	2003	1100	1586	1111	1597
August	1141	1598	1112	1487		
September	960	1394	961	1384		
October	916	1544	570	716		
November	855	1140	846	3398		
December	823	1074	784	939		
Average	1060		880			

The following table provides a comparison of the annual meter data against the annual treatment plant records.

Year	W	ater Meter	Data (m³/d)		Water Treatment	NRW
	Total Billed	Wiarton	Oxenden*	Oliphant**	Plant (m³/d)	(m³/d)
2012	524	434	58	31	1060	536
2013	580	484	62	33	880	301
2014***	627	539	57	31	951	324
Total Average****	651	551	65	35	970	319

^{*}Oxenden (65% of Total Billed – Wiarton)

Total Water Produced = 970 m³/d
 Total Water Billed = 651 m³/d
 Unbilled Water Usage = 319 m³/d

Unbilled Water Consumption Ratio = 32.9%

Existing population (2011 Census) = 2,886

*includes Oliphant and Oxenden

^{**}Oliphant (35% of Total Billed - Wiarton)

^{***2014} meter data up until June 30

^{****}For meter data, it is the summation of the 3-year average of each meter (as the number of meters varies year to year), for Water Treatment Plant it is the yearly average for 2012-2013 (as 2014 is lacking key summer months), and NRW is the difference between Total Billed and Water TreatmentBased on the preceding Tables, the measured 3-year average:



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Per capita average

Total Water Consumption = 336 L/d
 Billed Water Consumption = 226 L/d
 Unbilled Water Consumption = 110 L/d

These values represent the measured average day demands and have been summarized to show total billed and unbilled contributions.

Existing demands are also provided based on the following

- Average Day Demand based on the total water consumption calculations provided above
- Max Day Demand peaking factor based on the MOECC peaking criteria of 2.25 (for communities size of 2,001-3,000)
- Peak Hour Demand peaking factor based on the MOECC peaking criteria of 3.38 (for communities size of 2,001-3,000)

Average Day Demands, Maximum Day Demands, and Peak Hour Demands calculated for the existing system are provided below.

Zone	ADD (m³/d)	MDD Peaking Factor	MDD (m³/d)	PHD Peaking Factor	PHD (m ³ /d)
Upper	42		95		142
Lower	928	2.25	2,088	3.38	3,137
Total	970		2,183		3,279

5 Existing Infrastructure Capacity Assessment

- Based on the existing maximum day demand (2,183 m³/d), the existing water treatment plant is within capacity (5.400 m³/d).
- Existing MDD demand at the high lift pumps (at the treatment plan) is within capacity (5,140 m³/d)
- Existing MDD demand at the booster pumps (Upper Zone) is within capacity (3,920 m³/d)
 - o PHD 142 m³/d
 - \circ MDD + Fire Flow 3,378 m³/d
- Existing Water Storage Standpipe is within capacity (2,890 m³)
 - Fire Flow storage 792 m³
 - Equalization storage 487 m³
 - Emergency storage 320 m³
 - o Required storage 1,599 m³
- There are some localized dead ends within the system that are experiencing either low pressures or limited fire flows. These restrictions can be addressed through localized looping of the system



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6 Planning Data and Future Demands

Wiarton 2011 Census population = 2,291 Oxenden 2011 Census population = 370 Oliphant 2011 Census population = 225

Growth population either in the form of population or 'units' and spatial area were supplied by the Town. No employment populations were provided. It should be noted that there are no growth projections for Oxenden and the Town of Oliphant future demands are assumed to be 0; after an upgrade to their water system.

Growth Area Description	Residential Growth Units (@2.5 ppu)	Residential Growth Population	Employment Growth	Comment
Division St	24	60	0	
McNaughton St	50	125	0	intensification
Frank St 1	34	85	0	
Elm St 1	28	70	0	
William St	20	50	0	
Elm St 2	16	40	0	intensification
Frank St 2	20	50	0	
Retirement Subdivision	1,500*	2,850	0	
Centennial Cr	43	108	0	
TOTALS	1,735	3,438	0	

^{*}Growth Units @1.9 ppu

Using the Town's design criteria, the following growth only demands are projected for average and max day demand rates:

Population	Consumption (L/cap/d)	ADD (m³/d)	MDD (m³/d)
3,438	450	1,547	3,094

For comparison and perspective, the following table provides the daily demand that would be generated based on ADD and MDD; showing the existing system, the growth only contribution, and the overall future system total.

	Demands (m³)		
	ADD MDD		
Existing System	970	2,183	
Growth Only Contribution	1,547	3,094	
Future System Total	2,479	4,958	

^{*}Existing MDD peaking factor is 2.25, however once population increases with growth it becomes 2.00 based on MOECC peaking criteria (population 3,001-10,000).

^{**}Oliphant future demands assumed to be 0.



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7 Future Capacity Assessment

Treatment Plant

Existing Capacity = $5,400 \text{ m}^3/\text{day}$

Existing population = 2,886

*includes Oxenden and Oliphant

Existing average demand = $970 \text{ m}^3/\text{d}$ Per capita average demand = 336 L/d

*includes Billed and NRW

Future population = 6,099

*includes Oxenden *excludes Oliphant

Future max day demand = $4,958 \text{ m}^3/\text{d}$

Capacity Surplus at Plant = 442 m³/d

High Lift Pumping (at Treatment Plant)

Existing Capacity = $5,140 \text{ m}^3/\text{d}$ Future max day demand = $4,958 \text{ m}^3/\text{d}$

Capacity Surplus at High Lift = 182 m³/d

Upper Zone Booster Pumps

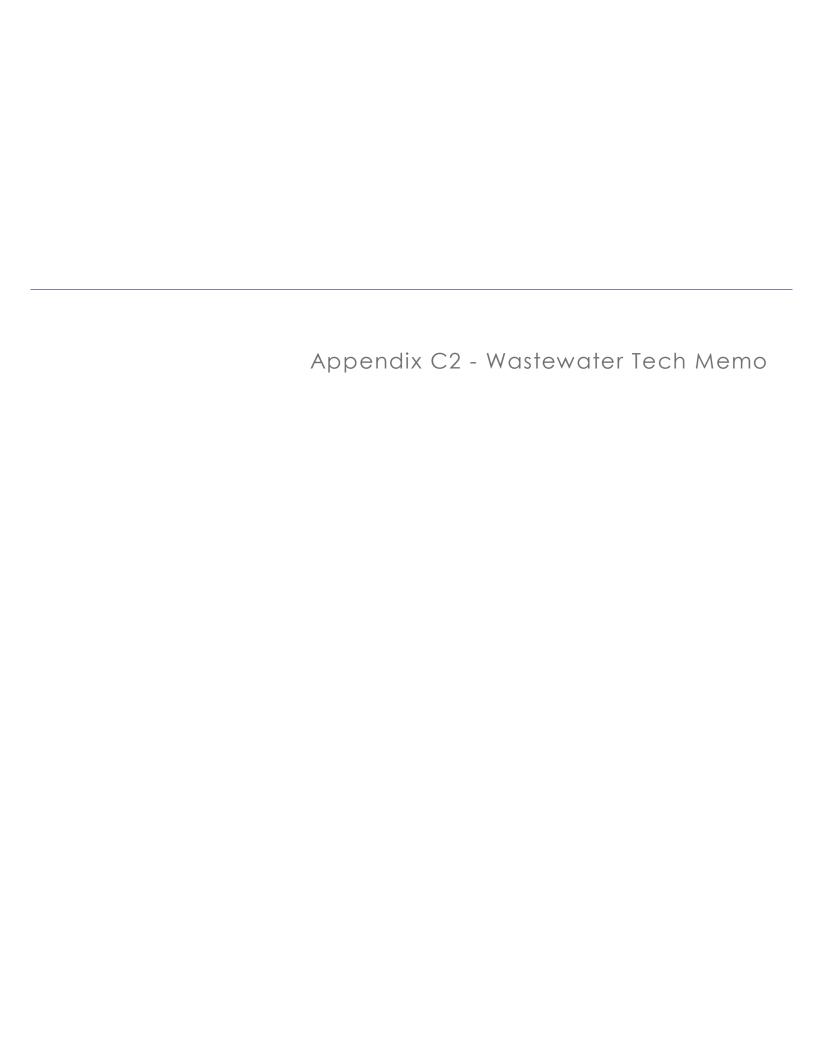
Existing Capacity = $3,920 \text{ m}^3/\text{d}$ Future max day demand + fire flow = $3,404 \text{ m}^3/\text{d}$ Future peak hour demand = $161 \text{ m}^3/\text{d}$

Capacity Surplus at Booster = 516 m³/d

Water Storage Standpipe

Existing Capacity = $2,895 \text{ m}^3$ Future Fire Flow Storage = $1,717 \text{ m}^3$ Future Emergency Storage = 731 m^3 Future Equalization Requirement = $1,207 \text{ m}^3$ Future Total Capacity = $3,655 \text{ m}^3$

Capacity Deficit at Storage = 760 m³





Memorandum

Organization: Town of South Bruce Peninsula	Project No: 214128
Attention:	Date: January 20th 2015
Project: Wiarton Master Serving Plan	
RE: Wastewater Baseline and Future Criteria Summary	

1. Introduction

In relation to the wastewater system this memo summarizes the existing baseline capacity, the design criteria, the proposed growth and future capacity needs of the system.

2. Existing Facilities and Capacities

Wiarton generally employs a gravity-based wastewater collection and treatment system that collects wastewater flows from the Wiarton area to a series of sanitary pump stations, which due topographic constraints, are in place to direct the flows from the shoreline of the Georgian Bay to the treatment lagoons facility atop the Niagara Escarpment. Treated flows are then conveyed to its final destination at the Colpoy's Bay on Georgian Bay.

The Wiarton Wastewater Treatment Lagoons (lagoons) are located south of Taylor Street within the former Town of Wiarton. The lagoons are operated by the Ontario Clean Water Agency (OCWA).

The lagoons, initially commissioned in 1981 and refurbished in 1999, treats sewage flows collected from the Wiarton service area only. The facility consists of a system of three aerated lagoons operated in series and has a design capacity of 2,500 m³/day (average daily flow). The final treated effluent is discharged to Colpoy's Bay on Georgian Bay.

Sewage Pump Station #1 is located at the southwest corner of the intersection of George Street and Taylor Street. The pump station is a wet well/dry well type with two submersible sewage pumps (one duty, one standby) in the dry well. Each pump has a rated capacity of 103 L/s at a TDH of 29 m. The combined rated capacity is 130 L/s at a TDH of 39.0 m. The Firm Capacity of the station is 103 L/s.

Sewage Pump Station #2 is located approximately half way up to the escarpment between SPS #1 and the lagoon facility, on the southwest corner of the intersection of Elm Street and Taylor Street. The pumps station consists of a divided wet well with three submersible sewage pumps (one duty, two standby). Each pump has a rated capacity of 116 L/s at a TDH of 30.5 m, with two pumps in parallel having a rated capacity of 164.81 L/s at a TDH of 36.68 m. The Firm Capacity of the station is 116 L/s.

Facility	Design Capacity
Treatment Lagoons	2500 m³/day (average daily flow)
Sewage Pump Station #1 – Taylor Street	103 L/s (peak flow)
Sewage Pump Station #2 – Elm Street	116 L/s (peak flow)



3. Design Flow Capacity Planning Criteria

 The capacities of the sewage pump stations and trunk sewers are assessed based on Peak Wet Weather Flow (PWWF), which is the combination of Peak Dry Weather Flow (PDWF) plus an Inflow and Infiltration (I/I) allowance as follows:

Peak Wet Weather Flow = (Dry Weather Flow x Peaking Factor) + RDII Allowance PWWF = (PDWF+PF) + I/I

 While pump stations and trunk sewers are designed and rated to deliver peak wet weather flows to the treatment plant, the lagoon capacity is based on Average Day Flow (ADF).

It should be noted that average daily flow at the lagoon is highly affected by the amount of wet weather flow that reaches the site. Should the amount of wet weather flow reaching the site in the future be greater than predicted, required expansions may be triggered at an earlier date. For this reason, it is important that I/I reduction programs are put in place

4. Existing Flows Summary

Existing sanitary flows in the Wiarton area are summarized below based on recorded flow data at the treatment plant and Town of South Bruce Peninsula design criteria.

The following table provides the average monthly and maximum average daily flow data recorded at the Wiarton Wastewater Treatment Lagoons.

	2009		2010		2011		2012		2013	
Month	Monthly Average Day Flow m3/d	Average daily Max Flow m3/d	Monthly Average Day Flow m3/d	Average daily Max Flow m3/d						
January	1724	3281	1724	3683	1824	5515	1914	3014	2435	11158
February	2615	8933	1370	1652	1888	5683	1569	2430	2188	4151
March	2593	3973	2140	4505	2728	6585	2163	4922	2605	8211
April	2874	7585	1573	2941	3222	8745	1194	1521	3608	9693
May	1788	2606	1379	1969	2009	3481	1122	1724	1528	2697
June	1747	5355	1763	2973	2065	4707	1005	1338	1297	2045
July	1329	2341	1238	1553	1339	1848	957	1598	1172	1797
August	1322	2465	1134	2324	1088	1453	1020	2146	1098	1613
September	1574	5231	1595	3044	1266	4123	982	1826	1125	1597
October	1468	1750	1304	1787	2341	7530	1679	5705	1958	5118
November	1507	1997	1591	2673	1902	5575	1597	3149	2773	6263
December	1878	2310	1753	3319	2238	4210	1941	5851	1638	3635
Average	1868.3		1547.0		1992.5		1428.6		1952.1	



Based on the above data, a 5 years average daily flow value and an average flow per capita per day value are calculated as follows. It should be noted that these values represent the average daily flows reaching the lagoons and, therefore, include wet weather inputs (I/I).

5 years average daily flow = $1757.7 \text{ m}^3/\text{d} \text{ (ADF)}$

Existing population = 2291 persons

Average flow per capita/per day = $0.767 \text{ m}^3 \sim 767 \text{ liters per capita per day (measured)}$

Average Daily Flow is calculated based on the Town's design criteria, as follows. An existing I/I rate of 0.69 L/s/ha is calculated based on the maximum average day flow (11,158 m³/d), minus the population derived flow (1030 m³/d - based on design criteria of 450 l/c/d), divided by the catchment area (181 ha).

The maximum average day flow does not account for any bypassed or flooded volume, just that which was recorded at the treatment lagoons.

	TSBP Design C	Existing*	
2011 census Population	Consumption (I/c/d)	I/I (L/s/ha)	I/I (L/s/ha)
2291	450	0.23	0.69

^{*} Based on Maximum Avg Day Flow to WWTP (11,158 m³) - January 2013

Based on this analysis, the existing inflow and infiltration rate is 3 times greater than the design criteria would anticipate. Average dry weather, peak dry weather and peak wet weather flows calculated for the existing system are provided below.

ADWF (L/s)	Harmon PF	PDWF (L/s)	Area (ha)	I/I (L/s)	PWWF (L/s)
11.93	3.54	42.2	181	124.9	167.1

Based only on design criteria it is difficult to estimate average daily flows. The following table provides perspective on the daily volume that would be generated based on ADWF, PDWF and PWWF derived from the table above

Daily Flows (m³) based on design criteria							
Average PDWF		PWWF					
1.031	3.649	14.439					



5. Existing capacities issues.

- Based on the flow data provided the existing treatment lagoons are within capacity (2500 m³/d), for average daily flow.
- 5 year average (2009 to 2013) was 1757 m³/d. 5 year maximum average (2013) was 1953 m³/d
- Existing peak flows are known to exceed the capacity of SPS #1 and #2 with bypass and property flooding events occurring. Accurate incoming flow data is not available for the stations.
- Our analysis of existitng flows estimates a peak flow of 167 L/s, which significantly exceeds pumping station one Firm capacity (103 L/s) and pumping station #2 Firm capacity (116 L/s).
- The existing inflow and infiltration rate is at least 3 times the normal design criteria. Sources of I/I should be isolated and disconnected from the sewage collection system.

6. Projecting Future Wastewater Flows Methodology

- Wastewater average day is residential equivalent
- DWF is based on 450 l/c/d
- PDWF is peaked based on Harmon peaking factor
- PWWF existing is based on maximum average day recorded flow which equates to an I/I allowance of 0.69 L/s (measured)
- PWWF future is based on I/I design criteria allowance of 0.23 L/s (design)
- Person per unit multiplier provided = 2.5 (1.9 for Retirement Subdivision)
- Unit growth projections provided by the Town.

7. Population data, assumptions and results

Wiarton 2011 Census population = 2291

Growth population either in the form of population or 'units' and spatial area were supplied by the town. No employment populations were provided.

Growth Area Description	Residential Growth Units (@2.5 ppu)	Residential Growth Population	Employment Growth	Area (ha)	New Contributing Area (ha)	Comment
Division St	24	60	0	5.48	5.48	
McNaughton St	50	125	0	1.73	0.00	intensification
Frank St 1	34	85	0	7.03	0.88	
Elm St 1	28	70	0	6.44	6.01	
William St	20	50	0	3.07	3.07	
Elm St 2	16	40	0	3.48	0.00	intensification
Frank St 2	20	50	0	2.11	2.11	
Centennial Cr	43	108	0	1.68	0.00	
Retirement Subdivision	1500*	2850	0	40.67	40.67	
TOTALS	1735	3438	0	72	58	

^{*}Retirement Subdivision Residential Growth Units multiplied by 1.9 ppu.



	TSBP Design Criteria			
Population	Consumption (I/c/d)	I/I (L/s/ha)		
3438	450	0.23		

Using the Towns design criteria produces the following growth only average and peak flow rates.

ADWF (L/s)	Harmon PF	PDWF (L/s)	Area (ha)	I/I (L/s)	PWWF (L/s)
17.91	3.39	60.7	58	13.4	74.1

For comparison and perspective the following table provides perspective on the daily volume that would be generated based on ADWF, PDWF and PWWF, showing the existing system, the growth only contribution and the overall future system total.

	Da	Daily Flows (m ³)				
	Average	PDWF	PWWF			
Existing System	1,031	3,649	14,439			
Growth Only Contribution	1,547	5,247	6,404			
Future System Total	2,578	8,223	20,171			

8. Future capacity issues

Treatment Lagoons

Existing Capacity = $2500 \text{ m}^3/\text{day (ADF)}$

Existing population = 2291

Existing average m^3/d = 1757.7 m^3/d

Per capita average/per day (m^3) = 0.767

Future population = 5729

Future average m^3/d = 4395.4 m^3/d

Capacity Deficit at Plant = 1895.4 m³/d

Pumping Station #1, Taylor Street

Existing Capacity = 103 L/s Future PWWF = 233 L/s Capacity Deficit at SPS #1 = 130 L/s

Pumping Station #2, Elm Street

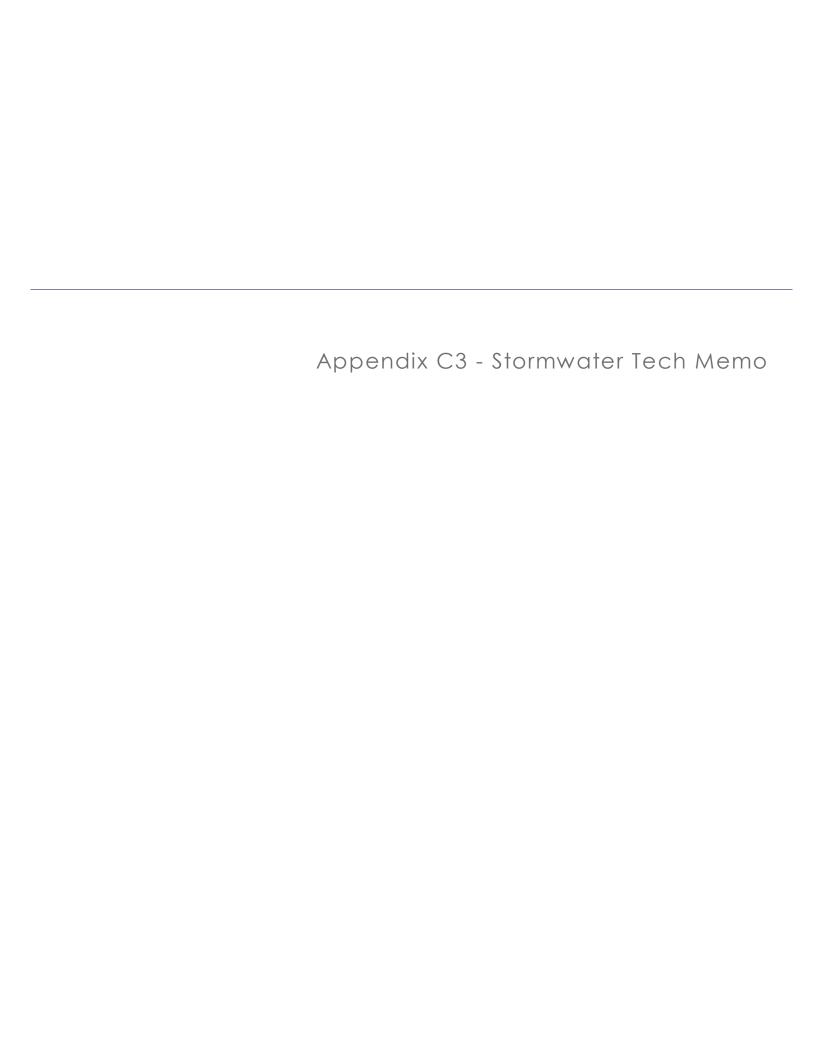
Existing Capacity = 116 L/s Future PWWF = 233 L/s Capacity Deficit at SPS #2 = 117 L/s



The table below provides a summary of the existing, growth only and future system average and peak flows.

Scenario	Population	Consumption (I/cap/d)	Inflow (L/s/ha)	ADWF (L/s)	Harmon	PDWF (L/s)	Area (ha)	Inflow (L/s)	PWWF (L/s)
Existing	2291	450	0.69	11.93	3.54	42.2	181.0	124.9	167.1
Growth Only	3438	450	0.23	17.91	3.39	60.7	58.2	13.4	74.1
2029 Build out	5729	450		29.84	3.19	95.2	239.2	138.3	233.5*

^{*} This is not the sum of existing and growth because the Harmon peaking factor changes with population





Date:	1/20/2015	File:	214128To:	
Town	of South Bruce Peninsu	laFrom:	GM BluePlan	
Projec	t: Wiarton Master Sei	vicing Pla	nSubject:	
Stormw	ater Baseline and Futu	re Criteria	Summary	

TECHNICAL MEMO

1 Introduction

In relation to the stormwater system this memo summarizes the existing baseline capacity, the design criteria, the proposed growth and future capacity needs of the system.

2 Existing Facilities and Capacities

The majority of the Wiarton stormwater conveyance system consists of a traditional sewer system, where surface water runoff is directed to and collected by the storm sewer system. Within Wiarton, all runoff flows are conveyed directly to the system outlets without peak flow attenuation. Also forming part of storm conveyance system are localized areas serviced by ditches and culverts.

Included in our system considerations is the Taylor Street Management Pond, an existing stormwater management pond that is jointly managed by the Grey Sauble Conservation Authority and Wiarton. The Taylor Street Pond has a design capacity of 33,080 m³ (at a depth of 4.7m). Flows out of the pond are controlled by a 750 mm dia. PE pipe that controls peak discharge rates to 3.11 m³/s. The pond provides peak flow attenuation from a large, mostly rural, upstream catchment areas and was constructed to manage downstream flooding issues within the Wiarton drainage system.

The Wiarton storm system has several stormwater outlets all of which either drain directly to Georgian Bay, or to the west into one of several major channels, which tributary to Clavering Creek.

Facility	Storage Capacity	Peak Discharge
Taylor Street Pond	33,080 m ³	3.11 m ³ /s

3 Design Capacity Planning Criteria

- Convey 5 year flows within the sewer without surcharging
- Provide a safe conveyance route for all runoff up to the 100 year flows
- New development discharging to Clavering Creek Watershed; provide flow management such that post development peak flow rates match pre development peak flow rates

3.1 Design Storm Events

- The Environment Canada short duration rainfall intensity duration frequency data from the Wiarton weather station was used to generate the design storm data.
- System was evaluated using the SCS Type 2 storm hyetograph

Duvetien	Total Rainfall Amounts (mm)							
Duration	2 year	5 year	10 year	25 year	50 year	100 year		
1 hour	21.3	30.1	35.9	43.3	48.8	54.2		
2 hour	26.9	39.2	47.4	57.7	65.3	72.9		
6 hour	36.2	49.5	58.3	69.5	77.7	85.9		
12 hour	40.9	55.2	64.6	76.6	85.4	94.2		
24 hour	48.2	61.0	69.4	80.1	88.0	95.9		

3.2 Existing Impervious Coverage

Existing impervious coverage was estimated using available orthophotography.



Memo To: Town of South Bruce Peninsula

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3.3 Existing Flows

No existing flow data was available.

4 Existing Capacity Assessment

- A few localized sewers are expected to experience surcharging conditions under a 5 year storm. These areas
 include Berford Street, at the Sound end of the Town limits, which confirms noted historic drainage issues in
 that area.
- No surface flooding, due to sewer capacity restrictions, is expected under the 5 year storm.

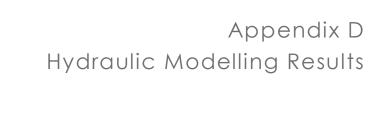
5 Projection Criteria

• Impervious coverage based on projected land use

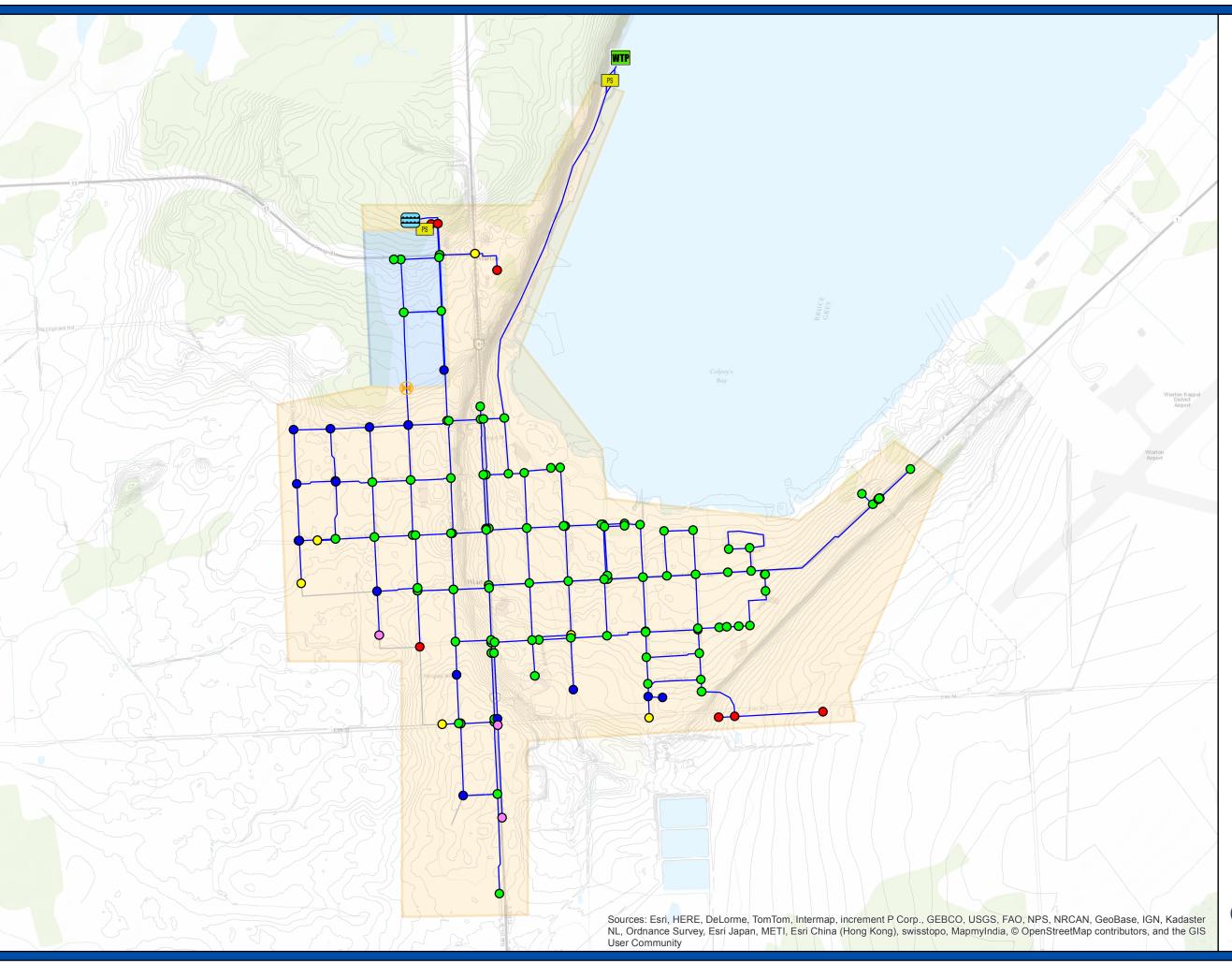
Growth Area Description	Land use	Area (ha)	Impervious Coverage
Division St	Single Family	5.48	0.45
McNaughton St	Single Family	1.73	0.45
Frank St 1	Single Family	7.03	0.45
Elm St 1	Single Family	6.44	0.45
William St	Single Family	3.07	0.45
Elm St 2	Single Family	3.48	0.45
Frank St 2	Single Family	1.35	0.45
Retirement Subdivision	Townhouse	40.67	0.75

6 Future Capacity Issues

- Local storm sewers appear to have sufficient capacity to accommodate projected growth related increases in the peak 5 year flow rates
- New development will require to manage the following:
 - Water quality management from all new development sites
 - Peak flow management is required for all new developments discharging to the Clavering Creek Watershed
 - Management of 100 year overland flow route









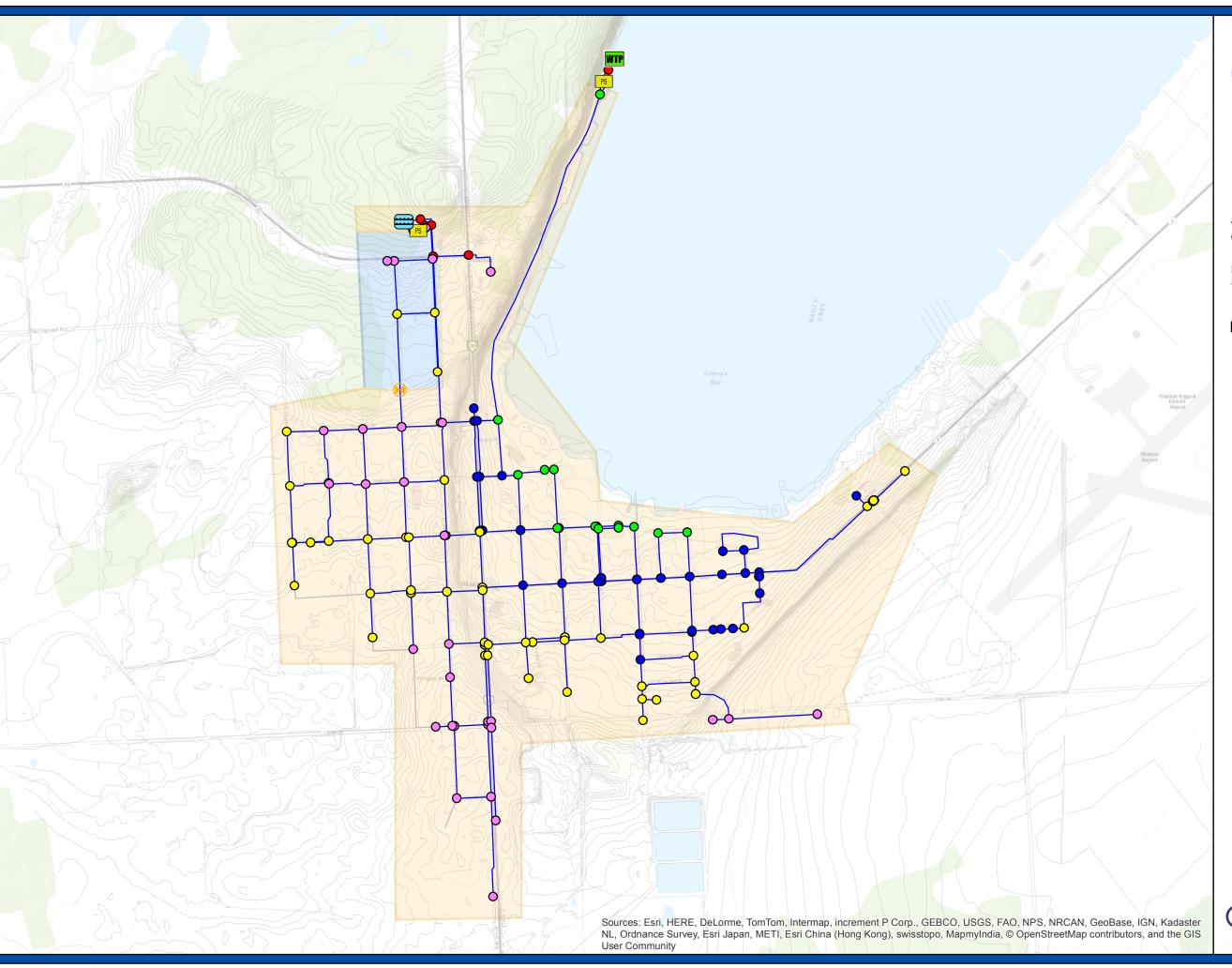


Baseline Scenario Model Results Fire Flow Under Max Day Demand

Available Flow

- less than 25.00
- **O** 25.00 ~ 50.00
- **O** 50.00 ~ 75.00
- **o** 75.00 ~ 100.00
- greater than 100.00







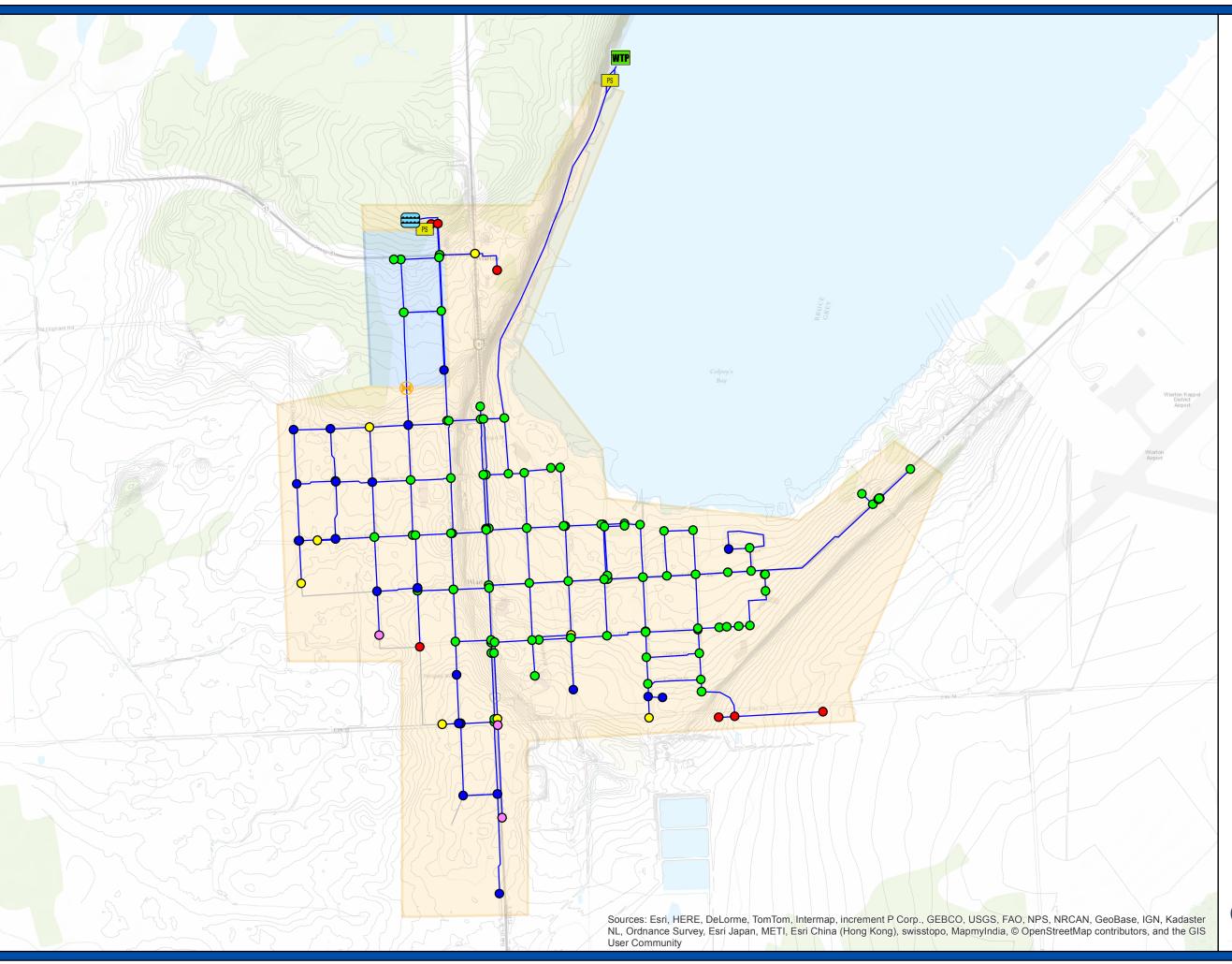


Baseline Scenario Model Results System Pressures Under Max Day Demand

Minimum Pressure

- less than 40.00
- **4**0.00 ~ 60.00
- O 60.00 ~ 80.00
- **80.00 ~ 90.00**
- greater than 90.00







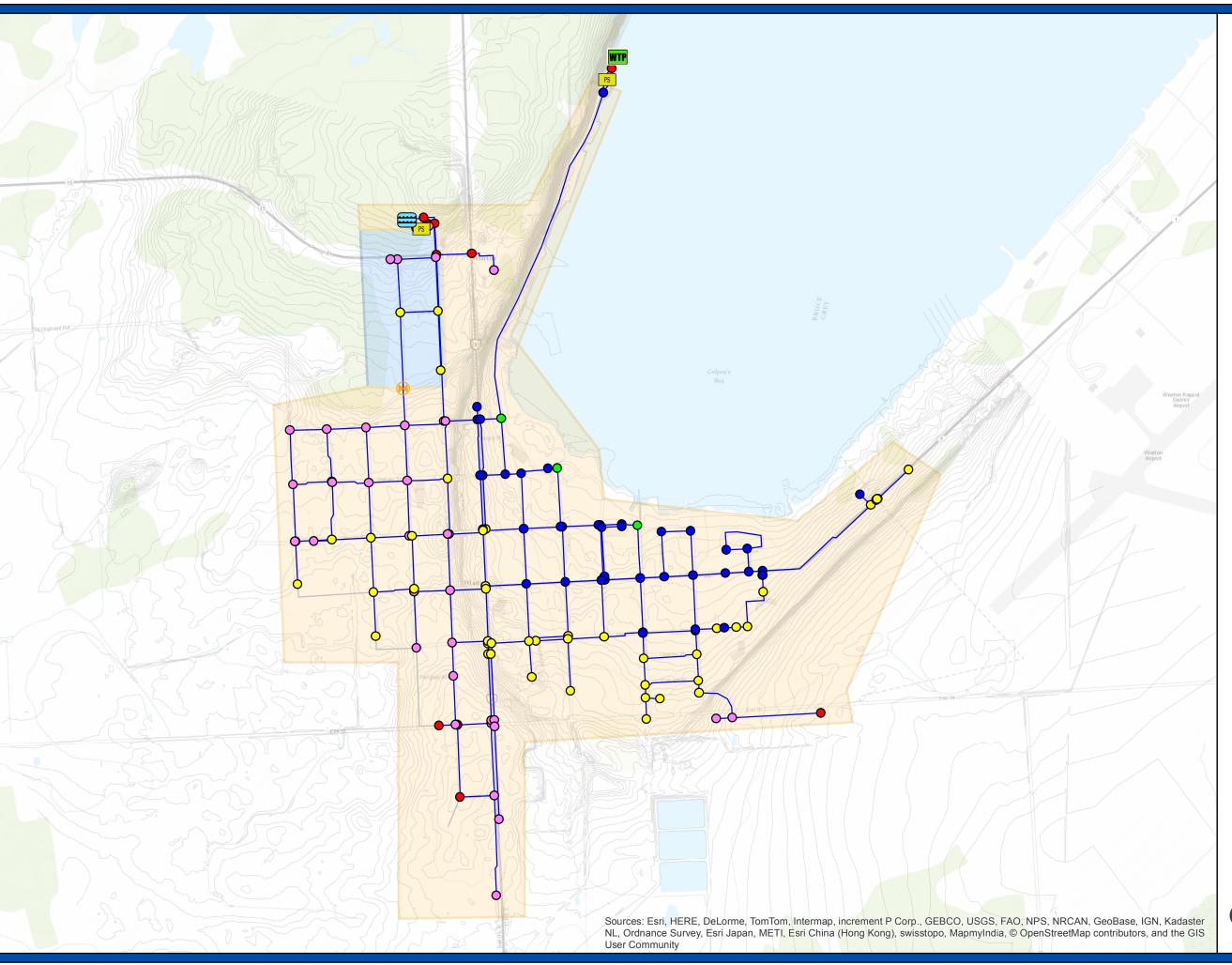


Future Growth Scenario Model Results Fire Flow Under Max Day Demand

Available Flow

- less than 25.00
- **O** 25.00 ~ 50.00
- O 50.00 ~ 75.00
- **o** 75.00 ~ 100.00
- greater than 100.00







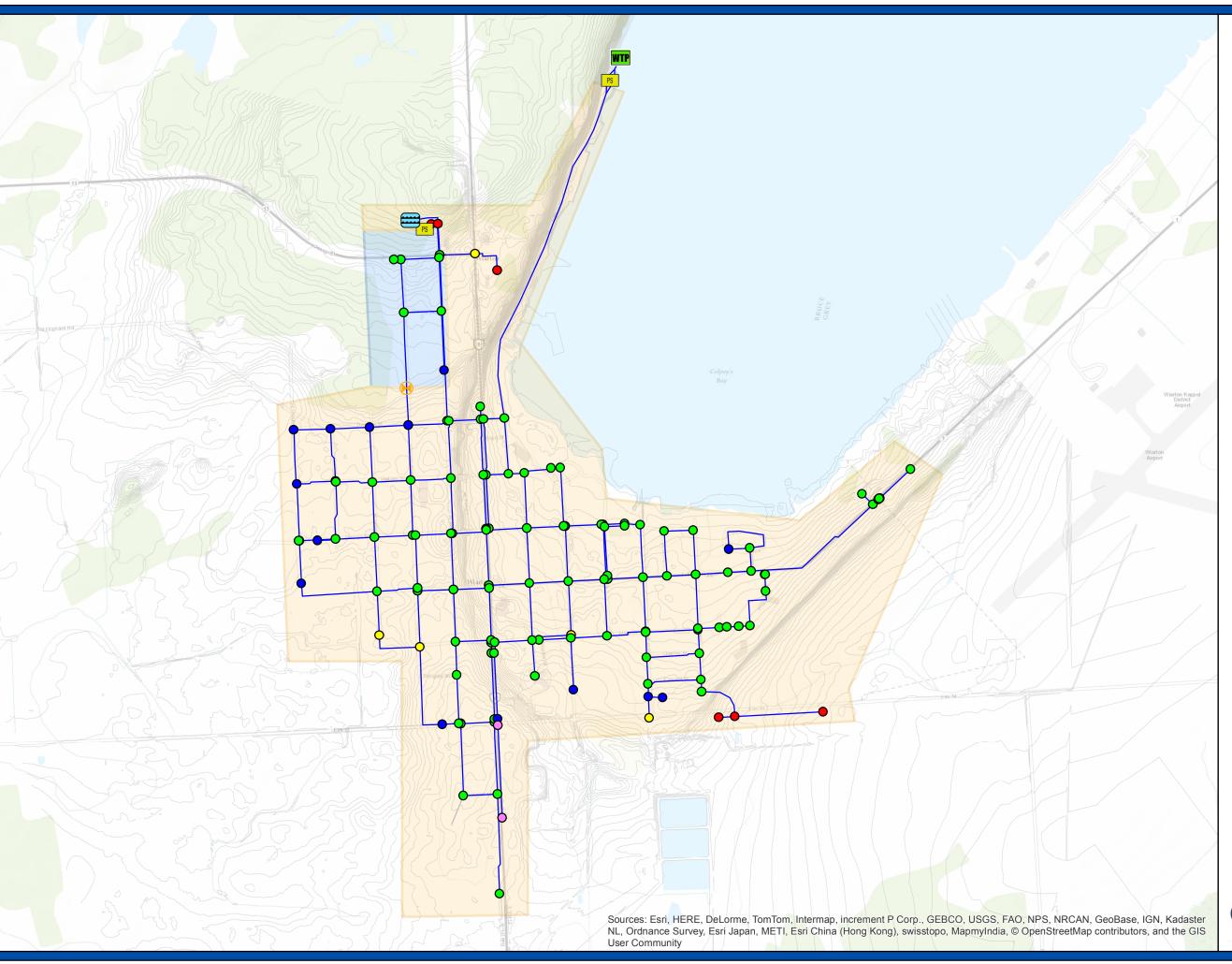


Future Growth Scenario Model Results System Pressures Under Max Day Demand

Minimum Pressure

- less than 40.00
- **O** 40.00 ~ 60.00
- O 60.00 ~ 80.00
- **80.00 ~ 90.00**
- greater than 90.00







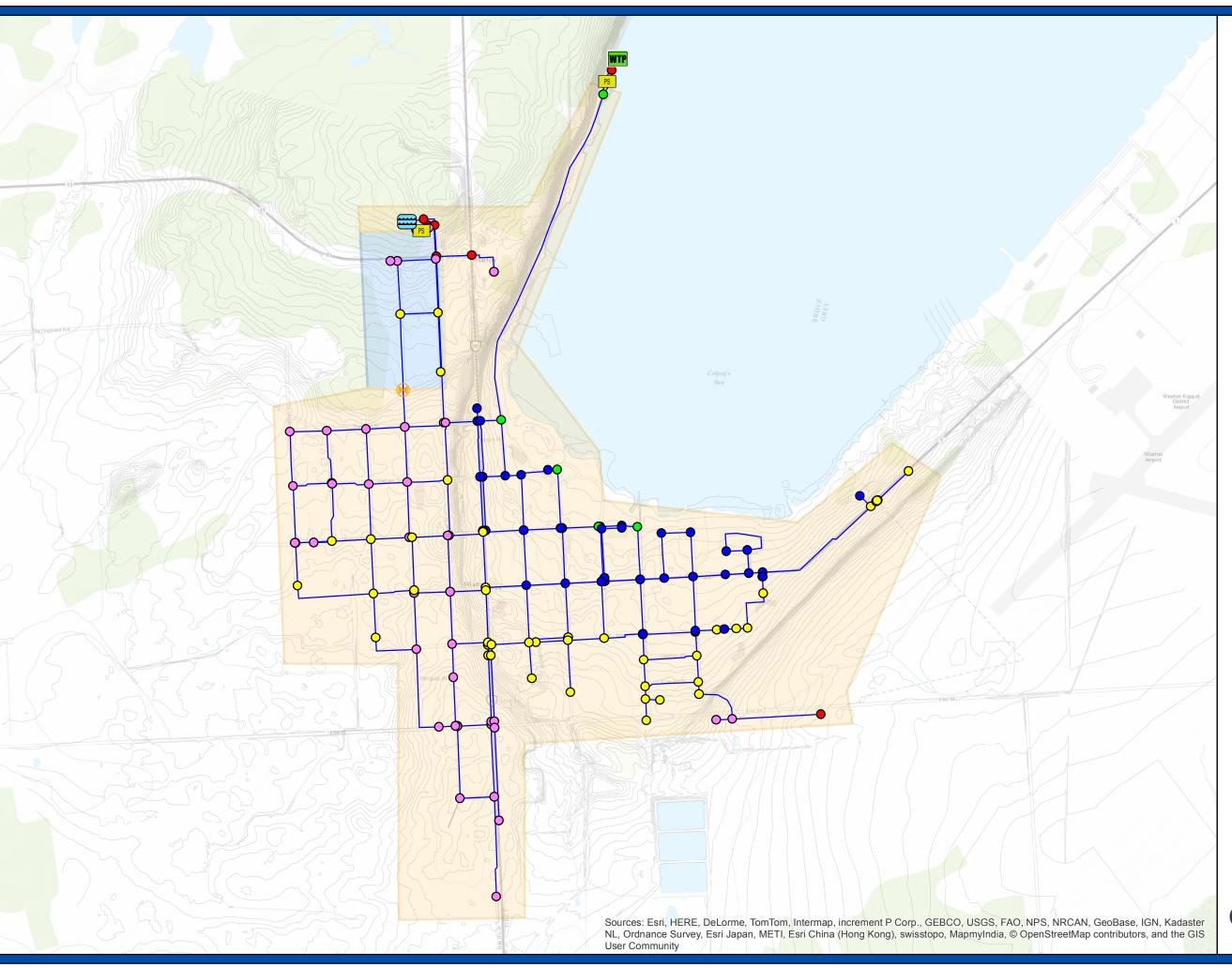


Loop + Watermain Upgrades Model Results Fire Flow Under Max Day Demand

Available Flow

- less than 25.00
- **O** 25.00 ~ 50.00
- O 50.00 ~ 75.00
- **o** 75.00 ~ 100.00
- greater than 100.00









Loop + Watermain Upgrades Model Results System Pressures Under Max Day Demand

Minimum Pressure

- less than 40.00
- **O** 40.00 ~ 60.00
- O 60.00 ~ 80.00
- **80.00 ~ 90.00**
- greater than 90.00



Appendix D Wastewater Modelling Resul	







Baseline - Wastewater Model Results

Dry Weather Flow (d/D)

Less than 0.25

Greater than 1

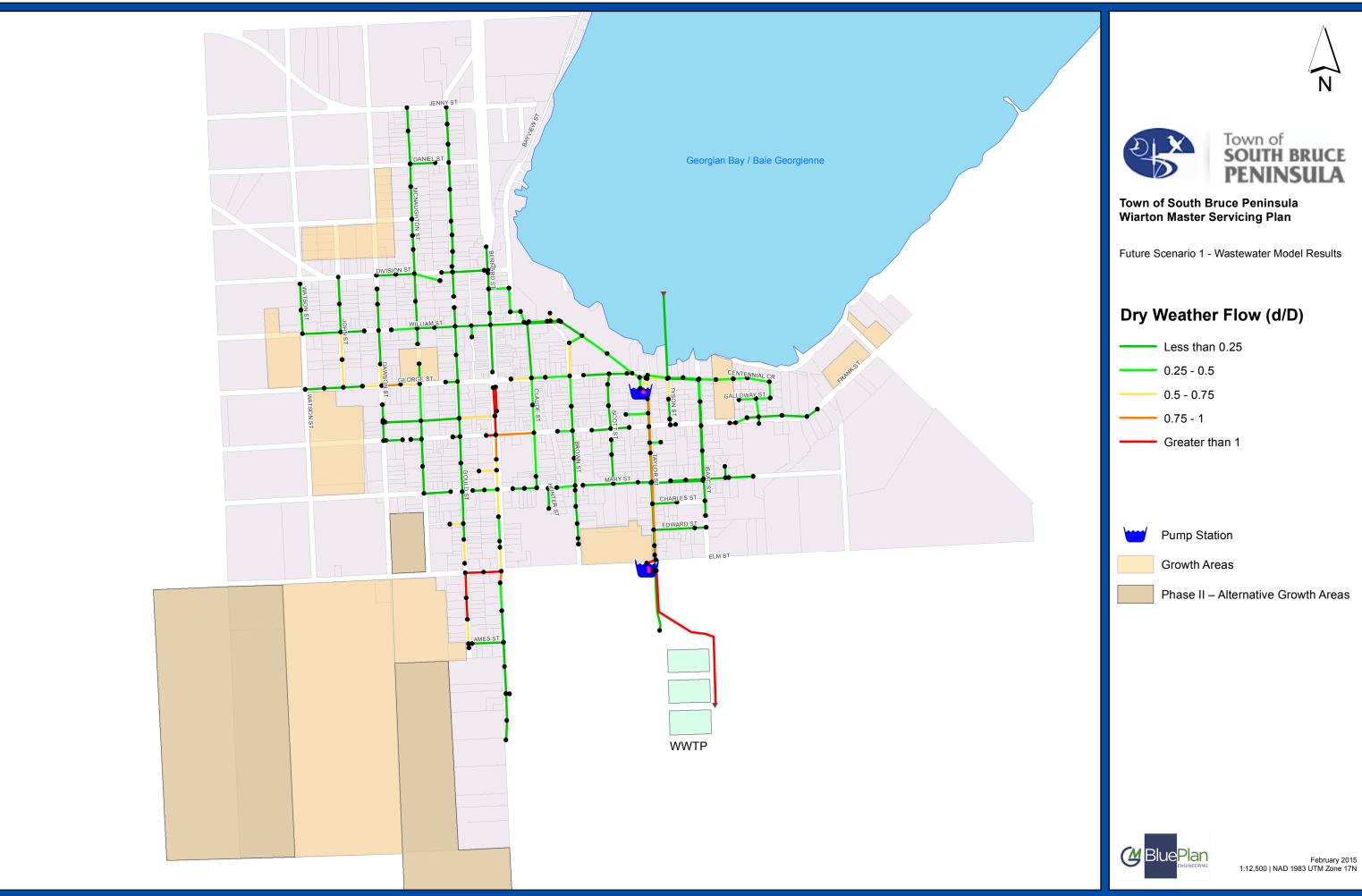
0.25 - 0.5

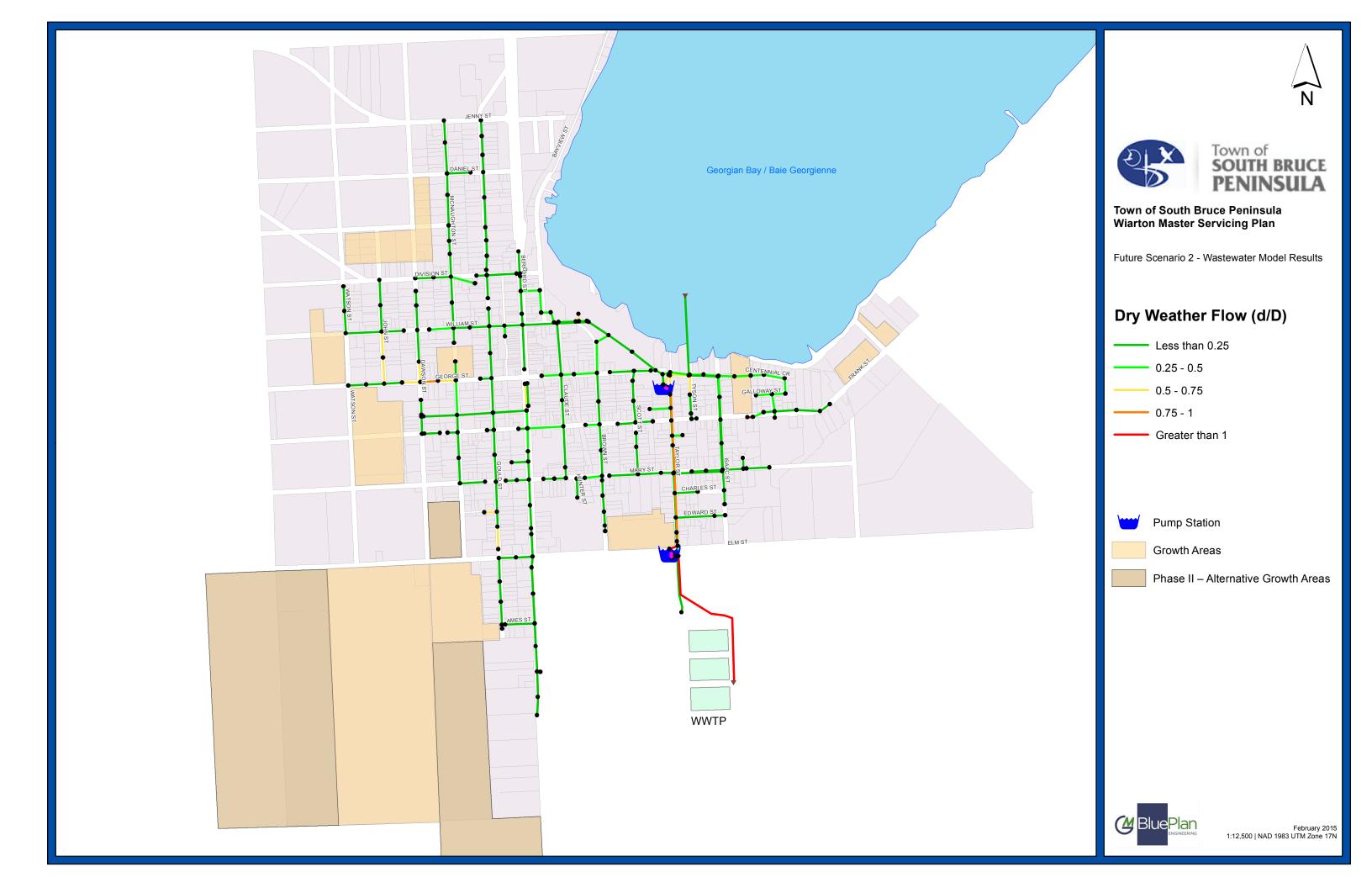
0.5 - 0.75

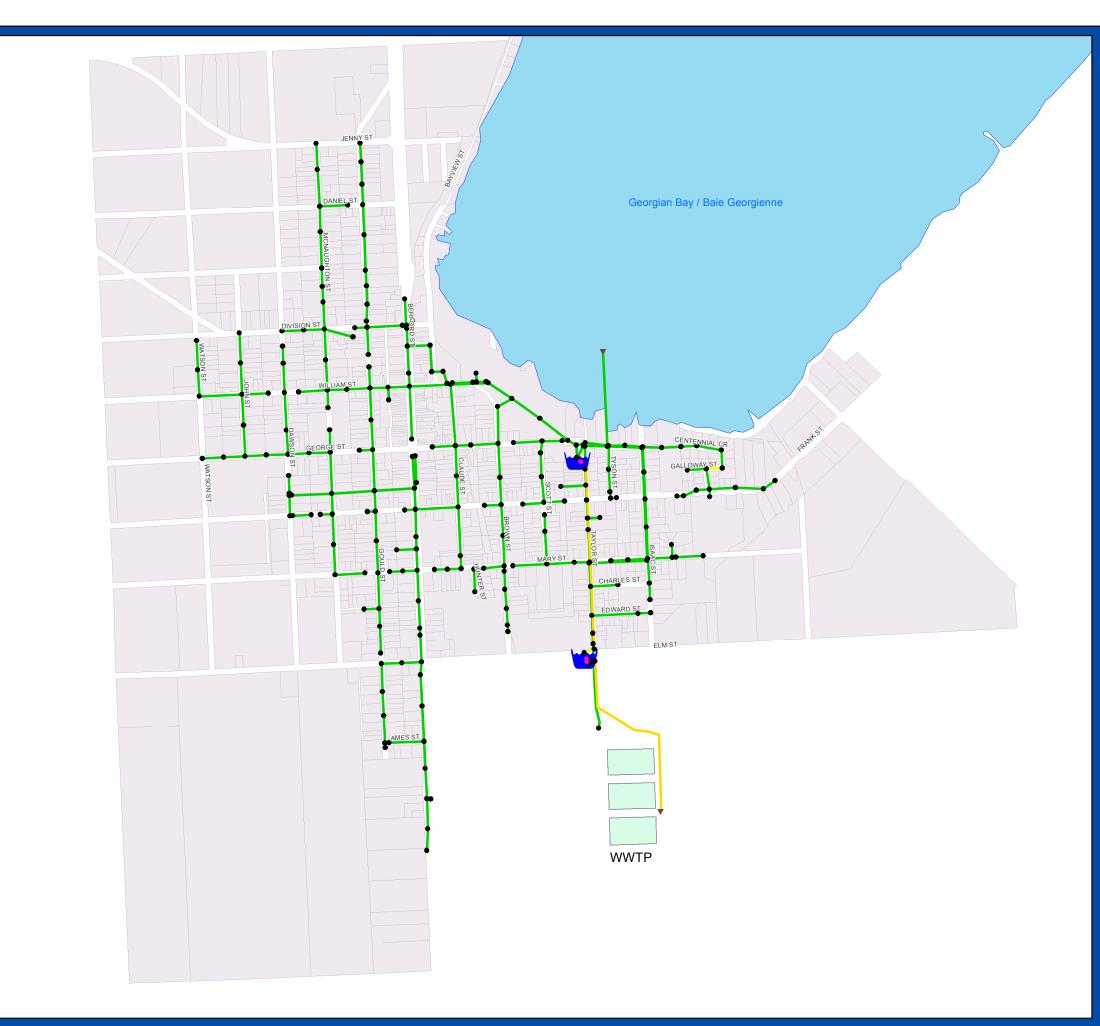
0.75 - 1

Pump Station













Baseline - Wastewater Model Results

Dry Weather Flow (q/Q)

less than 0.400

0.400 ~ 0.600

0.600 ~ 0.800

0.800 ~ 1.000

1.000 ~ 1.500

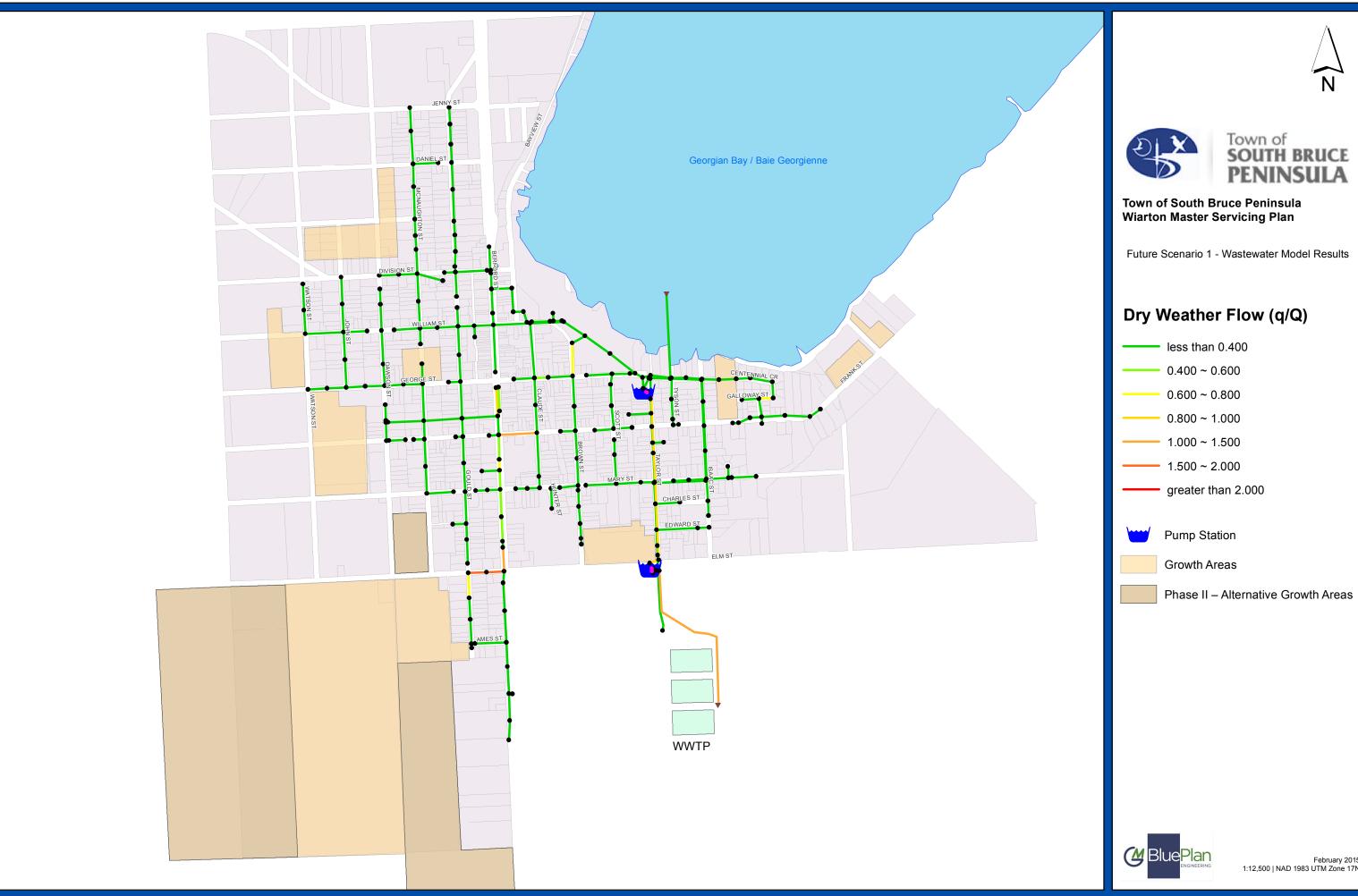
1.500 ~ 2.000

greater than 2.000



Pump Station

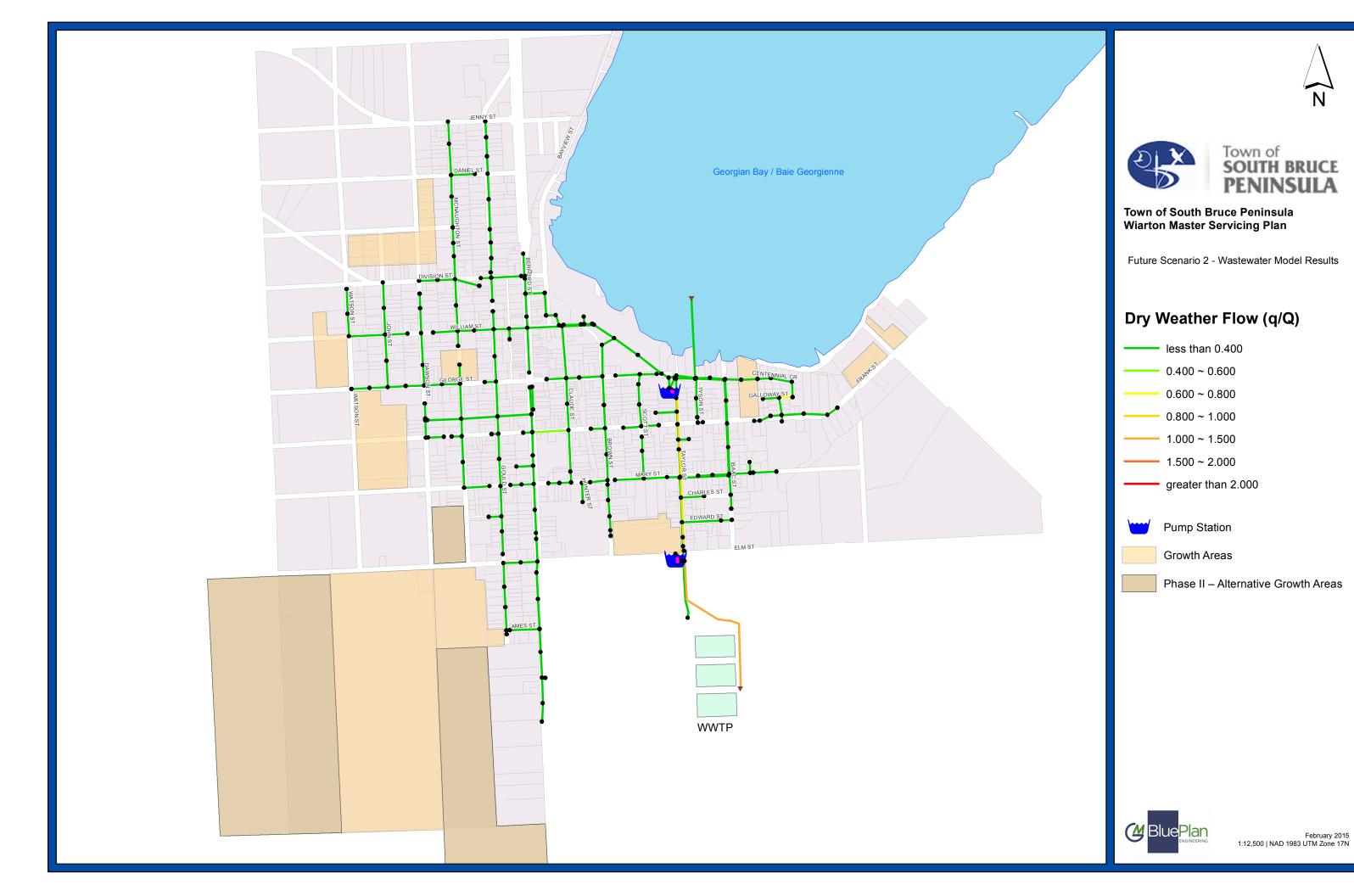


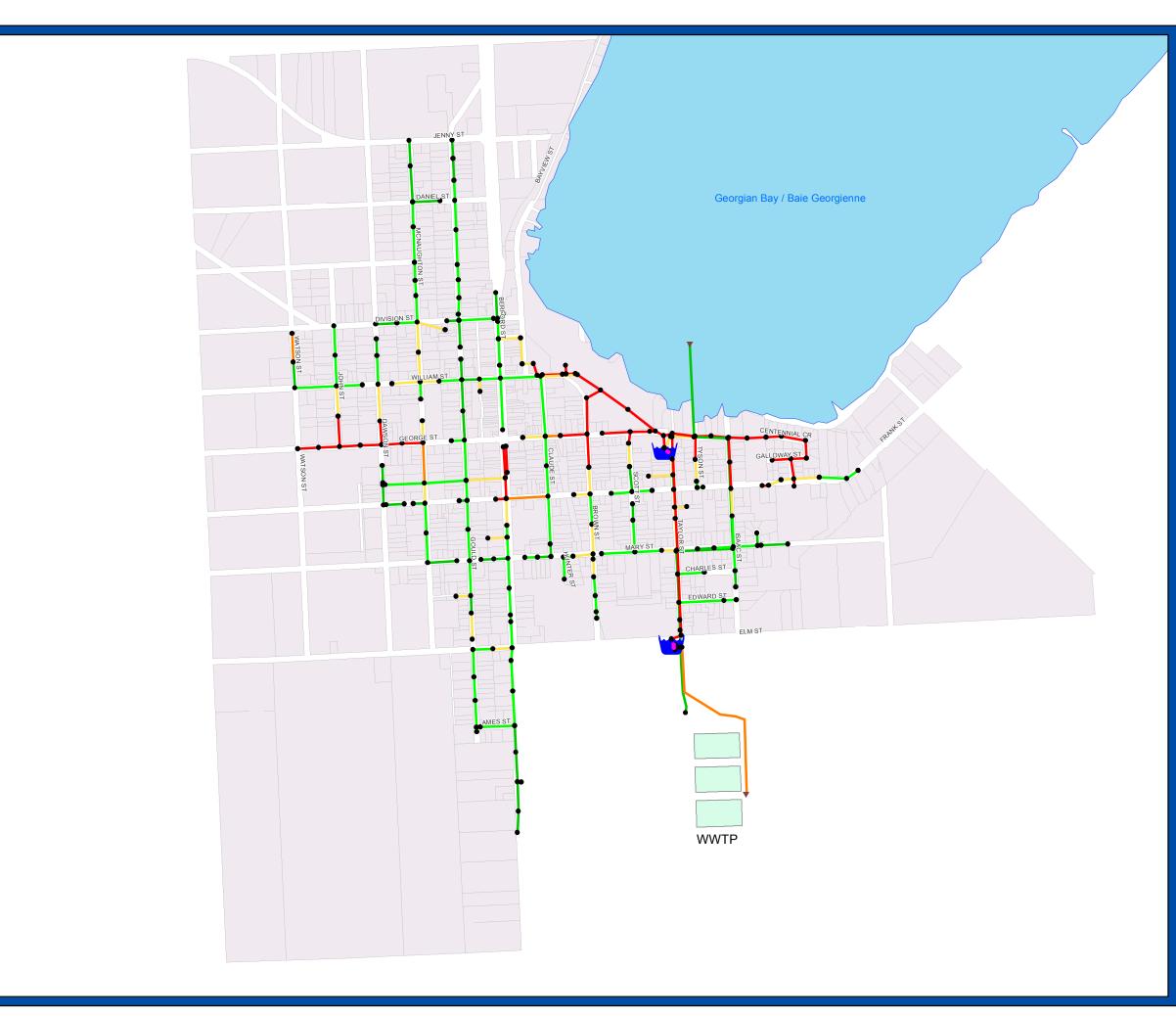






Wiarton Master Servicing Plan









Town of South Bruce Peninsula Wiarton Master Servicing Plan

Baseline - Wastewater Model Results

Wet Weather Flow (d/D)

Less than 0.25

0.25 - 0.5

0.5 - 0.75

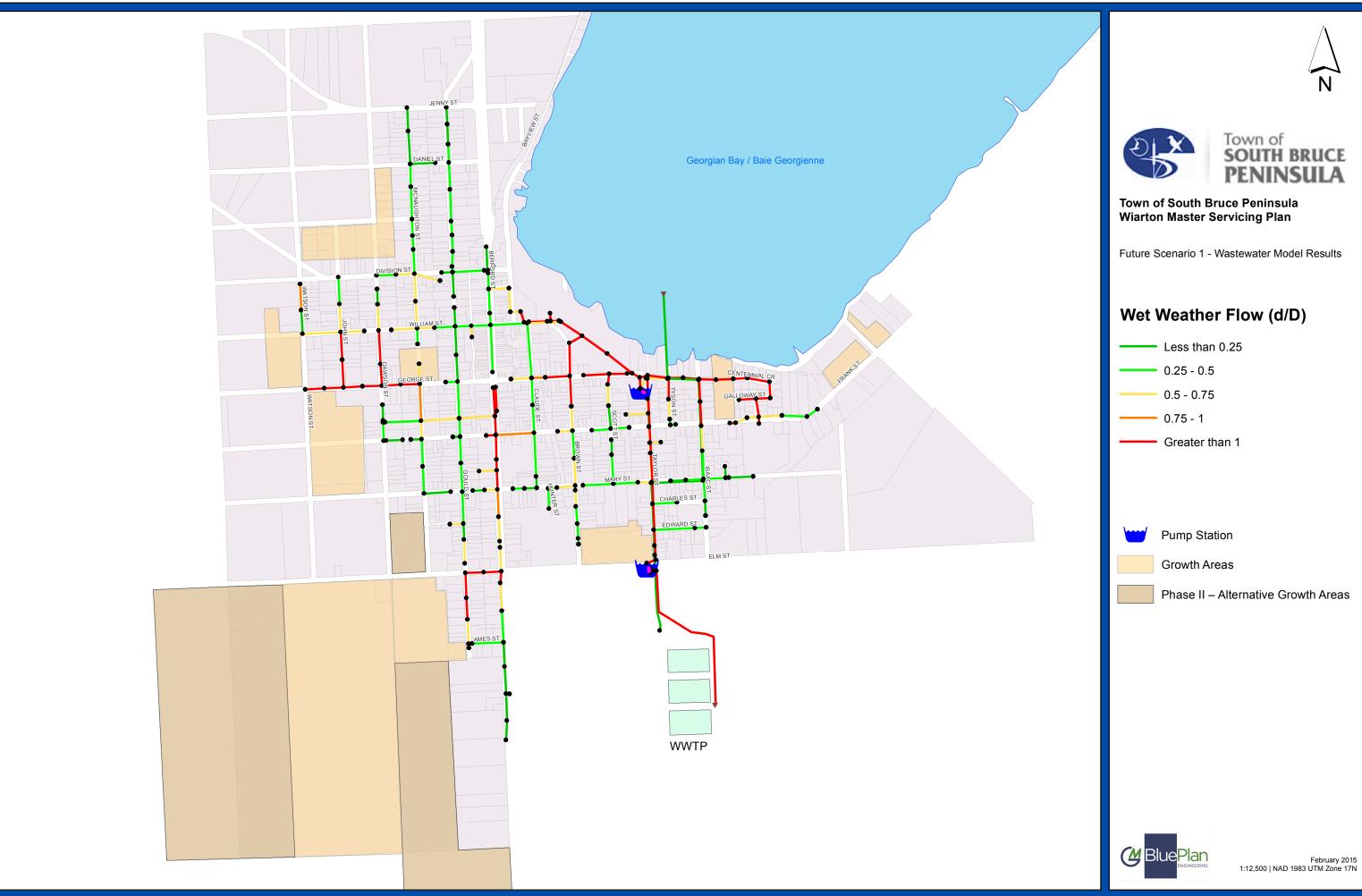
0.75 - 1

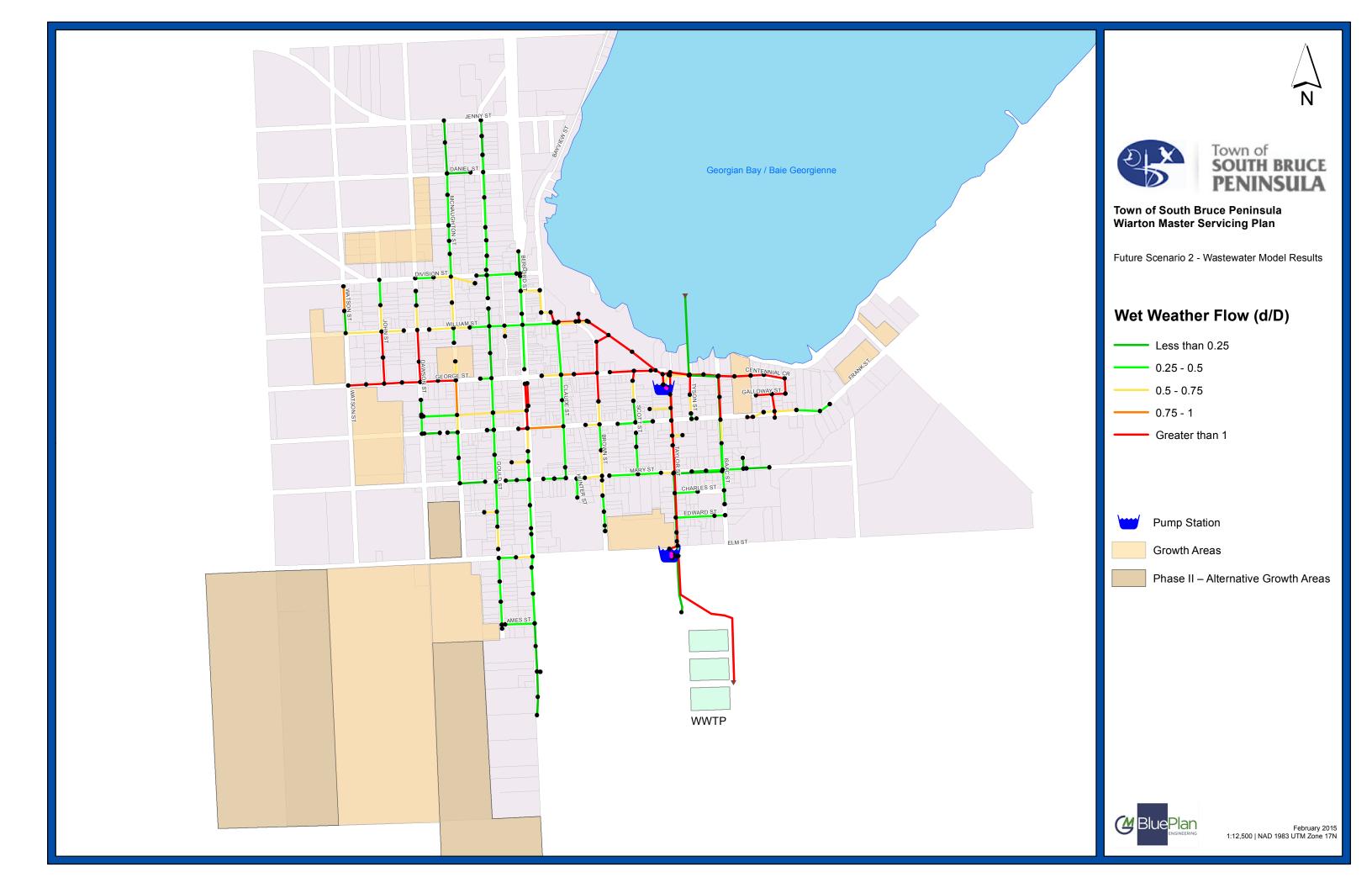
Greater than 1

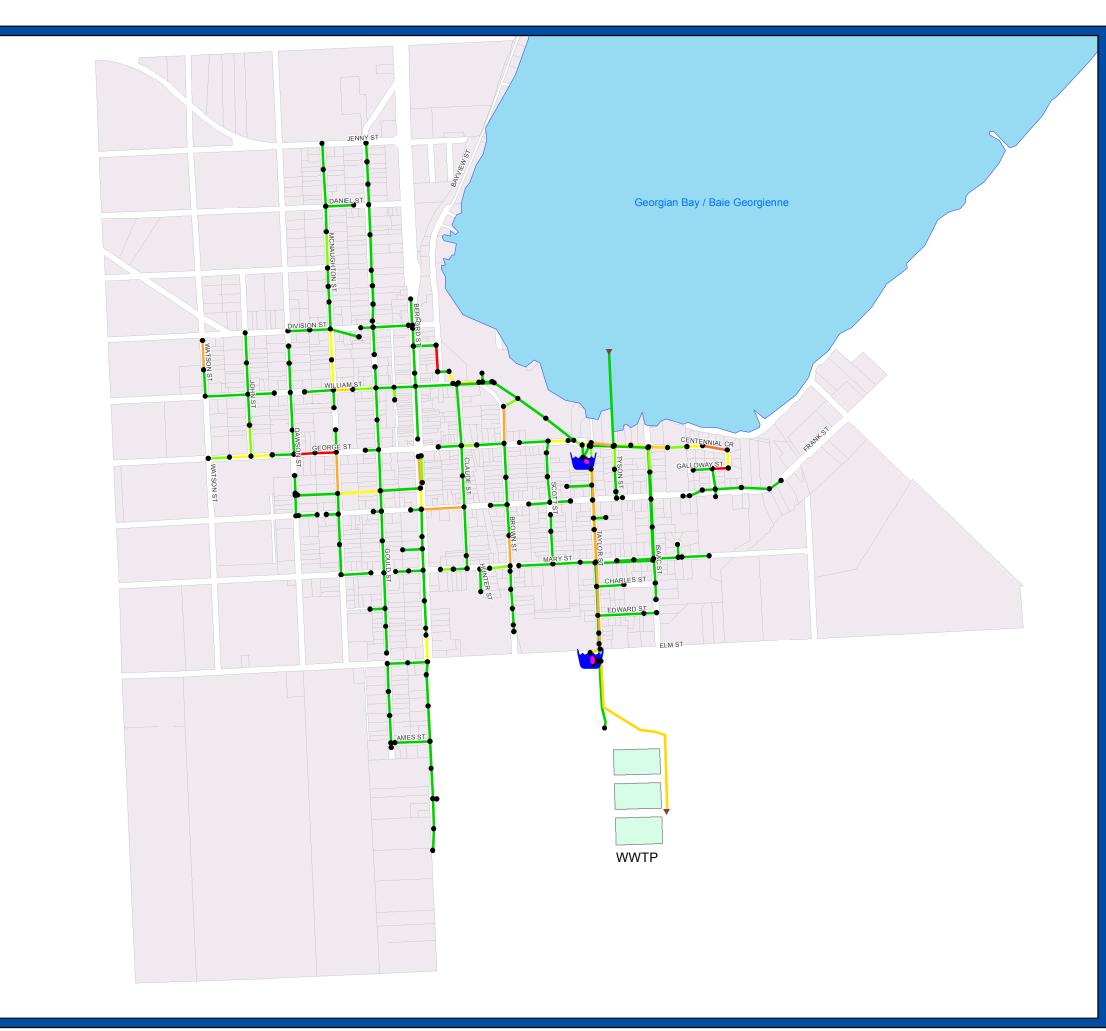


Pump Station













Town of South Bruce Peninsula Wiarton Master Servicing Plan

Baseline - Wastewater Model Results

Wet Weather Flow (q/Q)

less than 0.400

0.400 ~ 0.600

0.600 ~ 0.800

- 0.800 ~ 1.000 - 1.000 ~ 1.500

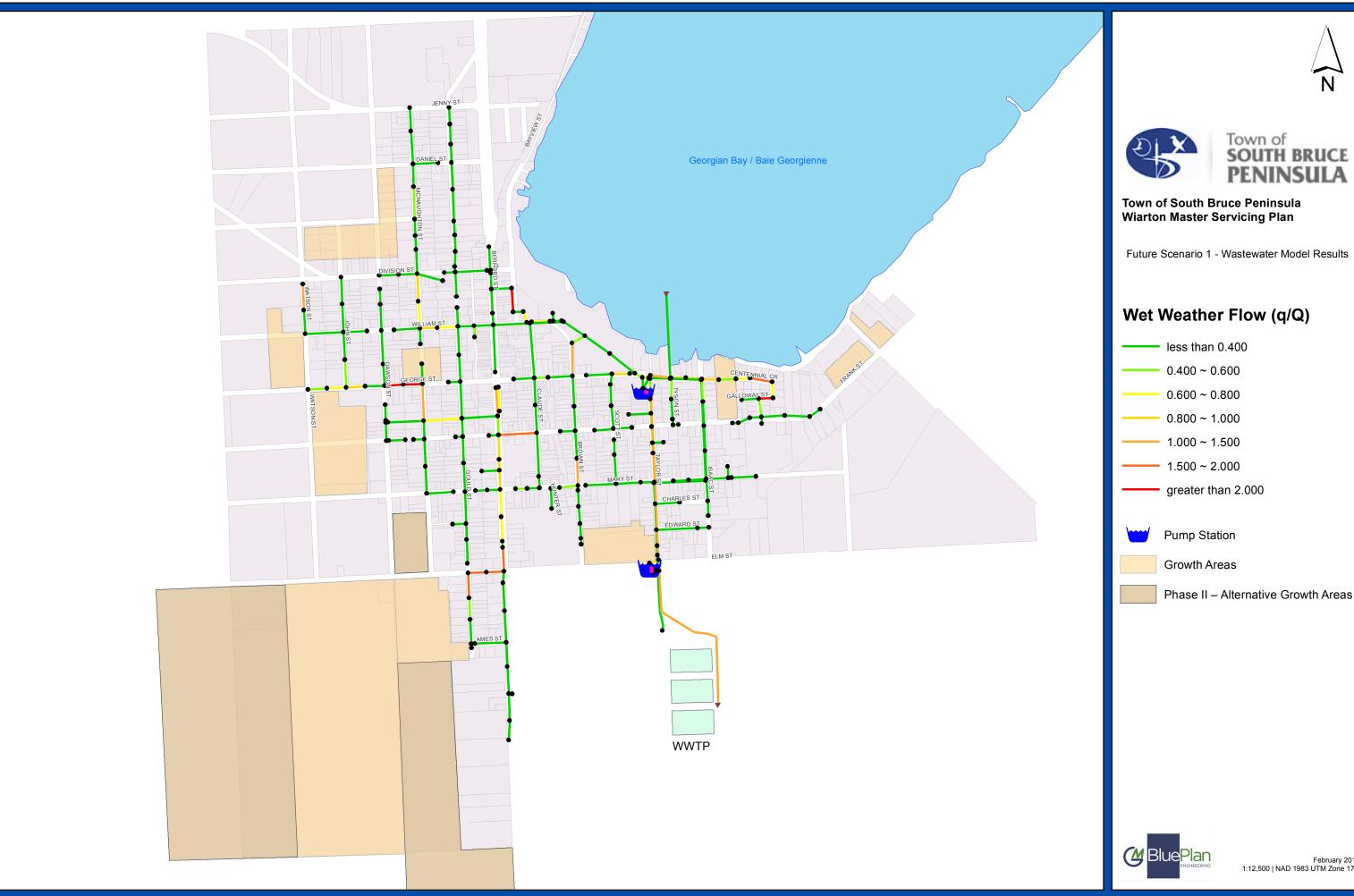
1.500 ~ 2.000

greater than 2.000



Pump Station

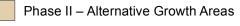


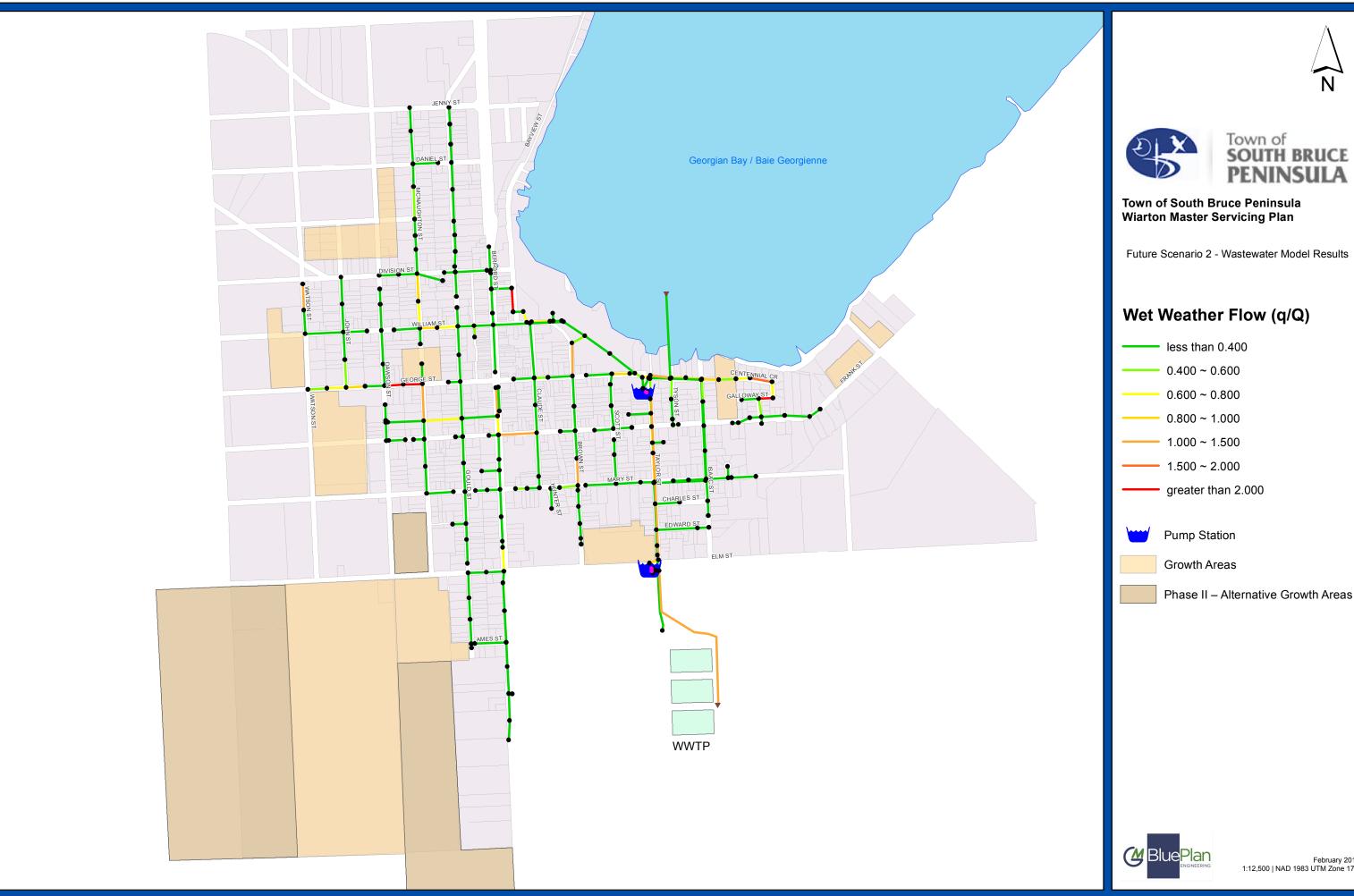






Town of South Bruce Peninsula Wiarton Master Servicing Plan





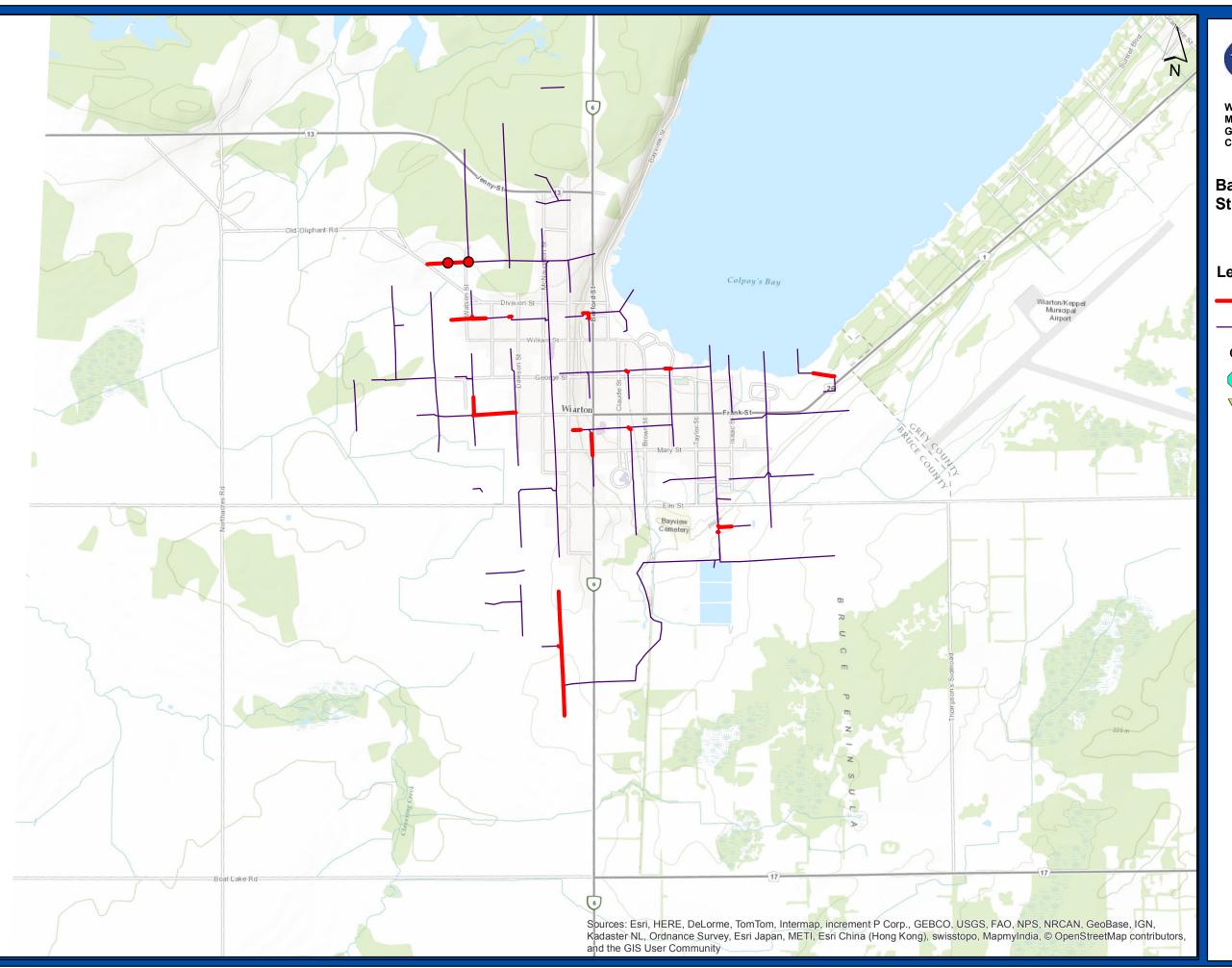




Wiarton Master Servicing Plan

Phase II – Alternative Growth Areas







Wiarton Water, Wastewater and Stormwater Master Servicing Plan and Gould Street Sanitary Sewer Upgrade Class Environmental Assessment Study

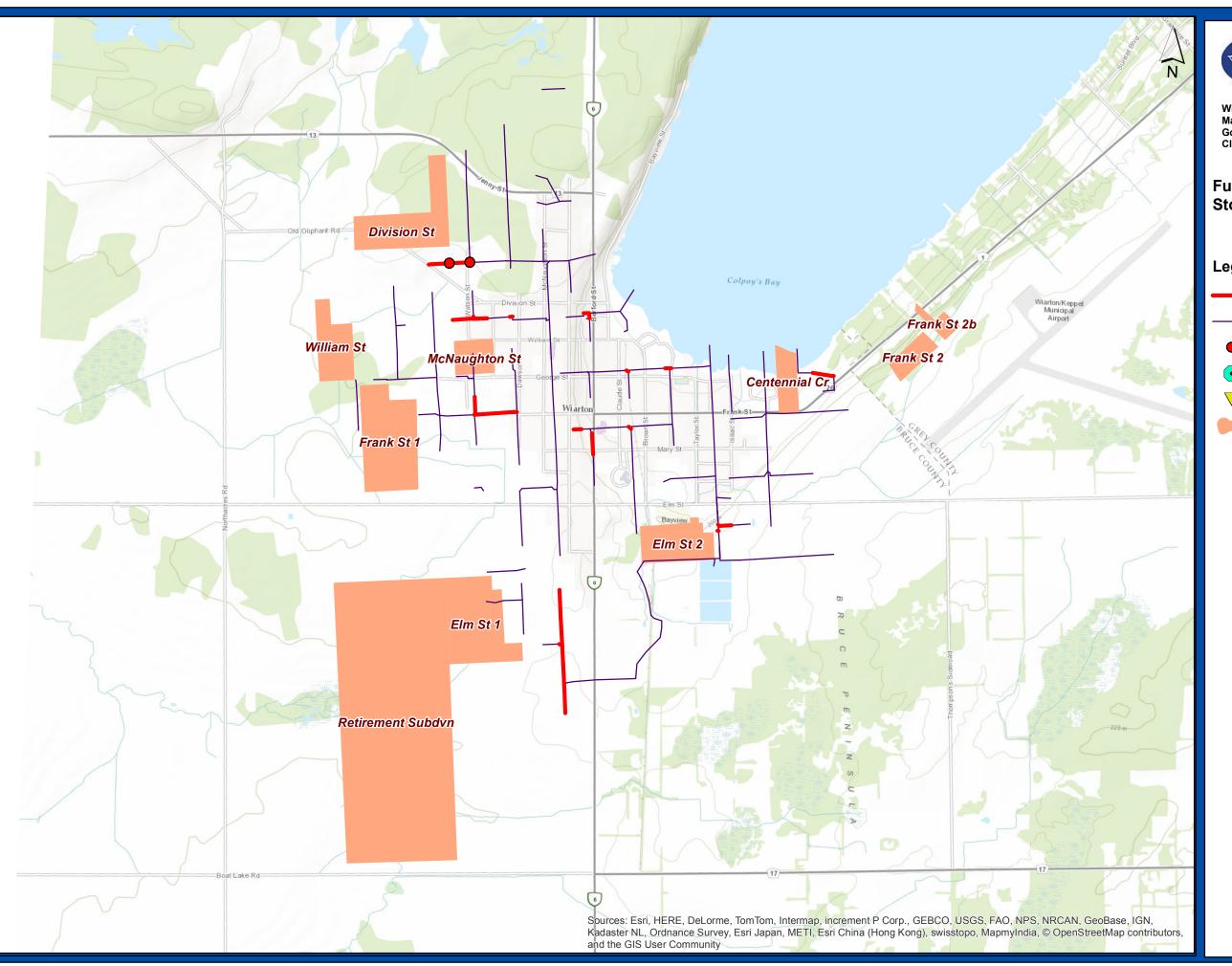
Baseline Scenario Stormwater Model Results

Legend

- Storm Sewer Capacity d/D > 1
- ----- Existing Stormwater Sewer
- Localized Flooding
- Existing SWM Detention Pond
- Existing Storm Outfall



214128-16-SW October 2015 Data Source: Town of South Bruce Peninsula Scale: 1:13,000 | WGS 1984 Web Mercator





Wiarton Water, Wastewater and Stormwater Master Servicing Plan and Gould Street Sanitary Sewer Upgrade Class Environmental Assessment Study

Future Growth Scenario Stormwater Model Results

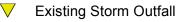
Legend

Storm Sewer Capacity d/D > 1



Localized Flooding

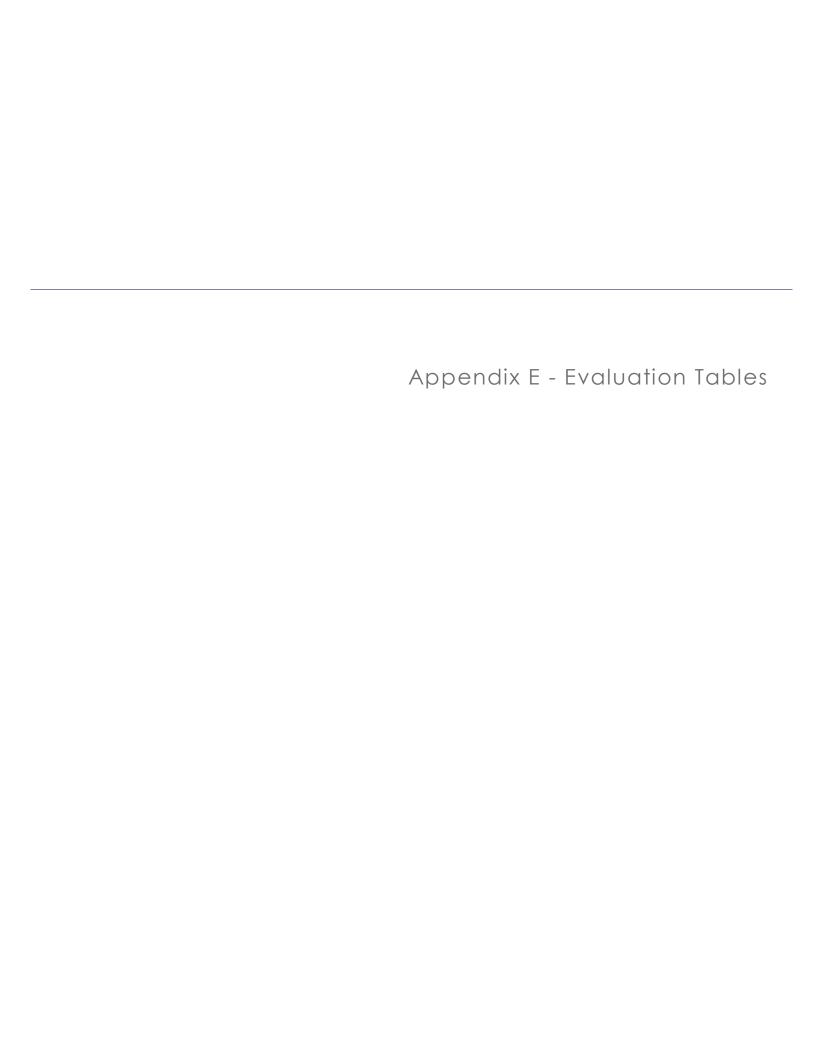


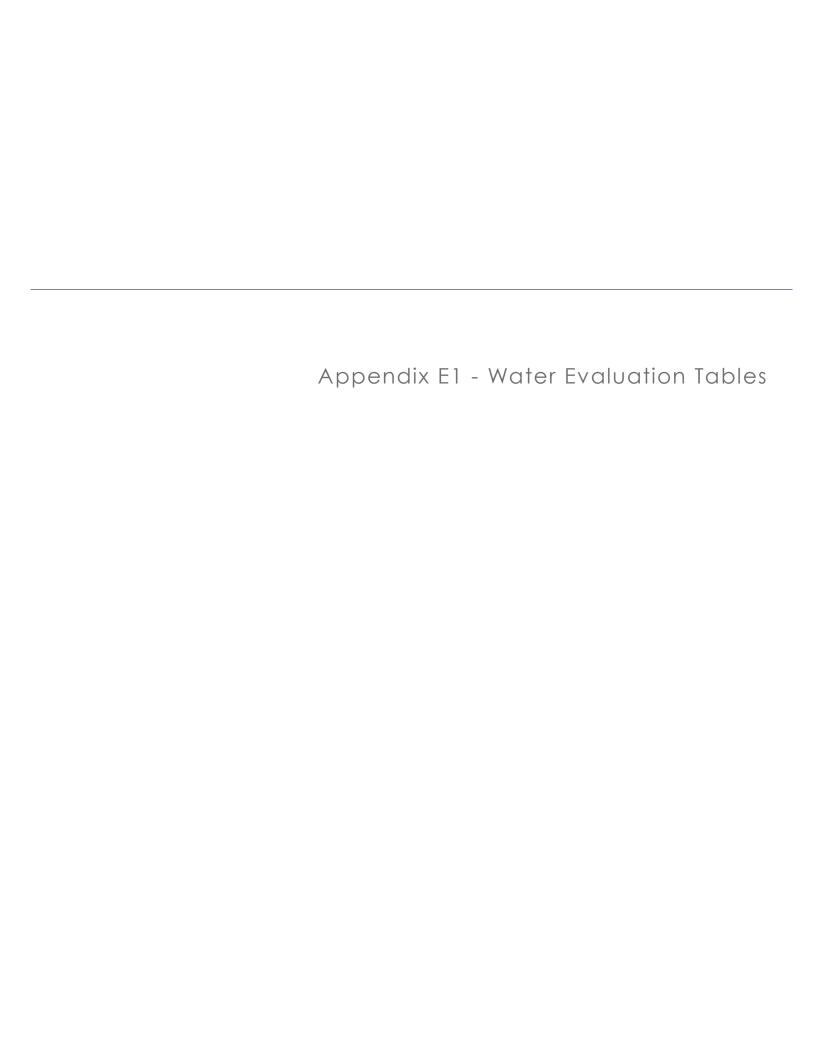


Phase I Growth Area



214128-17-SW October 2015 Data Source: Town of South Bruce Peninsula Scale: 1:13,000 | WGS 1984 Web Mercator







WIARTON MASTER SERVICING PLAN FOR WATER, WASTEWATER AND STORMWATER SERVICES WATER SERVICING CONCEPTS - EVALUATION TABLE



Long List Water Servicing Concepts Evaluation Table

Concept No.	Concept Description	Advantages	Disadvantages	Rating	Carried Forward / Screened Out
General Concepts					
CONCEPT 1	Do Nothing	- Does not incur capital costs No social/economic/environmental disruptions due to infrastructure construction.	- Does not meet Problem/Opportunity Statement Does not achieve required levels of service to meet existing needs and future growth Does not address issues with existing condition of infrastructure Potential social/economic/environmental disruptions due to lack of servicing.	Low	Screened out
CONCEPT 2	Limit Community Growth	Reduces extent of upgrades required in system. Reduces potential for social/economic/environmental disruptions due to infrastructure construction. Reduces capital costs incurred from infrastructure construction.	- Does not meet Problem/Opportunity Statement Not consistent with the Town's Official Plan community vision Does not achieve Town's planning projections.	Low	Screened out
CONCEPT 3 - Increase System C	Capacity				
CONCEPT 3A	Provide Additional Storage	 Proper storage (hydraulic grade line and capacity) would maximize use of existing infrastructure. Increasing storage could minimize the need for linear infrastructure upgrades. May be cost effective in the long term from an energy/operation and management (O&M) perspective. Increased storage capacity would provide security of supply to the system and allows for better operation. 	- High capital and construction costs associated with new storage facility Proper storage alone would unlikely be able to efficiently solve all constraints A new storage facility would increase asset inventory and would incur additional O&M costs New storage is only required if full buildout is realized.	Medium	Carried Forward
CONCEPT 3B	Watermain Upgrades	- Increasing watermain capacity addresses growth within existing urban boundary Watermain upgrades help optimize/maximize use of existing storage, pumping stations, and water treatment plant (WTP) Opportunity to align with State of Good Repair program associated with aging linear infrastructure.	- Watermain upgrades alone do not address storage deficiencies at full buildout conditions.	High	Carried Forward
CONCEPT 4 - Improve System E	fficiency				
CONCEPT 4A	Pressure Zone Optimization	 Adjusting the pressure zone boundaries has the potential to optimize the operations of the existing facilities. Would help optimize system pressures (addressing low and high pressure areas). Has the potential to minimize linear infrastructure upgrades. 	 Existing storage levels may not be optimal for new pressure zone elevations. Potential for high capital and construction costs if new pumping station(s) and zone valving are required. Unlikely to be able to solely and efficiently solve all constraints; would still require additional storage at full buildout. Increases asset inventory; new facilities would incur additional O&M costs. 		Carried Forward
CONCEPT 4B	Increase Water Conservation / Reduce Water Loss	 Maximizes use of existing infrastructure by reducing the demand on the system. Potential to eliminate the need for major facility or conveyance upgrades as full capacity may not be met. The reduced flow would result in savings in pumping and treatment. Potential to minimize total required upgrades. 	- Dependent on the implementation of water conservation program; high potential of not meeting flow reduction targets Highly dependent on public and private participation and commitment Not considered feasible as a complete solution.	Medium	Carried Forward

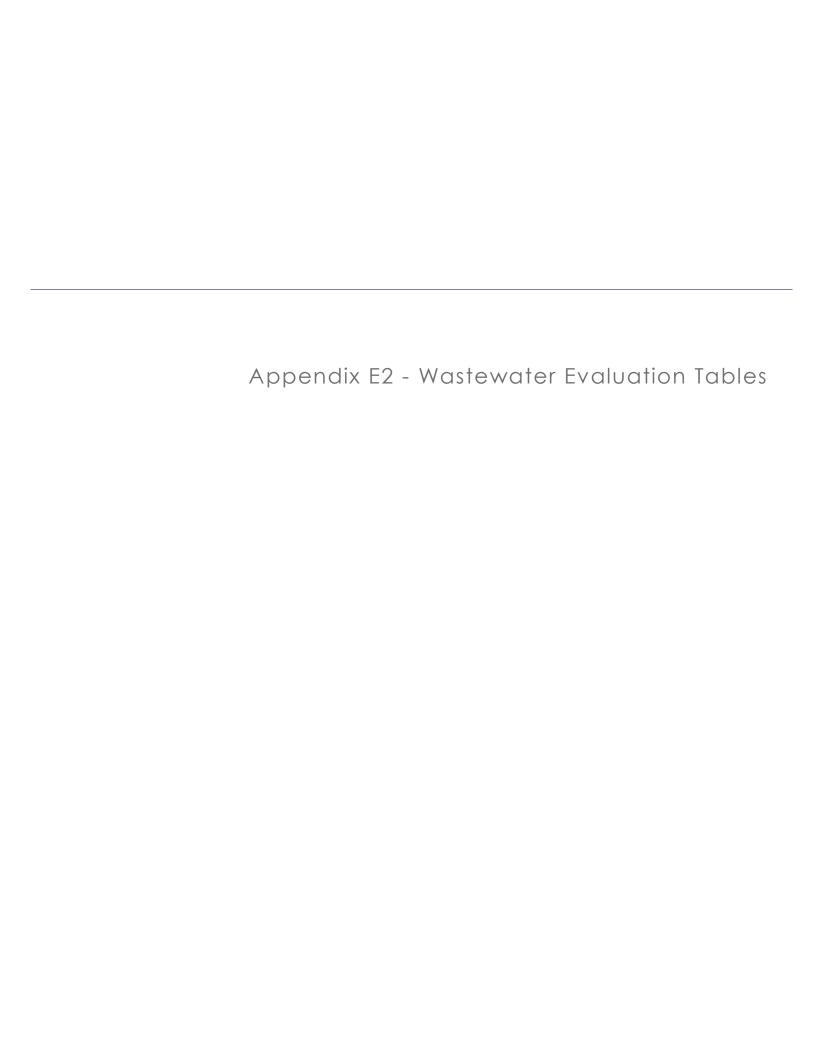


WIARTON MASTER SERVICING PLAN FOR WATER, WASTEWATER AND STORMWATER SERVICES WATER SERVICING STRATEGIES - EVALUATION TABLE



Short List Water Servicing Strategies Evaluation Table

		Strategy 1	Strategy 2a	Strategy 2b	Strategy 3	Strategy 4	Strategy 5
Description		- CONCEPT 3B: Trunk watermain upgrades to South Lands (from the north along Gould St) and loop southwest dead ends. - CONCEPT 4B: Increase water conservation / reduce water loss.	- CONCEPT 3A: New storage facility at existing storage site CONCEPT 3B: Trunk watermain upgrades to South Lands (from the north along Gould St) and loop southwest dead ends CONCEPT 4B: Increase water conservation / reduce water loss.		- CONCEPT 3A: New storage facility at South Lands site CONCEPT 3B: Trunk watermain upgrades to South Lands (from the north along Gould St) and loop southwest dead ends CONCEPT 4B: Increase water conservation / reduce water loss.	- CONCEPT 3A: New storage facility at South Lands site CONCEPT 3B: Loop southwest dead ends CONCEPT 4A: Expand Upper Pressure Zone - Upgrade existing booster pump station - New floating storage for upper zone - Existing tank for lower zone - Twin trunk watermain from Division St to booster pump station - CONCEPT 4B: Increase water conservation / reduce water loss.	- CONCEPT 3B: Loop southwest dead ends CONCEPT 4A: Expand Upper Pressure Zone - Pump upgrades at WTP - Decommission existing booster and tank - New tank in upper pressure zone - PRV connection to lower zone - CONCEPT 4B: Increase water conservation / reducements.
Environmental		- All linear infrastructure upgrades are on existing or	- All linear infrastructure upgrades are on existing or	- All linear infrastructure upgrades are on existing or	- All linear infrastructure upgrades are on existing or	- All linear infrastructure upgrades are on existing or future rights	- All linear infrastructure upgrades are on existing or
	Habitat	future rights of way, minimizing environmental impacts. - No conflicts or crossings of existing environmental features.	future rights of way, minimizing environmental impacts. - New storage facility proposed at existing storage site, minimizing environmental impacts. - No conflicts or crossings of existing environmental features.	impacts. - New storage facility proposed at South Lands site, could result in higher environmental impacts than	future rights of way, minimizing environmental impacts. New storage facility proposed at South Lands site, could result in higher environmental impacts than Strategies 1 and 2a. Impact of new site to be mitigated through completion of Class EA procedure, subsequent mitigative measures, and construction techniques. No conflicts or crossings of existing environmental features.	of way, minimizing environmental impacts. New storage facility in upper zone could require a new site resulting in higher environmental impacts than Strategies 1 and 2a. Impact of new site to be mitigated through completion of Class EA procedure, subsequent mitigative measures, and construction techniques. No conflicts or crossings of existing environmental features.	future rights of way, minimizing environmental impacts. New storage facility in upper zone could require a new site resulting in higher environmental impacts than Strategies 1 and 2a. Impact of new site to be mitigated through completion of Class EA procedure, subsequent mitigative measures, and construction techniques. No conflicts or crossings of existing environmental features.
	Energy	- No new energy costs associated with new infrastructure.	New storage facility could increase operational efficiency thereby minimizing energy use at the water treatment plant and booster pump station thereby having less environmental impacts than Strategy 1 (no new storage).	treatment plant and booster pump station thereby	 New storage facility could increase operational efficiency thereby minimizing energy use at the water treatment plant and booster pump station thereby having less environmental impacts than Strategy 1 (no new storage). 	- Required upgrades at the booster pump station would result in higher energy use compared to Strategies 1-3.	- Required upgrades at the water treatment plant would result in higher energy use compared to Strategies 1-4.
Sub-Score (1, 2, or 3)		High	Medium	Medium	Medium	Low	Low
Technical		- North-south trunk watermain upgrade required to	- North-south trunk watermain upgrade required to	- North-south trunk watermain upgrade required to	- North-south trunk watermain upgrade required to	- Upgrade booster PS to expand upper zone boundary.	- Upgrades at WTP to directly feed expanded upper
	Technical Justification		provide sufficient flows and pressures to new South Lands development.		provide sufficient flows and pressures to new South Lands development.	Existing tank used as floating storage for lower zone and new tank used for upper zone. New trunk watermains needed to support pressure zone change.	zone; PRV to lower zone. - Decommission existing tank and booster PS; existing tank TWL no longer feasible with WTP upgrades.
	Site Availability	- No new site(s) required.	No land acquisition required as the existing tank site can accommodate a new tank.	- Land acquisition would be required for the new tank.	- Land acquisition would be required for the new tank.	- Land acquisition may be required for the new tank if it is not placed at existing tank site.	- Land acquisition may be required for the new tank if it is not placed at existing tank site.
	Other Factors	- Opportunity to align watermain upgrades with State of Good Repair.	- Opportunity to align watermain upgrades with State of Good Repair.	- Opportunity to align watermain upgrades with State of Good Repair.	Opportunity to align watermain upgrades with State of Good Repair. Having 2 tanks would increase operations and maintenance compared to Strategies 1-2.	 Opportunity to align watermain upgrades with State of Good Repair. Having 2 tanks would increase operations and maintenance compared to Strategies 1-2. 	- Decommissioning of existing tank and booster PS would decrease operations and maintenance compared to Strategies 1-4
	Utilization of Available System Capacity	- Looping of southwest dead end mains required to improve local level of service.	- Looping of southwest dead end mains required to improve local level of service.	- Looping of southwest dead end mains required to improve local level of service.	Looping of southwest dead end mains required to improve local level of service.	- Looping of southwest dead end mains required to improve local level of service.	Looping of southwest dead end mains required to improve local level of service.
	System Flexibility	- Does not increase system flexibility.	- Does not increase system flexibility.	- Does not increase system flexibility.	- Does not increase system flexibility.	 New pressure zone boundary allows for more optimal HGLs; improves LOS compared to Strategies 1-3. 	- New pressure zone boundary allows for more optimal HGLs; improves LOS compared to Strategies 1-3.
	Beyond 2029	- Solution does not address projected storage deficiency at full buildout.	New tank provides increased storage for future growth.	New tank provides increased storage for future growth.	- New tank provides increased storage for future growth.	New tank provides increased storage for future growth.	New tank provides increased storage for future growth.
Sub-Score (1, 2, or 3)		Low	Medium	Medium	Medium	High	High
Socio / Cultural	Community Issues (Noise, Dust, Aesthetics etc.)	New linear infrastructure constructed in built-up areas, potential for impact/disruption to residents and local traffic.	New linear infrastructure constructed in built-up areas, potential for impact/disruption to residents and local traffic.	New linear infrastructure constructed in built-up areas, potential for impact/disruption to residents and local traffic.	New linear infrastructure constructed in built-up areas, potential for impact/disruption to residents and local traffic.	 New linear infrastructure constructed in built-up areas, potential for impact/disruption to residents and local traffic. 	New linear infrastructure constructed in built-up areas, potential for impact/disruption to residents and local traffic.
	LOS	- No significant change in level of service.	- No significant change in level of service.	- No significant change in level of service.	- Additional tank can provide more security to the system.	Positive impacts to existing/proposed level of service (minimize high/low pressure areas). Additional tank can provide more security to the system.	- Positive impacts to existing/proposed LOS (minimize high/low pressure areas).
	Land Use	- No new land use.	 Existing site is located away from the residential areas. Additional storage at location of existing storage, minimizes potential for negative perceived visual impact. 		- Potential for perceived visual impact caused by elevated tank.	Potential for perceived visual impact caused by elevated tank.	- Potential for perceived visual impact caused by elevated tank.
Sub-Score (1, 2, or 3)		High	High	Low	Low	Medium	Medium
Financial		- Lowest total capital cost strategy.	- Capital costs greater than Strategy 1 due to new	- Capital costs greater than Strategies 1 and 2 due to	- Capital costs greater than Strategies 1 and 2,	- Highest capital cost option; BPS upgrades and additional tank.	- Higher capital costs than all strategies due to WTP
	Capital Cost	- No increase in operational costs.	tank, but significantly lower than Strategies 4 and 5. - No increase in operational costs.		additional tank, however lower than Strategies 4 and 5. - Higher operational costs than Strategies 1-2 due to	- Higher operational costs than Strategies 1-2 due to additional	upgrades. - Least operational costs due to decommissioning of
	Operational Cost	- No property acquisition required.	- No property acquisition required.	- New storage site will require property acquisition.	additional storage tank. - New storage site will require property acquisition.	tank. - New storage may require property acquisition.	BPS and existing tank. - New storage may require property acquisition.
	Property Purchase Cost Sharing Opportunities	North-south trunk watermain to service South Lands development presents opportunity for cost sharing with developers.	North-south trunk watermain to service South Lands development presents opportunity for cost sharing with developers.	- North-south trunk watermain to service South Lands	North-south trunk watermain to service South Lands development presents opportunity for cost sharing with developers.		- New Storage may require property acquisition.
Sub-Score (1, 2, or 3)		High	Medium	Medium	Medium	Low	Low
Legal / Jurisdictional	Land	- Will not require land acquisition.	- Will not require land acquisition.	- Requires land acquisition for new elevated tank.	- Requires land acquisition for new elevated tank.	- Potential land acquisition required for new elevated tank.	Potential land acquisition required for new elevated tank.
Sub-Score (1, 2, or 3)		High	High	Medium	Medium	Medium	Medium
OVERALL RATING		High	Medium	Low	Low	Low	Low





WIARTON WATER, WASTEWATER AND STORMWATER MASTER SERVICING PLAN WASTEWATER EVALUATION (STRATEGIES FROM SHORTLISTED SERVICING CONCEPTS)



Wiarton Water & Wastewater Master Plan and Gould St Sanitary Sewer Upgrade Class EA - Short List Servicing Strategies Evaluation Table

		Strategy 1 -	Strategy 2 -
		Provide High Flow Storage Capacity within the Existing System and Implement Long Term I&I Reduction Program	Divert West Area Flows Away from SPS#1 and Implement Long Term I&I Reduction Program
		- CONCEPT 4B: New Storage Facility at SPS#1 to manage peak wet weather flows and Convey South	
Description		Lands via SPS#3 - CONCEPT 7A: Implement Long Term I/I Reduction Program	- CONCEPT 5: Divert West Area Flows away from SPS#1 and Convey South Lands via SPS#3 - CONCEPT 7A: Implement Long Term I/I Reduction Program
Environmental		- Contest of the cont	
		Off-line storage facility will safeguard the environment from increased overflow occurrences by diverting flow from SPS#1 when the pumping capacity is exceeded. The diverted flow is stored until sufficient capacity	Diversion of flows away from SPS#1 will provide relief capacity to SPS#1 that will in turn safeguard the environment from increased overflows.
	Pollution issues	becomes available.	
		Greater potential for environmental impact. Would need greater mitigative requirements through design and implementation.	Greater potential for environmental impact if diversion requires an additional pump station compared to Strategy 1. Would need greater mitigative requirements through design and implementation. Less potential
			for environmental impact if gravity diversion is selected.
	Habitat	The proposed SPS#3 and its outfall may have greater potential for environmental impact and would require greater mitigative requirements through design and implementation, as there is an environmentally protected	The proposed SPS#3 and its outfall may have greater potential for environmental impact and would require greater mitigative requirements through design and implementation, as there is an environmentally protected
	Habitat	area in the area of Dawson St and Elm St (common to both strategies).	area in the area of Dawson St and Elm St (common to both strategies).
		Other conveyance upgrades may be triggered within the existing collection system.	Opportunity to divert flows by gravity which is considered a more sustainable strategy compared to pumping or storage tank.
Sub-Score - Environmental		Medium	Medium
Technical		There is site qualishility undergreath the positive let at CDCH1. As such elegans took will peed to be designed	Diversion provides connective relief to CDCM4, aliminating pood for new storage and improving eviating
	Known technology?	There is site availability underneath the parking lot at SPS#1. As such, storage tank will need to be designed for heavy loading.	Diversion provides capacity relief to SPS#1, eliminating need for new storage and improving existing hydraulic level of service.
		Size will vary depending on the amount of flow to be captured, but ranges from 400 m ³ to 1000 m ³ .	A pumped diversion will require an additional pump station (SPS#4) and forcemain to overcome topographic constraints, and will incur increased operational and maintenance requirements. However, a gravity diversion
	Site availability		constraints, and will incur increased operational and maintenance requirements. However, a gravity diversion will incur only marginal increased O&M requirements.
	Other factors	Increased operational and maintenance requirement for new storage tank. If gravity emptying is not possible, storage tank will also need pump to pump out flows.	A gravity diversion may require a sewer with deep sections. Given the potential to encounter bedrock along the diversion route, a geotechnical investigation will need to be conducted.
	Utilization of available	Underground storage tank will require above ground mechanical, electrical and odour controls housed at the	The strategy leverages capacity at SPS#3 and maximizes use of future planned infrastructure.
	system capacity?	existing SPS#1 facility.	
	System flexibility	Strategy provides for growth to 2029 however further expansion of the storage tank to accommodate these future flows is likely to be expensive and may not fit within existing site.	Diversion of flows away from SPS#1 provides flexibility in meeting future servicing requirements.
	Beyond 2031	I/I Reduction will: Maximize the use of existing infrastructure	I/I Reduction will: - Maximize the use of existing infrastructure
	Boyona 2001	 Minimize and delay the need for major conveyance upgrades Reduce flow in system, creating savings in pumping, treatment and need for upgrades 	 Minimize and delay the need for major conveyance upgrades Reduce flow in system, creating savings in pumping, treatment and need for upgrades
	Inflow/Infiltration	- I/I reduction is dependent on public and private participation and commitment.	- I/I reduction is dependent on public and private participation and commitment.
Sub-Score - Technical		Low	High
Socio / Cultural			
	Environmental issues	Some potential for noise, dust and aesthetic impacts on residents during construction of storage tank and sewer upgrades. Any potential disturbance will be limited by ensuring construction takes place during normal	Some potential for noise, dust and aesthetic impacts on residents during construction of pump stations and sewers in urban area. Any potential disturbance will be limited by ensuring construction takes place during
	(noise, dust, aesthetics etc)	working hours, and through construction contract obligations.	normal working hours, and through construction contract obligations.
		Conveyance upgrades to SPS#1 could require extensive upgrades on Gould St, Frank St and Berford St, increasing the potential for socio/economic impacts during construction.	Potential for socio/economic impacts during construction will vary depending on alignment selected for flow diversion; however, alternative alignments are possible that avoid the use of busy roads such as Berford St
		Minimal visual impact caused by storage tank as it would be underground.	and Taylor St. Potential visual impact caused by pump station(s). Opportunity to mitigate impacts through integrated
	Community issues	,	community design.
		Storage site will not require acquisition of additional land adjacent to the lakeshore. Existing SPS#3 land	Land will need to be acquired for new pump station(s).
		Storage site will not require acquisition of additional land adjacent to the lakeshore. Existing SPS#3 land parcel is owned by the Municipality.	Potential site for SPS#3 is located away from downtown area at Elm St and Dawson St. Potential site for SPS#4 could be within residential neighbourhood (Frank St and Gould St) or Frank St and
			Potential site for SPS#3 is located away from downtown area at Elm St and Dawson St.
		parcel is owned by the Municipality. New storage tank to manage peak wet weather flows will be perceived by the public as a measure the	Potential site for SPS#3 is located away from downtown area at Elm St and Dawson St. Potential site for SPS#4 could be within residential neighbourhood (Frank St and Gould St) or Frank St and Claude St.
	Land use	parcel is owned by the Municipality.	Potential site for SPS#3 is located away from downtown area at Elm St and Dawson St. Potential site for SPS#4 could be within residential neighbourhood (Frank St and Gould St) or Frank St and Claude St.
Sub-Score - Socio / Cultural	Land use	parcel is owned by the Municipality. New storage tank to manage peak wet weather flows will be perceived by the public as a measure the	Potential site for SPS#3 is located away from downtown area at Elm St and Dawson St. Potential site for SPS#4 could be within residential neighbourhood (Frank St and Gould St) or Frank St and Claude St.
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Cultural Financial Sub-Score - Financial	Capital Cost Operational Cost Cost Phasing Property Purchase Cost Sharing Opportunities Deferral of other upgrades?	New storage tank to manage peak wet weather flows will be perceived by the public as a measure the Municipality is taking towards resolving basement flooding issues. High Capital cost is likely to be less than pumped diversion, but higher than gravity diversion. Increased operational and maintenance requirements for new storage tank and SPS#3. Offline tank will likely require a pump. Limited potential for phasing. Large, lump-sum capital cost expected for the new underground storage tank to address existing issues at SPS#1. Storage site will not require acquisition of additional land adjacent to the lakeshore. Existing SPS#3 land parcel is owned by the Municipality. Limited opportunity to share costs with the development community. No external funding available for a storage facility. High capital cost and increase in O&M. Would defer/minimize system upgrades at SPS#1 only; strategy may still trigger upgrades within the collection system. Medium Permits and approvals from Municipality and from Grey Sauble Conservation Authority are required for storage tank and SPS#3. Permit from Grey Sauble Conservation Authority may be required for SPS#3 given proximity to environmental protection area at Elm St and Dawson St. New site required for SPS#3 (same for both strategies). Underground storage tank will not require acquisition of additional land. There is site availability under the	Potential site for SPS#4 could be within residential neighbourhood (Frank St and Dawson St. Potential site for SPS#4 could be within residential neighbourhood (Frank St and Gould St) or Frank St and Claude St. No additional site for SPS#4 required if gravity diversion is possible. Medium
Cultural Financial Sub-Score - Financial	Capital Cost Operational Cost Cost Phasing Property Purchase Cost Sharing Opportunities Deferral of other upgrades?	New storage tank to manage peak wet weather flows will be perceived by the public as a measure the Municipality is taking towards resolving basement flooding issues. High Capital cost is likely to be less than pumped diversion, but higher than gravity diversion. Increased operational and maintenance requirements for new storage tank and SPS#3. Offline tank will likely require a pump. Limited potential for phasing. Large, lump-sum capital cost expected for the new underground storage tank to address existing issues at SPS#1. Storage site will not require acquisition of additional land adjacent to the lakeshore. Existing SPS#3 land parcel is owned by the Municipality. Limited opportunity to share costs with the development community. No external funding available for a storage facility. High capital cost and increase in O&M. Would defer/minimize system upgrades at SPS#1 only; strategy may still trigger upgrades within the collection system. Medium Permits and approvals from Municipality and from Grey Sauble Conservation Authority are required for storage tank and SPS#3. Permit from Grey Sauble Conservation Authority may be required for SPS#3 given proximity to environmental protection area at Elm St and Dawson St. New site required for SPS#3 (same for both strategies).	Potential site for SPS#4 could be within residential neighbourhood (Frank St and Gould St) or Frank St and Claude St. No additional site for SPS#4 could be within residential neighbourhood (Frank St and Gould St) or Frank St and Claude St. No additional site for SPS#4 required if gravity diversion is possible. Medium Medium If pumped diversion: Capital cost is likely to be higher than storage tank and gravity diversion. If gravity diversion: Capital cost is likely to be higher than pumped diversion and storage tank. Increased operational and maintenance requirements for pump station(s). Limited potential for cost phasing, as SPS#3 and/or SPS#4 will likely need to be in place to divert flows away from SPS#1. Land acquisition will be required for new SPS#3 and/or SPS#4. SPS#3 will divert west area flows and service the South Lands development as well, meaning increased opportunity for cost sharing. Opportunity to utilize funding granted by the Province for a pump station on Gould Street, however there is limited ability to utilize unding for a gravity diversion that resolves the same issues. If pumped diversion: high capital cost and significant increase in O&M. If gravity diversion: medium capital cost and marginal increase in O&M. Either diversions: medium capital cost and marginal increase in O&M. Either diversions: could defer/minimize system upgrades. Medium Permits and approvals from Municipality and Grey Sauble Conservation Authority are required for p SPS#3 and SPS#4 (if pumped diversion). Permit from Grey Sauble Conservation Authority may be required for SPS#3 given proximity to environmenta protection area at Elim St and Dawson St. New site required for SPS#3 (same for both strategies).
Cultural Financial Sub-Score - Financial	Capital Cost Operational Cost Cost Phasing Property Purchase Cost Sharing Opportunities Deferral of other upgrades? Stakeholders Permits and approvals	New storage tank to manage peak wet weather flows will be perceived by the public as a measure the Municipality is taking towards resolving basement flooding issues. High Capital cost is likely to be less than pumped diversion, but higher than gravity diversion. Increased operational and maintenance requirements for new storage tank and SPS#3. Offline tank will likely require a pump. Limited potential for phasing. Large, lump-sum capital cost expected for the new underground storage tank to address existing issues at SPS#1. Storage site will not require acquisition of additional land adjacent to the lakeshore. Existing SPS#3 land parcel is owned by the Municipality. Limited opportunity to share costs with the development community. No external funding available for a storage facility. High capital cost and increase in O&M. Would defer/minimize system upgrades at SPS#1 only; strategy may still trigger upgrades within the collection system. Medium Permits and approvals from Municipality and from Grey Sauble Conservation Authority are required for storage tank and SPS#3. Permit from Grey Sauble Conservation Authority may be required for SPS#3 given proximity to environmental protection area at Elm St and Dawson St. New site required for SPS#3 (same for both strategies). Underground storage tank will not require acquisition of additional land. There is site availability under the	Potential site for SPS#4 could be within residential neighbourhood (Frank St and Gould St) or Frank St and Claude St. No additional site for SPS#4 could be within residential neighbourhood (Frank St and Gould St) or Frank St and Claude St. No additional site for SPS#4 required if gravity diversion is possible. Medium

OVERALL RATING	Screened Out	Carried Forward



WIARTON WATER, WASTEWATER AND STORMWATER MASTER SERVICING PLAN WASTEWATER EVALUATION (LONG LIST SERVICING CONCEPTS)



Wiarton Water & Wastewater Master Plan - Long List Servicing Concepts Evaluation Table

Concept No.	Concept Description	Advantages	Disadvantages	Rating	Carried Forward / Screened Out
General Concepts					
1	Do Nothing	Does not incur capital costs. No social/economic/environmental disruptions due to infrastructure construction.	Does not meet Problem/Opportunity Statement for Class EA. Does not achieve required levels of service to meet existing needs and future growth. Does not address issues with existing condition of infrastructure. Potential social/economic/environmental disruptions due to lack of servicing.	Low	Screened Out
2	Limit Community Growth	Reduces extent of upgrades required in system. Reduces potential for social/economic/environmental disruptions due to infrastructure construction. Reduces capital costs incurred from infrastructure construction.	Does not meet Problem/Opportunity Statement for Class EA. Not consistent with the Town's Official Plan community vision. Does not achieve Town's planning projections.	Low	Screened Out
CONCEPT 3 - Increase Conv	veyance Capacity Throughout the Existing	g System			
CONCEPT 3A	Connect SPS#3 to SPS#1 (New Forcemain and Gravity Sewer Upgrades)	reducing potential need for new easements or property acquisition.	- Concept relies on moving flows from the south down through the system towards Colpoy's Bay causing a greater impact to the existing system compared to Concepts 3B and 3C. - Does not alleviate capacity to SPS#1. - Requires upgrading of existing capacity at SPS#1 and twinning of existing forcemain along Taylor St. - Conveyance upgrades to SPS#1 could require extensive upgrades on Gould St, Frank St and Berford St, increasing the potential for socio/economic impacts during construction. - Length of forcemain to SPS#1 is longer than to SPS#2, thereby increasing costs compared to Concepts 3B and 3C.	Low	Screened Out
CONCEPT 3B	Connect SPS#3 to SPS#2 (New Forcemain and Gravity Sewer)	- Provides relief to SPS#1, by diverting flows that currently drain to SPS#1 to SPS#2, however not enought to offset need to upgrade SPS#1. - Provides a more direct route to the WWTP. Length of forcemain to SPS#2 is shorter than to SPS#1 thereby reducing costs. - Causes a minimal impact to the existing system compared to Concept 3A. - Majority of construction work will be contained to minor local roads (e.g. Elm St), thereby minimizing potential disruption to traffic and local businesses.	 SPS#1 still requires additional capacity to address existing issues and improve existing level of service. Increased pump capacity at SPS#1 will require upgrading the forcemain to create a direct connection to the WWTP (bypassing SPS#2). Reduced potential for socio-economic impacts during construction compared to Concept 3A. 	Medium	Screened Out
CONCEPT 3C	Connect SPS#3 to WWTP (Direct Forcemain)	Provides relief to SPS#1, by diverting flows that currently drain to SPS#1 to SPS#2. - Provides a more direct route to the WWTP Length of forcemain to WWTP is shorter than to SPS#1 Causes a minimal impact to the existing system compared to Concept 3A Majority of construction work will be contained to minor local roads (e.g. Elm St), thereby minimizing potential disruption to traffic and local businesses.	- SPS#1 still requires additional capacity to address existing issues and improve existing level of service. - Gravity Sewer to WWTP is not possible due to topographic constraints; as such, a direct forcemain would be required from SPS#3 to WWTP. - Does not maximize use of existing infrastructure capacity at SPS#2. - Reduced potential for socio-economic impacts during construction compared to Concept 3A.	Medium	Screened Out
CONCEPT 4 - Provide High	Flow Storage Capacity within the Existin	ng System			
CONCEPT 4A	Connect SPS#3 to SPS#1 (New Forcemain and Gravity Sewer Upgrades)	- The use of storage at SPS#1 provides opportunities to manage peak wet weather flows within the system Storage facility is intended to improve existing hydraulic level of service (i.e. reduce overflows and basement flooding) Does not require new infrastructure along new alignments.	- Concept relies on moving flows from the south down through the system towards Colpoy's Bay causing a greater impact to the existing system compared to Concepts 4B and 4C. - New storage facility at SPS#1 will incur additional capital costs and maintenance. - Conveyance upgrades to SPS#1 could require extensive upgrades on Gould St, Frank St and Berford St, increasing the potential for socio/economic impacts during construction. - Length of forcemain to SPS#1 is longer than to SPS#2, thereby increasing costs compared to Concepts 4B and 4C. - Depending on size of storage facility, additional land may need to be acquired.	Low	Screened Out
CONCEPT 4B	Connect SPS#3 to SPS#2 (New Forcemain and Gravity Sewer)	- The use of storage at SPS#1 provides opportunities to manage peak wet weather flows within the system Storage facility is intended to improve existing hydraulic level of service (i.e. reduce overflows and basement flooding) Provides relief to SPS#1, by diverting flows that currently drain to SPS#1 to SPS#2 Provides a more direct route to the WWTP. Length of forcemain to SPS#2 is shorter than to SPS#1 Does not involve upgrades in the downtown area.	New storage facility at SPS#1 will incur additional capital costs and maintenance. Depending on size of storage facility, additional land may need to be acquired. Reduced potential for socio-economic impacts during construction compared to Concept 4A.	High	Carried Forward
CONCEPT 4C	Connect SPS#3 to WWTP (Direct Forcemain)	- The use of storage at SPS#1 provides opportunities to manage peak wet weather flows within the system Storage facility is intended to improve existing hydraulic level of service (i.e. reduce overflows and basement flooding) Provides relief to SPS#1, by diverting flows that currently drain to SPS#1 to SPS#2 Provides a more direct route to the WWTP Length of forcemain to WWTP is shorter than to SPS#1 Does not involve upgrades in the downtown area.	New storage facility at SPS#1 will incur additional capital costs and maintenance. Does not maximize use of existing infrastructure capacity at SPS#2. Gravity Sewer to WWTP is not possible; as such, a direct forcemain would be required from SPS#3 to WWTP. Depending on size of storage facility, additional land may need to be acquired. Reduced potential for socio-economic impacts during construction compared to Concept 4A.	Medium	Screened Out
CONCEPT 5 – Divert West A	area Flows away from SPS#1	- Provides relief to SPS#1, by diverting west area flows that currently drain to	- Requires significant new infrastructure to overcome topographic constraints: 2		
CONCEPT 5A	Connect SPS#3 to SPS#2 (Divert West Area Flows to SPS#2 via SPS#4)	SPS#1 to SPS#2. - West area diversion requires a new SPS#4 to overcome topographic constraints; depending on stiting of SPS#4, there is a potential to divert additional flows in the southwest, including Gould St and south of Elm St. - Larger diversion to SPS#2 means there is a greater positive impact at SPS#1 and negates the need to construct new storage / upgrade pumps at SPS#1.	pumping stations (SPS#3 and SPS#4), 2 forcemains.	Medium	Carried Forward
CONCEPT 5B	Connect SPS#3 to SPS#2 (Divert West Area Flows to SPS#3 by Gravity Sewer)	Provides relief to SPS#1, by diverting flows that currently drain to SPS#1 to SPS#3 and then to SPS#2. - Diversion of west area flows from Frank/Gould to SPS#3 is sufficient to negate need to construct new storage / upgrade pumps at SPS#1. - West area diversion can be achieved by gravity to SPS#3 - preferable to pumping. - Leverages the capacity at future SPS#3. - There is potential to cost share infrastructure at associated with SPS#3 with developers of the South Lands.	- Gravity sewer to divert west area flows could have deep sections on Frank St, between Gould St and Dawson St There is a potential that the gravity sewer could be as costly as new SPS#4.	High	Carried Forward
CONCEPT 5C	Connect SPS#3 to WWTP (Divert West Area Flows to WWTP via SPS#3)	- Concept is similar to 3B, but rather than discharging to SPS#2 the west area flows discharge directly to the WWTP via direct forcemain Provides relief to SPS#1, by diverting west area flows that currently drain to SPS#1 to SPS#3 and then directly to WWTP Diversion of west area flows from Frank/Gould to SPS#3 is sufficient to negate need to construct new storage? upgrade pumps at SPS#1 West area diversion can be achieved by gravity to SPS#3 - preferable to pumping Leverages the capacity at future SPS#3 There is potential to cost share infrastructure at associated with SPS#3 with developers of the South Lands.	Does not maximize use of existing infrastructure capacity at SPS#2. Gravity sewer to divert west area flows could have deep sections on Frank St, between Gould St and Dawson St. There is a potential that the gravity sewer could be as costly as new SPS#4.	Low	Screened Out
CONCEPT 6 – Modified Trea	atment Systems	- Addresses existing issues with overflows at SPS#1.	- Increase in treatment asset base not favourable.		
CONCEPT 6A	Provide on-site treatment at SPS#1 (septic tank)		 Increased operations and maintenance issues. Potential for environmental impacts associated with septic tank. Increased traffic by haulers pumping and hauling the wastewater/septage to receiving facilities. 	Low	Screened Out
CONCEPT 6B	Relocate wastewater treatment plant to shoreline	-Addresses existing issues with overflows at SP\$#1New WWTP closer to shoreline could eliminate the need for SP\$#2, as most of the Town's catchment area would be serviceable by gravity to SP\$#1 or directly to the new WWTP.	- A new WWTP requires significant capital investment and does not leverage existing capital upgrades at the existing WWTP Potential site along shoreline to conflict with existing use as recreational and open space; high potential for public opposition to landuse Increased operations and maintenance for staff Does not maximize use of existing infrastructure.	Low	Screened Out
CONCEPT 7 - Point Source	Reduction Sources	Leucrope information obtained through 1-8	Inflow and Infiltration Program will require extension and		
CONCEPT 7A	Inflow & Infiltration Reduction	- Leverages information obtained through past inflow/infiltration studies and reports. - Would focus on reducing extraneous flows in priority areas with a history of basement flooding. - Tactical abatement of inflow/infiltration sources has potential to significantly improve existing level of service. - Positive public perception as citizens are engaged in the process. - Potential for high return on investment in the long term.	Inflow and Infiltration Program will require extensive pre- and post-flow monitoring program to track progress in achieving wastewater flow reduction targets Given that majority of I&I sources originate from private property, there will need to be extensive public education and outreach Could incur high capital costs depending on study area and scope of work; Town will need to explore alternative funding mechanisms in order to manage reasonable costs.	High	Carried Forward
CONCEPT 7B	Water Conservation	Potential to reduce existing per capita dry weather flows, which may delay the need for capital upgrades in both the water and wastewater systems. Supports Bill 72, Water Opportunities and Water Conservation Act, 2010.	 - Dry weather flow generation is not the primary culprit in triggering the capacity issues, therefore there is limited return on investment. - Water Conservation Program will require public education and monitoring in order to track progres in achieveing water conservation goals. - Enforcing reduced water use with the use of outdoor water use by-laws would be required - may face negative public reaction. 	Medium	Screened Out

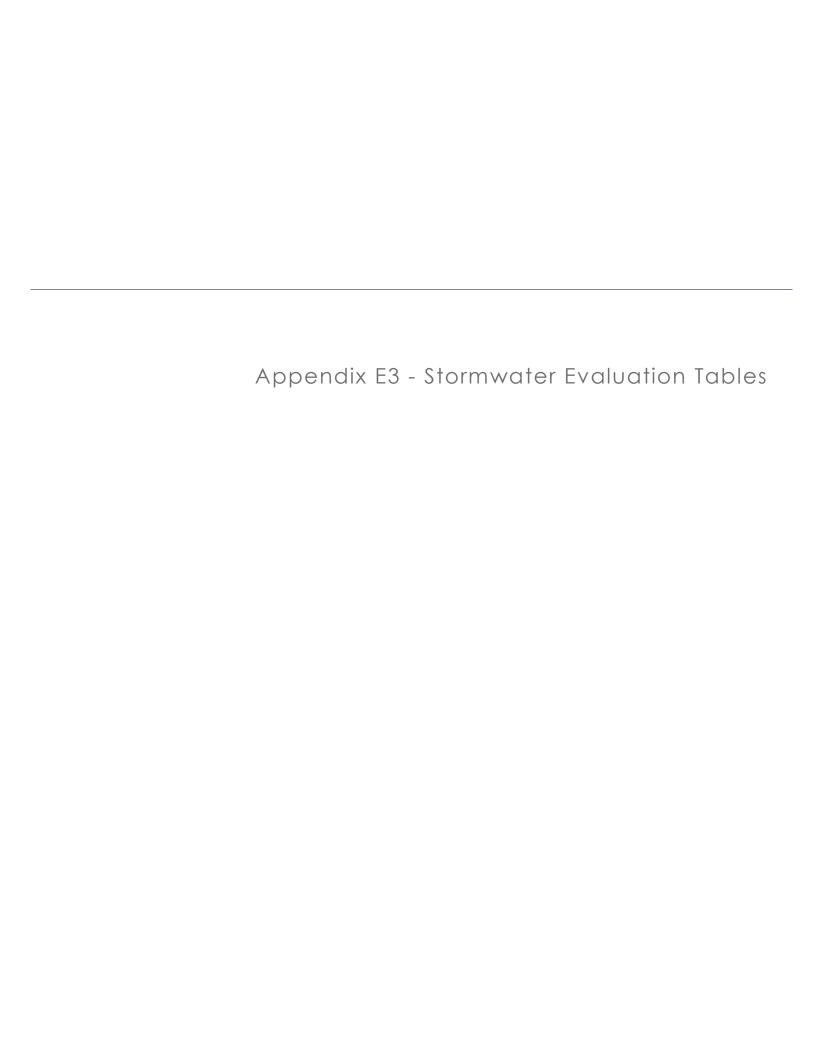


WIARTON WATER, WASTEWATER AND STORMWATER MASTER SERVICING PLAN WASTEWATER EVALUATION ALTERNATIVE SERVICING STRATEGIES ALIGNMENTS



ALTERNATIVES		Divert West Area	a flows by Gravity				
	Alternative 1a	Alternative 1b Divert West Area flows to SPS#2 via Direct Forcemain from SPS#4 (on Frank St). Convey	Alternative 1c	Alternative 1d	Alternative 1e	Alternative 2a	Alternative 2b Divert West Area flows southwest via Gravity on Frank St and Dawson St to SPS#3,
Description	Divert West Area flows to SPS#2 via Direct Forcemain from SPS#4 (on Frank St), Convey South Lands to SPS#2 via Forcemain and Gravity Sewer from SPS#3	Direct West Area flows to SHS#2 via Direct Forcemain from SHS#4 (on Frank St), Convey South Lands to SPS#4 via Forcemain and Gravity Sewer from SPS#3	Divert West Area flows to SPS#3 via Direct Forcemain from SPS#4 (on Gould St), Convey South Lands and West Area to SPS#2 via Forcemain and Gravity Sewer from SPS#3	Divert West Area flows to SPS#3 via Direct Forcemain from SPS#4 (on Frank St), Convey South Lands and West Area to SPS#2 via Forcemain and Gravity Sewer from SPS#3	Divert West Area flows to Elm Street Gravity Sewer via SPS#4, Convey South Lands and West Area to SPS#2 via Forcemain and Gravity Sewer from SPS#3	Divert West Area flows southeast via Gravity on Frank St and Taylor St to SPS#2, Convey South Lands to SPS#2 via Forcemain and Gravity Sewer from SPS#3	Divert West Area flows southwest via Gravity on Frank St and Dawson St to SPS#3, Convey South Lands and West Area to SPS#2 via Forcemain and Gravity Sewer from SPS#3
Environmental	and would require greater mitigative requirements through design and implementation, as	and would require greater mitigative requirements through design and implementation, as	and would require greater mitigative requirements through design and implementation, as	and would require greater mitigative requirements through design and implementation, as	The proposed SPS#3 and its outfall may have greater potential for environmental impact and would require greater mitigative requirements through design and implementation, as othere is an environmentally protected area in the area of Devson St and Elm St adjacent to the potential site for SPS#3 (common to all alternatives).	and would require greater mitigative requirements through design and implementation, as	and would require greater mitigative requirements through design and implementation, as
	- Greater energy use and greenhouse gas production associated with one (1) additional pump station, compared to Alternative 2.	- Greater energy use and greenhouse gas production associated with one (1) additional pump station, compared to Alternative 2.	- Greater energy use and greenhouse gas production associated with one (1) additional pump station, compared to Alternative 2.	- Greater energy use and greenhouse gas production associated with one (1) additional pump station, compared to Alternative 2.	- Greater energy use and greenhouse gas production associated with one (1) additional pump station, compared to Alternative 2.	- Less energy use and greenhouse gas production with gravity diversion, compared to Alternative 1.	- Less energy use and greenhouse gas production with gravity diversion, compared to Alternative 1.
	 - All linear infrastructure upgrades within existing road right of way and alignment routes, reducing potential environmental impact associated with acquiring new easements. 	 -All linear infrastructure upgrades within existing road right of way and alignment routes, reducing potential environmental impact associated with acquiring new easements. 	 - Alignment on Dawson St, from Mary St to Elm St, is not an existing road right of way and contains some vegetation. It does appear that there is an existing easement. Future road plans to be confirmed. 	 Alignment on Dawson St, from Mary St to Elm St, is not an existing road right of way and contains some vegetation. It does appear that there is an existing easement. Future road plans to be confirmed. 	 - All linear infrastructure upgrades within existing road right of way and alignment routes, reducing potential environmental impact associated with acquiring new easements. 	 - All linear infrastructure upgrades within existing road right of way and alignment routes, reducing potential environmental impact associated with acquiring new easements. 	 Alignment on Dawson St, from Mary St to Elm St, is not an existing road right of way and contains some vegetation. It does appear that there is an existing easement. Future road plans to be confirmed.
	 - Alignment on Elm St, between Brown St and Taylor St crosses a regulated area under the Regulation 151/06, Development, Interference with Wetlands and Alteration to Shorelines and Watercourses. 	 The only alternative with an alignment (on Brown St) that avoids crossing a regulated area on Elm St under the Regulation 151/06, Development, Interference with Wetlands and Alteration to Shorelines and Watercourses. 	 Alignment on Elm St, between Brown St and Taylor St crosses a regulated area under the Regulation 151/06, Development, Interference with Wetlands and Alteration to Shorelines and Watercourses. 	 - Alignment on Elm St, between Brown St and Taylor St crosses a regulated area under the Regulation 151/06, Development, Interference with Wetlands and Alteration to Shorelines and Watercourses. 	 Alignment on Elm St, between Brown St and Taylor St crosses a regulated area under the Regulation 151/06, Development, Interference with Wetlands and Alteration to Shorelines and Watercourses. 	 Alignment on Elm St, between Brown St and Taylor St crosses a regulated area under the Regulation 151/06, Development, Interference with Wetlands and Alteration to Shorelines and Watercourses. 	 Alignment on Elm St, between Brown St and Taylor St crosses a regulated area under the Regulation 151/06, Development, Interference with Wetlands and Alteration to Shorelines and Watercourses.
Sub-Score Environmental	Low	Medium	Low	Low	Low	High	High
Technical	- Greater increase in operating & maintenance requirements, compared to Alternative 2	- Greater increase in operating & maintenance requirements, compared to Alternative 2	- Greater increase in operating & maintenance requirements, compared to Alternative 2	- Greater increase in operating & maintenance requirements, compared to Alternative 2	- Greater increase in operating & maintenance requirements, compared to Alternative 2	- Less of an increase in operating & maintenance requirements, compared to Alternative 1	- Less of an increase in operating & maintenance requirements, compared to Alternative 1
	(gravity diversion) Greater lifecycle costs compared to Alternative 2.	(gravity diversion). - Greater lifecycle costs compared to Alternative 2.	(gravity diversion) Greater lifecycle costs compared to Alternative 2.	(gravity diversion) Greater lifecycle costs compared to Alternative 2.	(gravity diversion). - Greater lifecycle costs compared to Alternative 2.	(pumped diversion) Less lifecycle cost compared to Alternative 1.	(pumped diversion) Less lifecycle cost compared to Alternative 1.
	- Alternative requires two (2) new pump stations. - Total Sewer Requirement - 2 28th. - Need to acquire one (1) more additional site compared to Alternative 2.	- Alternative requires two (2) new pump stations Total Sewer Requirement - 2 24km Need to acquire one (1) more additional site compared to Alternative 2.	- Alternative requires two (2) new pump stations Total Sewer Requirement - 1.88km Very Imitted space available for a new PS on Gould St Potential constructability issues for new PS on very narrow tot Need to acquire one (1) more additional site compared to Alternative 2 Leverages future planned capacity of SPS43.	- Alternative requires two (2) new pump stations. - Total Sewer Repuirement - 2 Altern - Need to acquire one (1) more additional site compared to Alternative 2. - Leverages future planned capacity of SPS#3.	- Alternative requires two (2) new pump stations Total Sewer Requirement + 198km Need to acquire one (1) more additional site compared to Atternative 2.	- Alternative requires one (1) new pump station Total Sewer Requirement - 2 28th - Gravity sewer to divert vest area flows will have deep sections (-7m) on Frank St, between Gould St and Dawon St Given the potential be encounter bedrock along the diversion route, a geotechnical investigation will need to be conducted Need to acquire one (1) less site compared to Alternative 1.	- Alternative requires one (1) new pump station Total Sewer Requirement - 1.54km Gravity sewer to divert west area flows will have deep sections (-7m) on Frank St, between Gould St and Deawon St Given the potential to encounter bedrock along the diversion route, a geotechnical investigation will need to be conducted Need to acquire one (1) less site compared to Alternative 1 Leverages future planned capacity of SFSR3.
	- Diversion is not dependent on construction of SPS#3.	- Diversion is not dependent on construction of SPS#3.	- Diversion is dependent on construction of SPS#3.	- Diversion is dependent on construction of SPS#3.	- Diversion is not dependent on construction of SPS#3.	- Diversion is not dependent on construction of SPS#3.	- Diversion is dependent on construction of SPS#3.
	- New SPS#4, Cap ~ 90 L/s (extended west area). - New SPS#3, Cap ~ 65 L/s (South Lands)	- New SPS#4, Cap ~ 145 L/s (extended west area + South Lands) - New SPS#3, Cap ~ 65 L/s (South Lands)	- New SPS#4, Cap ~ 80 L/s (west area) - New SPS#3, Cap ~ 145 L/s (west area + South Lands)	- New SPS#4, Cap ~ 90 L/s (extended west area). - New SPS#3, Cap ~ 155 L/s (extended west area + South Lands).	- New SPS#4, Cap ~ 90 L/s (extended west area) New SPS#3, Cap ~ 65 L/s (South Lands).	- New SPS#3, Cap ~ 65 L/s (South Lands).	- New SPS#3, Cap ~ 145 L/s (west area + South Lands).
	Connecting link at Highway 6 (Berford St) and Elm St. connecting link.	Connecting link at Highway 6 (Berford St) and Elm St. connecting link.	Connecting link at Highway 6 (Berford St) and Elm St. connecting link.	Connecting link at Highway 6 (Berford St) and Elm St. connecting link.	Connecting link at Highway 6 (Berford St) and Elm St. connecting link.	Connecting link at Highway 6 (Berford St) and Elm St. connecting link.	Connecting link at Highway 6 (Berford St) and Elm St. connecting link.
Sub-Score Technical Socio / Cultural	High	Medium	Low	High	High	High	High
SOCIO / Cultural	New site required for SPS#3 (common to all pumping alternatives). New site required for SPS#4. Exact locations determined through landuse planning approvals.	New site required for SPS#3 (common to all pumping alternatives). New site required for SPS#4. Exact locations determined through landuse planning approvals.	- New site required for SPS#3 (common to all strategies) New site required for SPS#4 - site on Gould St will present challenges Exact locations determined through landuse planning approvals.	New site required for SPS#3 (common to all pumping alternatives). New site required for SPS#4. Exact locations determined through landuse planning approvals.	New site required for SPS#3 (common to all pumping alternatives). New site required for SPS#4. Exact locations determined through landuse planning approvals.	- New site required for SPS#3 (common to all strategies). - Exact location determined through landuse planning approvals.	New site required for SPS#3 (common to all strategies). Exact location determined through landuse planning approvals.
	 Potential visual impact caused by SPS#3 and SPS#4. Opportunity to mitigate impacts through integrated community design. 	- Potential visual impact caused by SPS#3 and SPS#4. Opportunity to mitigate impacts through integrated community design.	- Potential visual impact caused by SPS#3 and SPS#4. Opportunity to mitigate impacts through integrated community design.	 Potential visual impact caused by SPS#3 and SPS#4. Opportunity to mitigate impacts through integrated community design. 	- Potential visual impact caused by SPS#3 and SPS#4. Opportunity to mitigate impacts through integrated community design.	Potential visual impact caused by SPS#3 for future South Lands development. Opportunity to mitigate impacts through integrated community design.	Potential visual impact caused by SPS#3 for future South Lands development. Opportunity to mitigate impacts through integrated community design.
	- Potential noise, dust and traffic impacts due to construction on: Frank St, Taylor St and Elm St Use of Elm St minimizes impacts as it is a local road and carries less traffic.	- Potential noise, dust and traffic impacts due to construction on: Frank St, Berford St, Taylor St and Elm St (west of Berford St). - Use of Berford St increases potential disruption as it is a major road and carries more traffic than Alternative 1a.	- Potential temporary disruption to traffic and local businesses due to construction on: Frank St, Dawson St and Elm St.	 Potential temporary disruption to traffic and local businesses due to construction on: Frank St, Dawson St and Elm St. 	Potential temporary disruption to traffic and local businesses due to construction on: Frank St, Brown St and Elm St but most of these streets are considered local.	 Potential temporary disruption to traffic and local businesses due to construction on Frank St, Taylor St, and Elm St. 	 - Majority of construction work will be contained to minor local roads (e.g. Gould St, Frank St, Dawson St, Elm St), thereby minimizing potentiall temporary disruption to traffic and local businesses.
	 Some potential for socioleconomic impact associated with a New PS in a residential neighbourhood, but is favourable to a site on Gould St. Potential site on Frank St is located on an empty corner lot and is not directly adjacent to existing homes. 	 Some potential for socio/economic impact associated with a New PS in a residential neighbourhood, but is favourable to a site on Gould St. Potential site on Frank St is located on an empty corner lot and is not directly adjacent to existing homes. 	- High potential for socioleconomic impact associated with a New PS on Gould St north of Frank St, in between two existing homes.	neighbourhood, but is favourable to a site on Gould St.	 Some potential for socio/economic impact associated with a New PS in a residential neighbourhood, but is favourable to a site on Gould St. Potential site on Frank St is located on an empty corner lot and is not directly adjacent to existing homes. 		
Sub-Score Socio / Cultural	Medium	Medium	Low	High	High	Low	High
Financial FINANCIAL COST	\$3.71 M	\$3.65 M	\$3.31 M	\$3.74 M	\$3.64 M	\$5.37 M	\$3.39 M
	Average cost compared to all the pumped diversion alternatives. Operation and Maintenance costs for SPS#4 will be more costly than Alternatives 2a and 2b.	Average cost compared to all the pumped diversion alternatives. Operation and Maintenance costs for SPS#4 will be more costly than Alternatives 2a and 2b.	ASJ-1 M Lowest cost of all the pumped diversion alternatives. Although cost difference between Alternative 1c and Alternative 2b is only \$85,000, Operation and Maintenance costs for SPS#4 will be more costly than Alternative 2b.		SJOW W Average cost compared to all the pumped diversion alternatives. Operation and Maintenance costs for SPS#4 will be more costly than Alternatives 2a and 2b.	Highest cost of all the pumped / gravity diversion alternatives due to construction	S3.39 W Lowest cost of the gravity diversion alternatives. Lower Operation and Maintenance costs compared to Alternatives 1a through 1e.
Sub-Score Financial	Medium	Medium	High	Medium	Medium	Low	High
Legal / Jurisdictional	Permits and approvals from Municipality are required for two (2) new pump stations. - Permit from Grey Sauble Conservation Authority may be required for SPS#3 given proximity to environmental protection area at Emits tand Dasson St. - Permits and approvals required from MOECC for Air Emissions (Certificate of Approval) and Permit to Take Water should contractor require developering the excavations.	-Permits and approvals from Municipality are required for two (2) new pump stations Permit from Grey Sauble Conservation Authority may be required for SPSR3 given proximity to environmental protection area at Emits and Dasson St Permits and approvals required from MOECC for Air Emissions (Certificate of Approval) and Permit to Take Water should contractor require dewatering the excavations.	-Permits and approvals from Municipality are required for two (2) new pump stations Permit from Grey Stable Conservation Authority may be required for SFS#3 given proximity to environmental protection area at Ein St and Dessen St Permits and approvals required from MOECC for Air Emissions (Certificate of Approval) and Permit to Take Water should contractor require devatering the excavations.	Permits and approvals from Municipality are required for two (2) new pump stations. - Permit from Grey Sauble Conservation Authority may be required for SPS#3 given poximity to environmental protection area at Ern St and Dasson St. - Permits and approvals required from MOECC for Air Emissions (Certificate of Approval) and Permit to Take Water should contractor require develoring the excavations.	-Permits and approvals from Municipality are required for two (2) new pump stations Permit from Grey Sauble Conservation Authority may be required for SPS83 given proximity to environmental protection area at Emits and Dasson St Permits and approvals required from MOECC for Air Emissions (Certificate of Approval) and Permit to Take Water should contractor require develoring the excavations.	-Permits and approvals from Municipality are required for one (1) new pump stationPermit from Grey Stablet Conservation Authority may be required for SFSHS given proximity to environmental protection area at Ein St and Dasson StPermit and approval required from MOECC for Alt Emissions (Certificate of Approval) and Permit to Take Water should contractor require devalening the excavation.	- Permits and approvals from Municipality are required for one (1) new pump station Permit from Grey Sauble Conservation Authority may be required for SPS#3 given proximity to environmental protection area at EIn St and Dasson St Permit and approval required from MOECC for Air Emissions (Certificate of Approval) and Permit to Take Water should contractor require develoring the excivation.
	in landuse changes.	in landuse changes.	this will be more challenging than the potential site at Frank St / Claude St.	in landuse changes.	Potential site (vacant lot) at southwest comer of Frank St / Claude St will require approvals in landuse changes.	Exact location determined through landuse planning approvals.	New site required for SPS#3 (common to all strategies). Exact location determined through landuse planning approvals.
			this will be more challenging than the potential site at Frank St / Claude St.		in landuse changes.	New site required for SPS#3 (common to all strategies). Exact location determined through landuse planning approvals. All linear infrastructure upgrades within existing road right of way and alignment routes, reducing potential need for new easements or property acquisition.	
Sub-Score Legal / Jurisdictional	in landuse changes. All linear infrastructure upgrades within existing road right of way and alignment routes, reducing potential need for new easements or property acquisition. Low	in landuse changes. All linear infrastructure upgrades within existing road right of way and alignment routes, reducing potential need for new easements or property acquisition. Low	this will be more challenging than the potential sile at Frank St / Claude St. Easement required for gravity sewer alignment on Dawson St, from Mary St to Elm St, as it is currently not an existing road right of way. LOW	in landuce changes. Easement required for gravity sewer alignment on Dawson St, from Mary St to Elm St, as is currently not an existing road right of way. LOW	in landuse changes. It All linear infrastructure upgrades within existing road right of way and alignment routes, reducing potential need for new easements or property acquisition. Low	Exact location determined through landuse planning approvals. All linear infrastructure upgrades within existing road right of way and alignment routes, reducing potential need for new easements or property acquisition. High	Exact location determined through landuse planning approvals. Easement required for gravity sewer alignment on Dawson St, from Mary St to Elm St, as it is currently not an existing road right of way. High
Sub-Score Legal /	in landuse changes. All linear infrastructure upgrades within existing road right of way and alignment routes, reducing potential need for new easements or properly acquisition.	in landuse changes. All linear infrastructure upgrades within existing road right of way and alignment routes, reducing potential need for new easements or properly acquisition.	this will be more challenging than the potential site at Frank St / Claude St. Easement required for gravity sewer alignment on Dawson St, from Mary St to Elm St, as it is currently not an existing road right of way. Low Strategy requires 2 new pump stations and forcemains - SPSIM will be need to service existing west area (on Gould St) only.	in landuse changes. Easement required for gravity sever alignment on Dawson St, from Mary St to Elm St, as is currently not an existing road right of way.	in landuse changes. It All linear infrastructure upgrades within existing road right of way and alignment routes, reducing potential need for new essements or properly acquisition.	 Exact location determined through landuse planning approvals. All linear infrastructure upgrades within existing road right of way and alignment routes, 	- Exact location determined through landuse planning approvals. Easement required for gravity sewer alignment on Dawson St, from Mary St to Elm St, as it is currently not an existing road right of way. High - Constructability and cost associated with gravity sewer in Gould St/Frank St area. - West area diversion can be achieved by gravity to SPS#3 - preferable to pumping. - Leverages the capacity at thure SPS#3.
Sub-Score Legal / Jurisdictional	in landuse changes. All linear infrastructure upgrades within existing road right of way and alignment routes, reducing potential need for new easements or properly acquisition. Low Strategy requires 2 new pump stations and forcemains - SPSF44 will be sized for existing west and south areas SPSF44 will be decided to service South Lands development (growth) only.	in landuse changes. All linear infrastructure upgrades within existing road right of way and alignment routes, reducing potential need for new easements or properly acquisition. Low Stralegy requires 2 new pump stations and forcemains - SPSS4 will be need to be larger than in Alternative 1st to service existing west and south areas in addition to South Lands development (growth) flows. - SPSS4 will be decidated to service South Lands development (growth) only.	this will be more challenging than the potential site af Frank St / Claude St. Easement required for gravity sewer alignment on Dawson St, from Mary St to Elm St, as it is currently not an existing road right of way. Low Strategy requires 2 new pump stations and forcemains - SPS44 will be need to service existing west area (on Gould St) only. - SPS45 will be need to service existing west area, South Lands development and existing areas south of Elm St.	in landuce changes. Easement required for gravity sewer alignment on Dawson St, from Mary St to Elm St, as is currently not an existing road right of way. Low Strategy requires 2 new pump stations and forcemains - SPS#4 will be need to service existing west area (on Frank St). - SPS#4 will be need to service existing west area, South Lands development and existing areas south of Elm St.	In landuse changes. It All linear infrastructure upgrades within existing road right of way and alignment routes, reducing potential need for new easements or property acquisition. Low Strategy requires 2 new pump stations and forcemains - SPSR4 will be need to service existing west area (on Frank St) SPSR4 will be need to service existing South Lands development.	- Exact Location determined through landuse planning approvals. All linear infrastructure upgrades within existing road right of way and alignment routes, reducing potential need for new easements or properly acquisition. High - Considered a more sustainable long term servicing strategy. - Gravity diversion to SPSAZ presents significant challenges with overcoming topographic constraints and may require sections of very deep sever. - No opportunity locat share infrastracture as with Alternative 2b, as it does not leverage	- Exact location determined through landuse planning approvals. Easement required for gravity sever alignment on Dawson St, from Mary St to Elm St, as it is currently not an existing road right of way. High - Constructability and cost associated with gravity sever in Gould St / Frank St area. - West area diversion can be achieved by gravity to SPS#3 - preferable to pumping. - Leverages the capacity at future SPS#3: - Opportunity to cost share infrastructure for SPS#3 with Southland developers.

2013 Water and Wastewater Master Plan







Long List Stormwater Servicing Concepts Evaluation Table

				Georgian Bay Catchment	Clavering Creek Catchment
ncept No.	Concept Description	Advantages	Disadvantages	Carried Forward/ Screened Out	Carried Forward/ Screened Out
neral Concepts					
CONCEPT 1	Do Nothing Growth proceeds without modification to the existing system or downstream receiving system (creek / bay).	 Does not incur capital costs. No social/economic/environmental disruptions due to infrastructure construction. No policy change or restrictions on development and/or private properties. No project implementation or ongoing management of new infrastructure. No existing/projected capacity issues in the Georgian Bay system. 	- Cannot be applied to all proposed developments Does not meet management requirements for the Clavering Creek Catchment Does not achieve required levels of service to meet existing needs and future growth (Georgian Bay Catchment) Does not address issues with existing condition of infrastructure Does not address increased runoff and water quality issues Potential social/economic/environmental disruptions due to lack of servicing.	Carried Forward	Screened out
CONCEPT 2	Limit Community Growth Limit community growth based on existing system capacity.	- Reduces extent of upgrades required in system Reduces potential for social/economic/environmental disruptions due to infrastructure construction Reduces capital costs incurred from infrastructure construction.	- Does not meet Problem/Opportunity Statement Not consistent with the Town's Official Plan community vision Does not achieve Town's planning projections Does not address issues with existing condition of infrastructure Does not address increased runoff and water quality issues.	Screened out	Screened out
ONCEPT 3 - Tradition	nal Management Concepts				
CONCEPT 3A		 All infrastructure upgrades within existing road right of way and alignment routes, reducing potential need for new easements or property acquisition. Provides flood protection to private property and addresses nuisance overland flooding (water ponding on properties). Traditional management infrastructure, is well understood and is straightforward to implement and manage. 	- Does not address increased runoff and water quality issues Does not address impacts to downstream receiving system (Clavering Creek) Lack of runoff control results in larger conveyance system infrastructure (storm sewer and ditches) Increases importance of "Major System" and increases potential of flooding during major storm events No existing/projected capacity issues in the Georgian Bay system, no new infrastructure required.	Screened out	Screened out
CONCEPT 3B	Utilize local detention facilities to manage peak runoff rates to existing levels. Detention facilities can be incorporated to provide additional volume control	- Detention facilities minimize peak runoff rates by storing storm flows when conveyance capacity is exceeded and releasing flows back to the system once sufficient capacity becomes available. This reduces / eliminates the need for downstream infrastructure upgrades Reduces importance of "Major System" and decreases potential of flooding during major storm event Runoff management addresses impacts to downstream receiving system Facilities can serve multiple functions and can provided additional volume and water quality management benefits Smaller detention facilities means construction and maintenance of each individual facility is simplified. Flexibility to construct either/both surface and sub-surface storage facilities Traditional management infrastructure, is well understood and is straightforward to implement and manage.	- Surface detention requires land acquisition and/or loss of developable land to accommodate detention facilities Sub-surface detention may be costly to implement May be difficult to implement within existing built areas Potential for a large number of facilities to address existing issues and planned development areas. Increases ongoing management and maintenance requirements Poor maintenance or design of storage facilities may result in adverse effects on downstream system (increase potential for system flooding) No existing/projected capacity issues in the Georgian Bay system, therefore no new infrastructure or downstream flow management is required for Georgian Bay outlets.	Screened out	Carried Forward
CONCEPT 3C	Detention Implement new infrastructure / upgrades to the conveyance system to convey peak runoff directly to end of pipe facility. Facilities to manage peak runoff	- Conveyance upgrades within existing road rights of way and alignment routes, reducing potential need for new easements or property acquisition. - Provides flood protection to private property and addresses nuisance overland flooding (water ponding on properties). Incorporates well with conveyance management. - Detention addresses impacts to downstream receiving system. - Detention facilities can serve multiple functions and can provide additional volume and water quality management benefits. - Smaller number of detention facilities reduces overall management and maintenance requirements. - Opportunities to optimize conveyance and detention infrastructure. - Larger detention facilities can be designed / managed as a public amenity. - Traditional management infrastructure, is well understood and is straightforward to implement and manage. - Greater cost is anticipated compared to Concept 3A or 3B as Concept incurs capital cost associated with conveyance and detention.	- Lack of upstream runoff control results in larger conveyance system infrastructure (storm sewer and ditches) Increases importance of "Major System" and increases potential of flooding during major storm events Larger end of pipe detention infrastructure presents less flexibility in placement and design Surface detention requires land acquisition and/or loss of developable land to accommodate detention infrastructure No existing/projected capacity issues in the Georgian Bay system, therefore no new infrastructure or downstream flow management is required for Georgian Bay outlets.	Screened out	Carried Forward
ONCEPT 4 - Low Imp	pact Development Concepts				
CONCEPT 4A	Policy and Management Policies and management principles to assist in the management of stormwater runoff.	- Can be effective low cost alternative Supports other management approaches.	 Not a stand-alone solution. New policies will require public education and monitoring in order to track progress and compliance. Enforcement and compliance inspection of new by-laws would be required - potential for negative public reaction. 	Carried Forward	Carried Forward
CONCEPT 4B	Low Impact Development Utilize combination of decentralized LID facilities and non-structural modification/retrofits to existing sites (downspout and sump-pump disconnection, addition of amended soils, reduce development footprint etc.) to manage peak runoff rates. LID provides additional volume control through source reduction and water quality management benefit.	- Non-Structural measures can reduce runoff rates, reducing both detention and conveyance infrastructure needs. - Onsite LID facilities minimize peak runoff rates reducing downstream infrastructure requirements flows to the conveyance system. - Reduces importance of "Major System" and can decrease potential of flooding during major storm event. - Runoff management addresses impacts to downstream receiving system. - LID Facilities can serve multiple function and can provided additional volume and water quality management benefits. - Flexibility with type, configuration, and location of LID facilities. - Provides closest match to emulating the natural hydrologic cycle.	- May be difficult to implement within existing built areas Potential for a large number of facilities to address existing issues and planned development areas. Increases ongoing management and maintenance requirements Poor maintenance or design of storage facilities may result in adverse effects on downstream system (increase potential for system flooding) No existing/projected capacity issues in the Georgian Bay system, therefore no new infrastructure or downstream flow management is required for Georgian Bay outlets LID facilities can potentially be more complex to manage and maintain, increasing overall management and maintenance costs LID facilities can be more expensive to construct when compared to traditional management systems (Greenfield development).	Carried Forward	Carried Forward





$\underline{\textbf{Short List Stormwater Management Alternatives Evaluation Table - Georgian Bay Catchment}}$

Evaluation Criteria		Strategy 1 - Do Nothing / Implement Low Impact Development (LID) Policy and Management	Strategy 2 - Development Specific Onsite Low Impact Development (LID)	
		CONCEPT 4B - Low Impact Development - Policy and Management	CONCEPT 4A - Low Impact Development - Development Specific Onsite LID	
Description		CONCEPT 1 - Do Nothing Voluntary onsite management incentive program: roof leader disconnection, rain barrels and rain	Onsite control for New Development - Post-Development Peak Flow matches Pre-Development Peak	
	Onsite Controls	gardens.	Flow. Voluntary onsite management incentive program for existing properties: roof leader disconnection, rain barrels and rain gardens.	
	Public Facilities/Controls	No new facilities required.	No new facilities required.	
	Public Conveyance Water Quality Controls	No conveyance upgrades. Downstream system has sufficient capacity to accommodate growth. Water quality controls provided voluntary onsite management incentive program.	No conveyance upgrades. Downstream system has sufficient capacity to accommodate growth. Water quality controls provided by onsite LID facilities.	
Environmental	Trace quality controls			
	Water Quality Impacts	General water quality improvements achieved through voluntary measures. No water quality improvement/control required for new development areas.	General water quality improvements achieved through voluntary measures. Onsite LID provide water quality control for new development areas.	
	Habitat	 No conflicts or crossings of existing environmental features. No new stormwater outlets proposed. 	 No conflicts or crossings of existing environmental features. No new stormwater outlets proposed. 	
	Other Environmental Issues	- No new infrastructure proposed.	- No new infrastructure outside development areas is proposed.	
Sub-Score - Environmental		Medium	High	
Technical				
	Technical Justification	 No existing/projected capacity issues in the Georgian Bay system; no conveyance or storage facilities required. 	 No existing/projected capacity issues in the Georgian Bay system; no conveyance or storage facilities required. Onsite LID used to maintain existing system flows. 	
	Site Availability	 No land acquisition required; no new facilities & voluntary measures to be accommodated on existing properties. 	 No land acquisition required; Onsite facilities to be accommodated with proposed development areas & voluntary measures to be accommodated on existing properties. 	
	Other Factors	- Simple to implement; no new public infrastructure	- Requires new policies/by-law to require onsite management - Allows for town wide uniform stormwater management objectives	
	Utilization of Available System Capacity	- Utilizes existing system capacity - Increase peak flows to the system; increases risk of system flooding relative to Strategy 2	- Onsite control used to reduce impacts to system; reduces risk of system flooding relative to Strategy 1	
	System Flexibility	- Limits flexibility to manage potential impact of climate change relative to Strategy 2	- Increases flexibility to manage potential impact of climate change relative to Strategy 1	
	Beyond 2029	- Voluntary measures may provide additional capacity to accommodate post 2029 growth	- Onsite measure limit system impacts. Post 2029 growth to follow similar requirements.	
Sub-Score - Technical		Low	High	
Socio / Cultural	Environmental Issues	- No new public infrastructure construction	No new public infrastructure construction; onsite LID will be constructed as part of new development sites	
	(Noise, Dust, Aesthetics etc.)	The new years initiate details constituted.	To her public initiastructure constituction, onsite 215 mill be constitucted as part of new development sites	
	Community Issues	 New policies will require public education and monitoring in order to track progress Voluntary application will mitigate negative perception related to inspection and enforcement New voluntary measures will be perceived by the public as a measure the municipality is taking help improve the environment 	New policies will require public education and monitoring in order to track progress Voluntary application will mitigate negative perception related to inspection and enforcement New voluntary measures will be perceived by the public as a measure the municipality is taking help improve the environment	
	Land Use	- Voluntary measures not expected to impact existing landuse	Voluntary measures not expected to impact existing landuse LID measures expected to be accommodated within existing require greenspace and/or parking area requirements and are not anticipated to reduce total developable area	
Sub-Score - Socio / Cultural		High	High	
Financial				
	Capital Cost	- Lowest total cost strategy (Town and developers).	No additional cost to the Town; expected to increase development cost relative to strategy 1	
	Operational Cost	- No increase in operational cost.	 Increase inspection and enforcements efforts for the Town Potential for ongoing maintenance cost to private property owners for onsite LID facilities 	
	Property Purchase	- Voluntary measures will be accommodated on existing properties.	Onsite LID to be accommodated with existing development site, and will be requirement of individual developers Voluntary measures will be accommodated on existing properties	
	Deferral of Other Upgrades	 No upgrades required. Voluntary measures may provide additional capacity to accommodate post 2029 growth. 	No upgrades required Onsite measure limit system impacts. Post 2029 growth to follow similar requirements.	
	Cost Sharing Opportunities	Cost of voluntary measures to be assumed by private property owners Town may offer incentives to increase adoption of voluntary measures.	Onsite LID cost to be developer responsibility Cost of voluntary measures to be assumed by private property owners Town may offer incentives to increase adoption of voluntary measures.	
Sub-Score - Financial		High	Medium	
Legal / Jurisdictional		Public consultation and Policulby Journal of serviced	Public accoultation and Policythy Jour undets required	
	Stakeholders	- Public consultation and Policy/by-laws update required	- Public consultation and Policy/by-laws update required	
	Permits and Approvals	 - Municipal inspection of voluntary measures may be required if incentive program is implemented 	Municipal inspection of voluntary measures may be required if incentive program is implemented Municipal review and inspection of onsite LID required	
	Land	- Will not require land acquisition	- Will not require land acquisition	
	System Management and Enforcement	Management strategy not depended on voluntary measures Long-term sustained maintenance of facilities required to maintain performance and manage risk Lack of Town ownership of all management strategy components increases potential that private facilities are not maintained	Long-term sustained maintenance of facilities required to maintain performance and manage risk Lack of Town ownership of all management strategy components increases potential that requirements are not provided through private facilities	
Sub-Score - Legal / Jurisdictional		Low	Medium	
OVERALL RATING		Medium	High	

	OVERALL RATING		Medium	High
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Short List Stormwater Servicing Strategies Evaluation Table - Clavering Creek Catchment

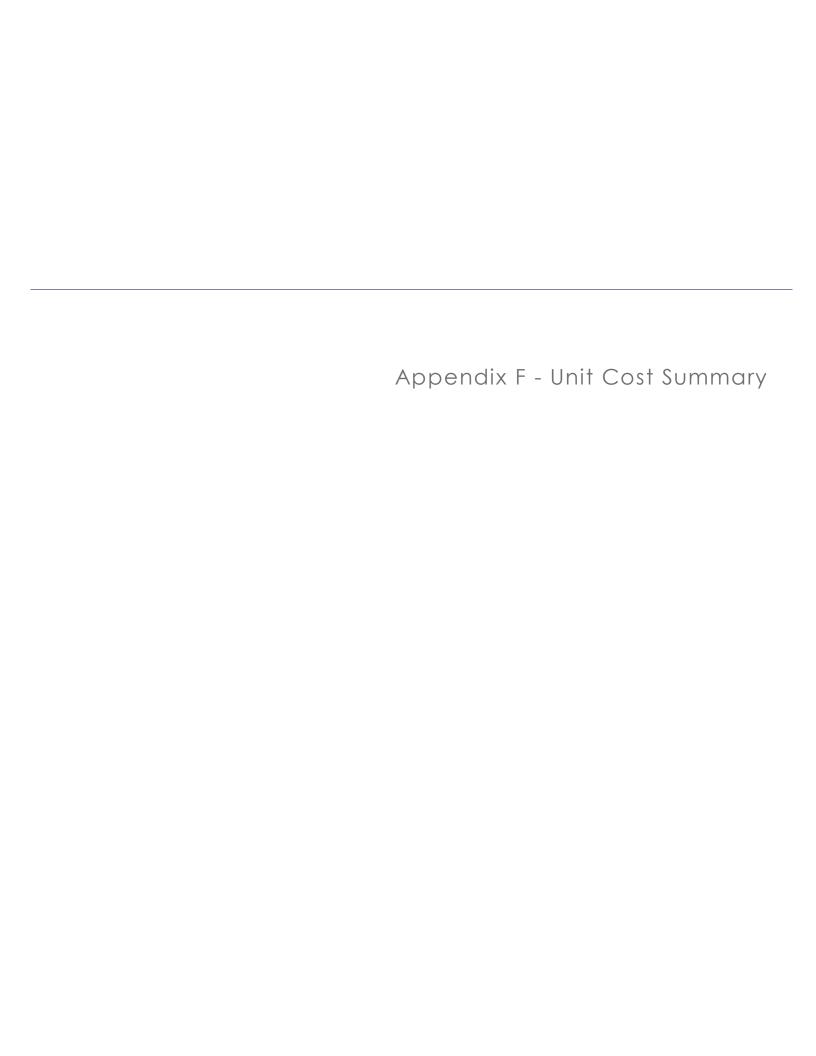
		Strategy 1a - Individual Detention Facilities	Strategy 1b - Localized End of Pipe Detention Facilities	Strategy 1c - End of Pipe Detention & Erosion Enhancements	Strategy 2 - Inline Detention	Strategy 3a - High LID Distributed	Strategy 3b - Moderate LID Incorporated within Right of Way	Strategy 4 - Hybrid Localized End of Pipe & Inline Storage
	Onsite Controls	Voluntary onsite management incentive program: roof leader disconnection, rain barrels and rain gardens.	Voluntary onsite management incentive program: roof leader disconnection, rain barrels and rain gardens.	Voluntary onsite management incentive program: roof leader disconnection, rain barrels and rain gardens.	Voluntary onsite management incentive program: roof leader disconnection, rain barrels and rain gardens. For new development areas; end of pipe water quality control facility	Voluntary onsite management incentive program: roof leader disconnection, rain barrels and rain gardens. Onsite control for New Development - Post-Development Peak Flow matches Pre-Development Peak Flow	Voluntary onsite management incentive program: roof leader disconnection, rain barrels and rain gardens.	Voluntary onsite management incentive program: roof leader disconnection, rain barrels and rain gardens. For new development areas; end of pipe water quality control facility
	Public Facilities/Controls	Utilizes onsite detention ponds for peak flow control and water quality management before discharging to existing stormwater system.	existing creeks	Utilizes a single centralized detention pond for peak flow control and water quality management before discharging to existing creeks. Post-Development Peak Flow matches Pre-Development Peak Flow	tanks) for peak flow control management before discharging to	No public facilities; control achieved through onsite LID.	Incorporate distributed LID within rights of way to provide peak flow control and water quality management before discharging to existing creeks.	Utilizes localized inline detention facilities (subsurface storage tanks) and a single centralized detention pond for peak flow control and water quality management before discharging to existing creeks. Post-Development Peak Flow matches Pre-Development Peak Flow.
	Public Conveyance	Localized capacity upgrades to address existing capacity issues. No new conveyance infrastructure or upgrades to accommodate growth.	New conveyance infrastructure and/or upgrades to existing infrastructure upstream of detention facilities.	Localized capacity upgrades to address existing capacity issues. New conveyance infrastructure and/or upgrades to existing infrastructure upstream of detention facilities. Ditch erosion control and enhancements upstream of storage facility.	Localized capacity upgrades to address existing capacity issues. No new conveyance infrastructure or upgrades to accommodate growth.			Localized capacity upgrades to address existing capacity issues. New conveyance infrastructure and/or upgrades to existing infrastructure upstream of detention facilities No new conveyance infrastructure or upgrades downstream of detention facilities.
	Water Quality Controls	Water quality controls provided at onsite detention facilities. Provide voluntary onsite management incentive program.	Water quality controls provided at centralized detention facilities Provide voluntary onsite management incentive program	Water quality controls provided by end of pipe detention facility Provide voluntary onsite management incentive program	Water quality controls provided by end of pipe water quality control facilities. Provide voluntary onsite management incentive program.	Water quality controls provided by onsite LID facilities. Provide voluntary onsite management incentive program.	Water quality controls provided by the right of way LID facilities. Provide voluntary onsite management incentive program.	Water quality controls provided at centralized detention facilities. Provide voluntary onsite management incentive program.
Environmental	Water Quality Impacts	Onsite detention provide water quality control for new development areas. General water quality improvements achieved through voluntary measures.	Centralized detention provide water quality control for new development areas. General water quality improvements achieved through voluntary measures.	 - End of pipe detention provide water quality control for new development areas. - General water quality improvements achieved through voluntary measures. 	- End of pipe water quality control facilities provide water quality control for new development areas - General water quality improvements achieved through voluntary measures	Onsite LID provide water quality control for new development areas. General water quality improvements achieved through voluntary measures.	Distributed LID provide water quality control for new development areas. General water quality improvements achieved through voluntary measures.	Centralized detention provide water quality control for new development areas. End of pipe water quality control facilities provide water quality control for new development areas. General water quality improvements achieved through voluntary measures.
	Habitat	- New stormwater outlets proposed; impacts to creek mitigated through upstream detention facilities.	- New stormwater outlets proposed; impacts to creek mitigated through upstream detention facilities.	New stormwater outlets proposed; impacts to creek mitigated through upstream detention facilities.	- New stormwater outlets proposed; impacts to creek mitigated through upstream detention facilities.	- New stormwater outlets proposed; impacts to creek mitigated through upstream LID facilities.	- New stormwater outlets proposed; impacts to creek mitigated through upstream LID facilities.	- New stormwater outlets proposed; impacts to creek mitigated through upstream detention facilities.
	Other Environmental Issu	- No new infrastructure outside development areas is proposed	- No new infrastructure outside existing Towns urban boundary	- Detention facility located outside existing Towns urban boundary	 New infrastructure to be located within existing/proposed rights of way 	- No new infrastructure outside development areas is proposed	- New infrastructure to be located within existing/proposed rights of way	- No new infrastructure outside existing Towns urban boundary
Sub-Score - Environmental		High	High	Medium	Medium	High	High	High
Technical	Technical Justification	- Existing capacity limitations within local conveyance system. Detention facilities used to maintain existing flow rates to existing storm system and receiving waters. - Local conveyance upgrades to address existing local issues	accommodate increase peak flows. - Detention facilities used to maintain existing flow rates to existing	- Existing capacity limitations within local conveyance system; Conveyance upgrades upstream of detention facilities needed to accommodate increase peak flows. - Detention facility used to maintain existing flow rates to existing storm system and receiving waters. - Local conveyance upgrades to address existing local issues	existing storm system and receiving waters.	Existing capacity limitations within local conveyance system. LID facilities used to maintain existing flow rates to existing storm system and receiving waters. Local conveyance upgrades to address existing local issues	Existing capacity limitations within local conveyance system. LID facilities used to maintain existing flow rates to existing storm system and receiving waters. Local conveyance upgrades to address existing local issues	- Existing capacity limitations within local conveyance system; Conveyance upgrades upstream of detention facilities needed to accommodate increase peak flows. - Detention facilities used to maintain existing flow rates to existing storm system and receiving waters. - Local conveyance upgrades to address existing local issues
	Site Availability	 No land acquisition required; Onsite facilities to be accommodated with proposed development areas. 	Optimal site locations and acquisition needs to be determined via	 - Land acquisition required for centralized facility; Optimal site locations and acquisition needs to be determined via subwatersheds drainage study. 	No land acquisition required; Inline detention facilities to be accommodated within existing/proposed rights of way	 No land acquisition required; Onsite LID facilities to be accommodated with proposed development areas 	 No land acquisition required; LID facilities to be accommodated within existing/proposed right of way. 	- Land acquisition required for centralized facility; Optimal site locations and acquisition needs to be determined via subwatersheds drainage study. Inline detention facilities to be accommodated within existing/proposed right of way.
	Other Factors	Simple to implement; all management needs meet at individual development sites Requires new policies/by-law to require onsite management Allows for town wide uniform stormwater management objectives Need to create several facilitates relative to all other Strategies (excluding 3a)	stormwater management strategy - Allows for town wide uniform stormwater management objectives - Limits the total number of facilities but requires conveyance upgrades	Requires subwatersheds drainage study to coordinate stormwater management strategy Allows for town wide uniform stormwater management objectives Single detention facility but requires greatest amount of conveyance upgrades	Requires subwatersheds drainage study to coordinate stormwater management strategy. Allows for town wide uniform stormwater management objectives. Need to create several facilitates but less than Strategies 1a & 3a.	- Simple to implement; all management needs meet at individual development sites Requires new policies/by-law to require onsite management Need to create several facilitates relative to all other Strategies (excluding 1a).	stormwater management strategy. - Allows for town wide uniform stormwater management objectives.	Requires subwatersheds drainage study to coordinate stormwater management strategy. Allows for town wide uniform stormwater management objectives Limits the total number of facilities but requires conveyance upgrades.
	Utilization of Available System Capacity	- Onsite control used to reduce impacts to system; reduces risk		- System capacity upgrades required to accommodate increased peak flows upstream of centralized detention facility	System capacity upgrades required to accommodate increased peak flows upstream of detention facilities. Detention facilities will reduce impacts to downstream system, reduces risk of downstream system flooding.	Onsite control used to reduce impacts to system; reduces risk of system flooding relative downstream management options.	System capacity upgrades required to accommodate increased peak flows upstream of detention facilities. Detention facilities will reduce impacts to downstream system, reduces risk of downstream system flooding.	 System capacity upgrades required to accommodate increased peak flows upstream of detention facilities. Detention facilities will reduce impacts to downstream system, reduces risk of downstream system flooding.
	System Flexibility	- Increases flexibility to manage potential impact of climate change		- limited capacity to accommodate impacts of climate change relative to other Strategies	Increases flexibility to manage potential impact of climate change, but less than Strategy 1a & 3a. Detention facilities to consider post 2029 growth, potential need.	Increases flexibility to manage potential impact of climate change.	- Increases flexibility to manage potential impact of climate change, but less than Strategy 1a & 3a.	- Increases flexibility to manage potential impact of climate change, but less than Strategy 1a & 3a.
	Beyond 2029	Onsite measure limit system impacts. Post 2029 growth to follow similar requirements.		- Detention facility to consider post 2029 growth, facility oversizing likely	- Detention raclilles to consider post 2029 growth, potential need for facility oversizing	- Onsite measure limit system impacts. Post 2029 growth to follow similar requirements.	- Detention raclilles to consider post 2029 growin, potential need for facility oversizing	Detention facilities to consider post 2029 growth, potential need for facility oversizing
Sub-Score - Technical		Medium	High	Medium	Medium	Medium	Medium	High
Socio / Cultural	Environmental Issues (Noise, Dust, Aesthetics etc.)	Detention facilities to be constructed as part of new development sites			Some potential for noise, dust and aesthetic impacts on residents during construction of detention facilities and conveyance upgrades. Any potential disturbance will be limited by ensuring construction takes place during normal working hours, and through construction contract obligations.	- LID facilities to be constructed as part of new development sites	Some potential for noise, dust and aesthetic impacts on residents during construction of LID facilities and conveyance upgrades. Any potential disturbance will be limited by ensuring construction takes place during normal working hours, and through construction contract obligations.	- Some potential for noise, dust and aesthetic impacts on residents during construction of detention facilities and conveyance upgrades. Any potential disturbance will be limited by ensuring construction takes place during normal working hours, and through construction contract obligations.
	Community Issues		Voluntary application will mitigate negative perception related to inspection and enforcement New voluntary measures will be perceived by the public as a	order to track progress - Voluntary application will mitigate negative perception related to inspection and enforcement - New voluntary measures will be perceived by the public as a	New policies will require public education and monitoring in order to track progress -Voluntary application will mitigate negative perception related to inspection and enforcement -New voluntary measures will be perceived by the public as a measure the municipality is taking help improve the environment	to inspection and enforcement - New voluntary measures will be perceived by the public as a	New policies will require public education and monitoring in order to track progress - Voluntary application will mitigate negative perception related to inspection and enforcement - New voluntary measures will be perceived by the public as a measure the municipality is taking help improve the environment	New policies will require public education and monitoring in order to track progress - Voluntary application will mitigate negative perception related to inspection and enforcement - New voluntary measures will be perceived by the public as a measure the municipality is taking help improve the environment.
	Land Use			- Voluntary measures not expected to impact existing landuse - Land acquisition required to accommodate centralized facility; Centralized facility outside existing Town limits no impact to developable areas expected.	- Voluntary measures not expected to impact existing landuse - Detention measures expected to be accommodated within existing RoW	Voluntary measures not expected to impact existing landuse Onsite measures expected to be accommodated within existing require greenspace and/or parking area requirements and are not anticipated to reduce total developable area	Voluntary measures not expected to impact existing landuse Detention measures expected to be accommodated within existing RoW	Voluntary measures not expected to impact existing landuse Land acquisition required to accommodate centralized facilities; may require dedicated land parcel reducing total developable areas
Sub-Score - Socio / Cultural		High	Medium	Medium	High	High	High	Medium

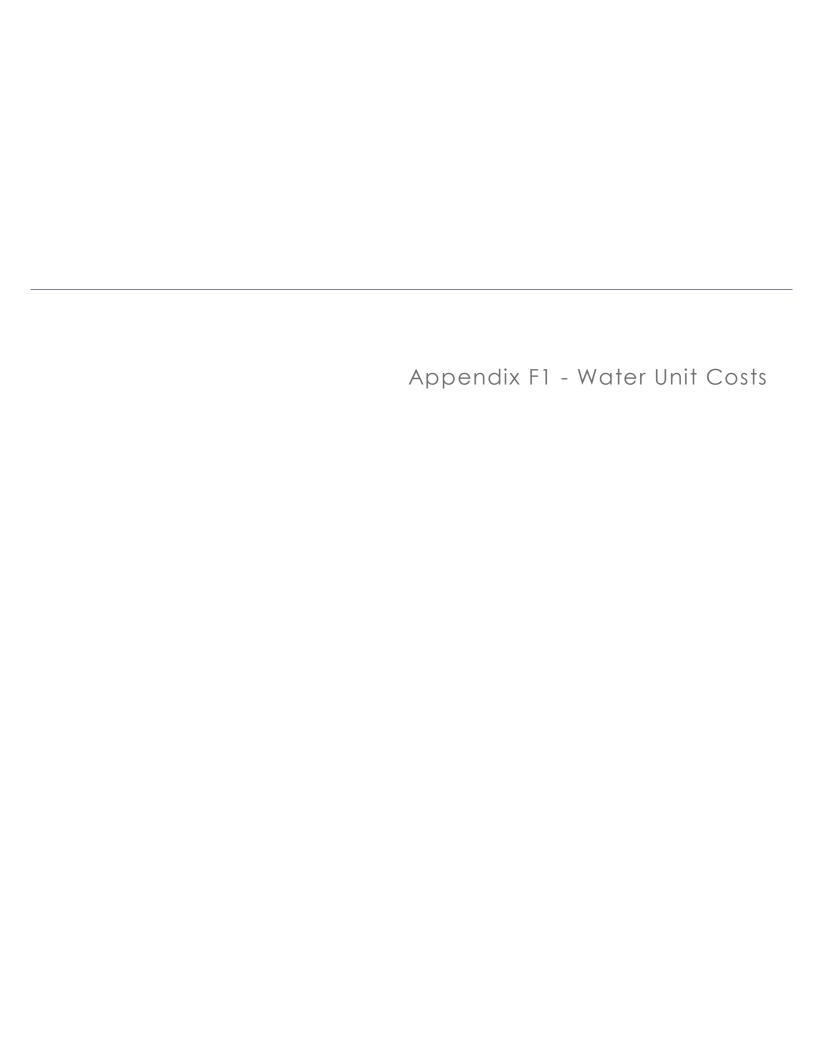




Short List Stormwater Servicing Strategies Evaluation Table - Clavering Creek Catchment

		Strategy 1a - Individual Detention Facilities	Strategy 1b - Localized End of Pipe Detention Facilities	Strategy 1c - End of Pipe Detention & Erosion Enhancements	Strategy 2 - Inline Detention	Strategy 3a - High LID Distributed	Strategy 3b - Moderate LID Incorporated within Right of Way	Strategy 4 - Hybrid Localized End of Pipe & Inline Storage
Financial								
	Capital Cost	 Local capacity upgrade costs common to all. No additional growth related cost to the Town; all infrastructure needs incorporated within development site. 		 Local capacity upgrade costs common to all. Conveyance and detention facilities cost greater that Strategy 1a and 3a but comparable to other Strategy. All growth related cost to be recovered through Development Charges. 	Local capacity upgrade costs common to all. Conveyance and detention facilities cost greater that Strategy a not 3a but comparable to other Strategy. All growth related cost to be recovered through Development Charges.	No additional cost to the Town; all infrastructure needs incorporated within development site.	Local capacity upgrade costs common to all. Conveyance and detention facilities cost greater that Strategy 1a and 3a but comparable to other Strategies. All growth related cost to be recovered through Development Charges.	Local capacity upgrade costs common to all. Conveyance and detention facilities cost greater that Strategy Ia and 3a but comparable to other Strategies. All growth related cost to be recovered through Development Charges.
	Operational Cost	- Increase inspection and enforcements efforts for the Town Potential for ongoing maintenance cost to private property owners for onsite facilities Low cost strategy.	Ongoing maintenance cost to new detention facilities. Mid cost strategy.	Ongoing maintenance cost to new detention facility. Low cost strategy.	- Ongoing maintenance cost to new detention facilities High cost strategy	Increase inspection and enforcements efforts for the Town Potential for ongoing maintenance cost to private property owners for onsite facilities Low cost strategy	Ongoing maintenance cost to new LID facilities. Highest cost strategy.	Ongoing maintenance cost to new detention facilities. Mid cost strategy.
	Property Purchase	 Onsite management to be accommodated with existing development site, and will be requirement of individual developers. Voluntary measures will be accommodated on existing properties. 	Potential land acquisition required for detention facilities. Voluntary measures will be accommodated on existing properties.	Land acquisition required for detention facility. Voluntary measures will be accommodated on existing properties.	Detention facilitates to be accommodated with existing/proposed RoW. Voluntary measures will be accommodated on existing properties.	Onsite management to be accommodated with existing development site, and will be requirement of individual developers. Voluntary measures will be accommodated on existing properties.	LID facilitates to be accommodated with existing/proposed RoW. Voluntary measures will be accommodated on existing properties.	Potential land acquisition required for detention facilities. Voluntary measures will be accommodated on existing properties.
	Deferral of Other Upgrades	Onsite measure limit system impacts. Voluntary measures may provide additional capacity to accommodate post 2029 growth.	Detention limits downstream impacts. Onsite measure limit system impacts. Post 2029 growth to follow similar requirements.	Onsite measure limit system impacts. Post 2029 growth to follow similar requirements.	Detention limits downstream impacts. Onsite measure limit system impacts. Post 2029 growth to follow similar requirements.	Onsite measure limit system impacts. Voluntary measures may provide additional capacity to accommodate post 2029 growth.	Detention limits downstream impacts. Onsite measure limit system impacts. Post 2029 growth to follow similar requirements.	Detention limits downstream impacts. Onsite measure limit system impacts. Post 2029 growth to follow similar requirements.
	Cost Sharing Opportunities	 Onsite management costs to be developer responsibility. Cost of voluntary measures to be assumed by private property owners. Town may offer incentives to increase adoption of voluntary measures. 	All growth related cost to be recovered through Development Charges. Cost of voluntary measures to be assumed by private property owners. Town may offer incentives to increase adoption of voluntary measures.	- All growth related cost to be recovered through Development Charges Cost of voluntary measures to be assumed by private property owners Town may offer incentives to increase adoption of voluntary measures.	All growth related cost to be recovered through Development Charges. Cost of voluntary measures to be assumed by private property owners. Town may offer incentives to increase adoption of voluntary measures.	Onsite management costs to be developer responsibility. Cost of voluntary measures to be assumed by private property owners. Town may offer incentives to increase adoption of voluntary measures.	- All growth related cost to be recovered through Development Charges Cost of voluntary measures to be assumed by private property owners Town may offer incentives to increase adoption of voluntary measures.	All growth related cost to be recovered through Development Charges. Cost of voluntary measures to be assumed by private property owners. Town may offer incentives to increase adoption of voluntary measures.
Sub-Score - Financial		High	High	Medium	Medium	High	Medium	High
Legal / Jurisdictional								
	Stakeholders	- Public consultation and Policy/by-laws update required	Public consultation and Policy/by-laws update required Requires subwatersheds drainage study to coordinate stormwater management strategy Detention facilities to be coordinated by the Town	Public consultation and Policy/by-laws update required Requires subwatersheds drainage study to coordinate stormwater management strategy Detention facility to be coordinated by the Town	Public consultation and Policy/by-laws update required Requires subwatersheds drainage study to coordinate stormwater management strategy Detention facilities to be coordinated by the Town	- Public consultation and Policy/by-laws update required	Public consultation and Policylby-laws update required Requires subwatersheds drainage study to coordinate stormwater management strategy LID facilities to be coordinated by the Town	- Public consultation and Policy/by-laws update required - Requires subwatersheds drainage study to coordinate stormwater management strategy - Detention facilities to be coordinated by the Town
	Permits and Approvals	 Municipal inspection of voluntary measures may be required if incentive program is implemented Municipal review and inspection of onsite management features 	Municipal inspection of voluntary measures may be required if incentive program is implemented Conservation Authority review and inspection of Detention Facility	Municipal inspection of voluntary measures may be required if incentive program is implemented Conservation Authority review and inspection of Detention Facility	Municipal inspection of voluntary measures may be required if incentive program is implemented Conservation Authority review and inspection of Detention Facility	Municipal inspection of voluntary measures may be required it incentive program is implemented Municipal review and inspection of onsite management features	Municipal inspection of voluntary measures may be required if incentive program is implemented Conservation Authority review and inspection of Detention Facility	Municipal inspection of voluntary measures may be required if incentive program is implemented Conservation Authority review and inspection of Detention Facility
	Land	- Will not require land acquisition	- May be require land acquisition	- Will be require land acquisition	- Will not require land acquisition	- Will not require land acquisition	- Will not require land acquisition	- May be require land acquisition
	System Management and Enforcement	Management strategy not depended on voluntary measures Long-term sustained maintenance of facilities required to maintain performance and manage risk Lack of Town ownership of all management strategy components increases potential that private facilities are not maintained		Long-term sustained maintenance of facilities required to maintain performance and manage risk Town has ownership of all aspects of management strategy reducing overall risk	Long-term sustained maintenance of facilities required to maintain performance and manage risk Town to assume ownership of all aspects of management strategy reducing overall risk	- Long-term sustained maintenance of facilities required to maintain performance and manage risk - Lack of Town ownership of all management strategy components increases potential that requirements are not provided through private facilities	Long-term sustained maintenance of facilities required to maintain performance and manage risk Town has ownership of all aspects of management strategy reducing overall risk	Long-term sustained maintenance of facilities required to maintain performance and manage risk Town to assume ownership of all aspects of management strategy reducing overall risk
Sub-Score - Legal / Jurisdictional		Low	High	High	High	Low	High	High
OVERALL RATING		Low	High	Medium	Medium	Low	Medium	High









WATER UNIT RATES

Water Pipes

Pipe Diameter (mm)	Unit Rate Cost 2014
100	\$766
250	\$916
300	\$1,018
400	\$1,131
450	\$1,260
500	\$1,434
600	\$1,584
750	\$1,835
900	\$2,176
1050	\$2,548
1200	\$3,961
1350	\$4,500
1500	\$5,383
1650	\$6,034
1800	\$7,083
2100	\$7,715
2400	\$8,191

Valves

Diameter (mm)	Unit Rate Cost 2014
100	\$24,703
250	\$27,703
300	\$30,781
400	\$34,201
450	\$36,565
500	\$41,746
600	\$54,320
750	\$75,595
900	\$80,675
1050	\$107,935
1200	\$138,012
1350	\$161,148
1500	\$195,550
1650	\$223,816
1800	\$282,059
2100	\$327,728
2400	\$373,396

Valve Spacing

Diameter (mm)	Unit Rate Cost 2014
100	300
250	300
300	300
400	300
450	600
500	600
600	600
750	600
900	600
1050	600
1200	2000
1350	2000
1500	2000
1650	2000
1800	2000
2100	2000
2400	2000

Trenchless Crossings, all include a valve at each side of crossing

For Creeks & Trans Canada

Length = 20

Diameter (mm)	Unit Rate Cost 2014
100	\$125,130
250	\$140,130
300	\$155,700
400	\$173,000
450	\$185,000
500	\$203,000
600	\$243,000
750	\$308,000
900	\$341,000
1050	\$419,000
1200	\$501,000
1350	\$570,000
1500	\$662,000
1650	\$741,000
1800	\$880,000
2100	\$1,017,000
2400	\$1,154,000

For Freeways, Major Creek Crossings Length= 150

Diameter (mm)	Unit Rate Cost 2014
100	\$613,500
250	\$688,500
300	\$765,000
400	\$850,000
450	\$911,000
500	\$979,000
600	\$1,117,000
750	\$1,330,000
900	\$1,511,000
1050	\$1,736,000
1200	\$1,967,000
1350	\$2,183,000
1500	\$2,422,000
1650	\$2,649,000
1800	\$2,936,000
2100	\$3,369,000
2400	\$3,801,000

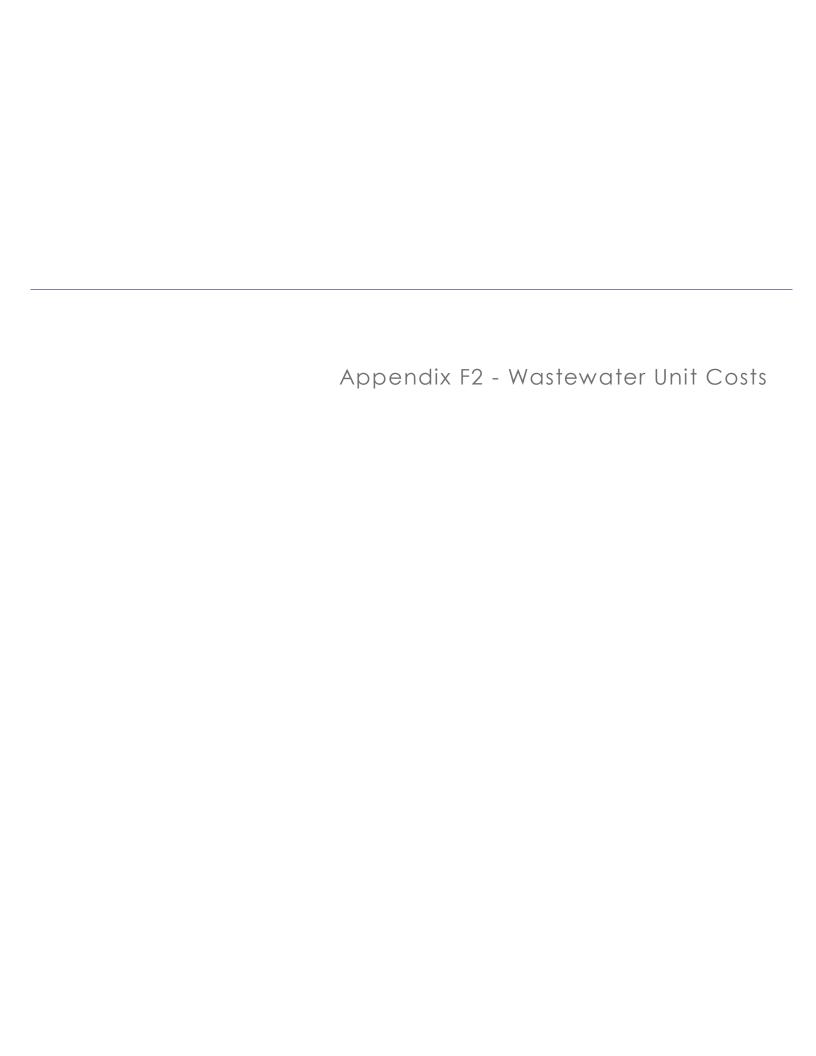
For Regional Roads, Rail and Hydro Corridors

Length= 60

Diameter (mm)	Unit Rate Cost 2014
100	\$274,610
250	\$308,610
300	\$342,900
400	\$381,000
450	\$408,000
500	\$442,000
600	\$512,000
750	\$623,000
900	\$701,000
1050	\$824,000
1200	\$952,000
1350	\$1,067,000
1500	\$1,204,000
1650	\$1,328,000
1800	\$1,513,000
2100	\$1,741,000
2400	\$1,968,000

Trenchless Rates

Diameter (mm)	Unit Rate Cost 2014
100	\$3,770
250	\$4,220
300	\$4,689
400	\$5,210
450	\$5,588
500	\$5,967
600	\$6,725
750	\$7,861
900	\$8,997
1050	\$10,134
1200	\$11,270
1350	\$12,406
1500	\$13,543
1650	\$14,679
1800	\$15,815
2100	\$18,088
2400	\$20,360







WASTEWATER UNIT RATES

Sewer Depth - 5m

Pipe Diameter (mm)	Unit Rate Cost 2014
200	\$600
250	\$625
300	\$657
375	\$692
450	\$735
525	\$780
600	\$865
675	\$1,086
750	\$1,190
825	\$1,239
900	\$1,517
975	\$2,349
1050	\$2,693
1200	\$3,006
1350	\$3,383
1500	\$3,794
1650	\$4,202
1800	\$4,742
2100	\$5,355
2400	\$6,960
3000	\$9,509

Sewer Depth - 10m

Pipe Diameter (mm)	Unit Rate Cost 2014
200	\$2,000
250	\$2,111
300	\$2,222
375	\$2,339.16
450	\$2,393.73
525	\$2,453.69
600	\$2,903.09
675	\$3,191.18
750	\$3,313.34
825	\$3,357.63
900	\$3,720.24
975	\$3,784.59
1050	\$4,449.27
1200	\$4,693.35
1350	\$5,043.76
1500	\$5,757.59
1650	\$6,164.85
1800	\$6,732.74
2100	\$7,377.60
2400	\$8,986.49
3000	\$11,533.32

Forcemains

Pipe Diameter (mm)	Unit Rate Cost 2014
150	\$564
200	\$608
250	\$656
300	\$713
350	\$910
400	\$1,072
450	\$1,232
500	\$1,402
600	\$1,784
750	\$1,900
900	\$2,211
1050	\$2,597
1200	\$2,987

Note: Unit Rates for sewers include manholes.

Assumptions are:

Diameter	Spacing
375-750	100 m
825 - 900	125 m
975 - 3000	150 m

Sewer Trenchless Crossings Assumed Length Stated on table and incldes manhole each side of crossing

For Creeks & Trans Canada

Length = 20

- 3-	
Diameter	Unit Rate Cost 2014
200	\$64,000
250	\$64,000
300	\$64,000
375	\$142,000
450	\$153,000
525	\$165,000
600	\$176,000
675	\$212,000
750	\$223,000
825	\$235,000
900	\$295,000
975	\$306,000
1050	\$332,000
1200	\$355,000
1350	\$378,000
1500	\$400,000
1650	\$423,000
1800	\$483,000
2100	\$528,000
2400	\$574,000
3000	\$664,000

For Regional Roads, Rail and Hydro Corridors

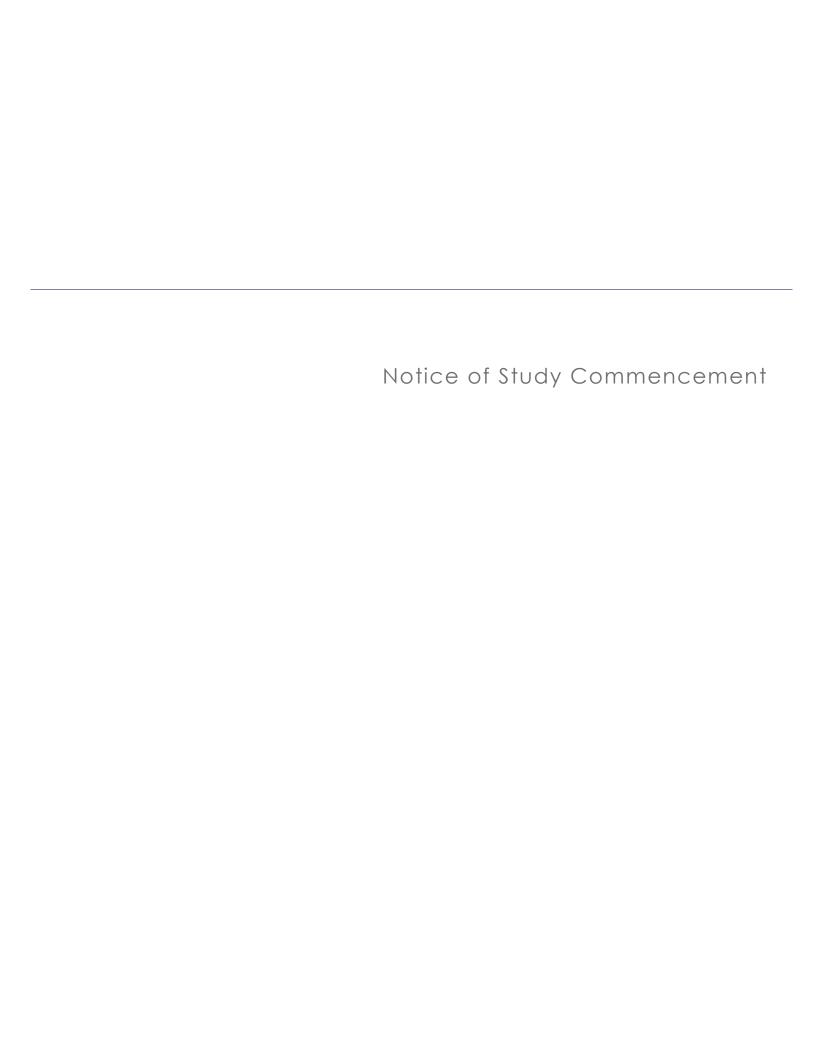
Length = 60

Lengur = 00	
Diameter	Unit Rate Cost 2014
200	\$108,000
250	\$108,000
300	\$108,000
375	\$343,000
450	\$377,000
525	\$411,000
600	\$445,000
675	\$504,000
750	\$538,000
825	\$572,000
900	\$655,000
975	\$689,000
1050	\$737,000
1200	\$806,000
1350	\$874,000
1500	\$942,000
1650	\$1,010,000
1800	\$1,115,000
2100	\$1,252,000
2400	\$1,388,000
3000	\$1,661,000

For Freeways, Major Creek Crossings Length = 150

200 \$207,000 250 \$207,000 300 \$207,000 375 \$795,000 450 \$880,000 525 \$965,000 600 \$1,050,000 675 \$1,160,000 750 \$1,245,000 825 \$1,330,000 900 \$1,464,000 975 \$1,550,000 1050 \$1,649,000 1200 \$1,820,000 1350 \$1,990,000 1500 \$2,161,000 1650 \$2,331,000 2100 \$2,879,000 2400 \$3,220,000 3000 \$3,900,000	Diameter	Unit Rate Cost 2014
300 \$207,000 375 \$795,000 450 \$880,000 525 \$965,000 600 \$1,050,000 675 \$1,160,000 750 \$1,245,000 825 \$1,330,000 900 \$1,464,000 975 \$1,550,000 1050 \$1,649,000 1200 \$1,820,000 1350 \$1,990,000 1500 \$2,161,000 1650 \$2,331,000 1800 \$2,639,000 2100 \$2,879,000 2400 \$3,220,000	200	\$207,000
375 \$795,000 450 \$880,000 525 \$965,000 600 \$1,050,000 675 \$1,160,000 750 \$1,245,000 825 \$1,330,000 900 \$1,464,000 975 \$1,550,000 1050 \$1,820,000 1200 \$1,820,000 1350 \$1,990,000 1500 \$2,161,000 1650 \$2,331,000 1800 \$2,879,000 2400 \$3,220,000	250	\$207,000
450 \$880,000 525 \$965,000 600 \$1,050,000 675 \$1,160,000 750 \$1,245,000 825 \$1,330,000 900 \$1,464,000 975 \$1,550,000 1050 \$1,649,000 1200 \$1,820,000 1350 \$1,990,000 1500 \$2,161,000 1650 \$2,331,000 1800 \$2,879,000 2100 \$3,220,000	300	\$207,000
\$600.0000000000000000000000000000000000	375	\$795,000
\$355,000 600 \$1,050,000 675 \$1,160,000 750 \$1,245,000 825 \$1,330,000 900 \$1,464,000 975 \$1,550,000 1050 \$1,649,000 1200 \$1,820,000 1350 \$1,990,000 1500 \$2,161,000 1650 \$2,331,000 1800 \$2,539,000 2100 \$2,879,000 2400 \$3,220,000	450	\$880,000
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750 \$1,245,000 825 \$1,330,000 900 \$1,464,000 975 \$1,550,000 1050 \$1,649,000 1200 \$1,820,000 1350 \$1,990,000 1500 \$2,161,000 1650 \$2,331,000 1800 \$2,879,000 2100 \$2,879,000 2400 \$3,220,000	600	\$1,050,000
825 \$1,330,000 900 \$1,464,000 975 \$1,550,000 1050 \$1,649,000 1200 \$1,820,000 1350 \$1,990,000 1500 \$2,161,000 1650 \$2,331,000 1800 \$2,539,000 2100 \$2,879,000 2400 \$3,220,000	675	\$1,160,000
900 \$1,464,000 975 \$1,550,000 1050 \$1,649,000 1200 \$1,820,000 1350 \$1,990,000 1500 \$2,161,000 1650 \$2,331,000 1800 \$2,539,000 2100 \$2,879,000 2400 \$3,220,000	750	\$1,245,000
975 \$1,550,000 1050 \$1,649,000 1200 \$1,820,000 1350 \$1,990,000 1500 \$2,161,000 1650 \$2,331,000 1800 \$2,539,000 2100 \$2,879,000 2400 \$3,220,000	825	\$1,330,000
1050 \$1,649,000 1200 \$1,820,000 1350 \$1,990,000 1500 \$2,161,000 1650 \$2,331,000 1800 \$2,539,000 2100 \$2,879,000 2400 \$3,220,000	900	\$1,464,000
1200 \$1,820,000 1350 \$1,990,000 1500 \$2,161,000 1650 \$2,331,000 1800 \$2,539,000 2100 \$2,879,000 2400 \$3,220,000	975	\$1,550,000
1350 \$1,990,000 1500 \$2,161,000 1650 \$2,331,000 1800 \$2,539,000 2100 \$2,879,000 2400 \$3,220,000	1050	\$1,649,000
1500 \$2,161,000 1650 \$2,331,000 1800 \$2,539,000 2100 \$2,879,000 2400 \$3,220,000	1200	\$1,820,000
1650 \$2,331,000 1800 \$2,539,000 2100 \$2,879,000 2400 \$3,220,000	1350	\$1,990,000
1800 \$2,539,000 2100 \$2,879,000 2400 \$3,220,000	1500	\$2,161,000
2100 \$2,879,000 2400 \$3,220,000	1650	\$2,331,000
2400 \$3,220,000	1800	\$2,539,000
7.7	2100	\$2,879,000
3000 \$3,902,000	2400	\$3,220,000
Ψ0,302,000	3000	\$3,902,000

Appendix G
Public and Agency Consultation



Notice of Study Commencement and Public Information Centre #1 Town of South Bruce Peninsula, Wiarton Master Servicing Plan -**Municipal Class Environmental Assessment Study**

Background

The Town of South Bruce Peninsula has initiated a Water, Wastewater and Stormwater Master Servicing Plan (MSP) for Wiarton to identify a preferred strategy to support existing servicing needs and projected growth. This strategy will accommodate anticipated demands as identified through the Town's Official Plan. This long term plan will address current service levels, policy, practices and procedures as well as identify gaps and opportunities to improve efficiency and effectiveness at present and in the future.

The study area for the Wiarton Master Servicing Plan is defined as the Town's limits and will encompass the entire existing urban area and future service areas as per the Town's Official Plan. The map is available on the Town's website www.southbrucepeninsula.com.

Goal To develop a comprehensive funding and implementation strategy for providing water, wastewater and stormwater servicing to existing and new growth areas in the town of Wiarton to 2029.

The Class EA Process

This notice signals the commencement of the Wiarton Master Servicing Plan - a study that will define existing problems and opportunities, consider and evaluate solutions and identify a preferred water, sanitary and storm servicing strategy. The Study follows the approved master planning process as outlined in Section A.2.7 (Approach #2 in Appendix 4) of the Municipal Engineer's Association (MEA) Municipal Class Environmental Assessment (October 2000, amended in 2011).

The Class EA process includes public and review agency consultation, evaluation of alternatives, an assessment of the potential environmental effects of the proposed improvements and identification of reasonable measures to mitigate any adverse impacts that may result. The Servicing Master Plan will become the basis for future investigations of any specific Schedule C projects that are proposed within.

Public Consultation

The Town of South Bruce Peninsula wishes to ensure that anyone with an interest in this study has the opportunity to be involved and to provide input. Opportunities for input will include two Public Information Centres (PICs) as well as direct consultation. The PICs will be held at key points during the study to present the study findings to-date and gather feedback. Representatives from the Township and its consultants will be present at the PICs to answer questions and discuss the next steps in the study. Public input and comments are welcome throughout the study process. With the exception of personal information, all comments received will become part of the public record.

The first Public Information Centre (PIC) is scheduled to take place Thursday, October 30th 2014 from 4:30 pm to 6:30 pm at the Wiarton Arena (Upstairs) - 526 Taylor Street, Wiarton.

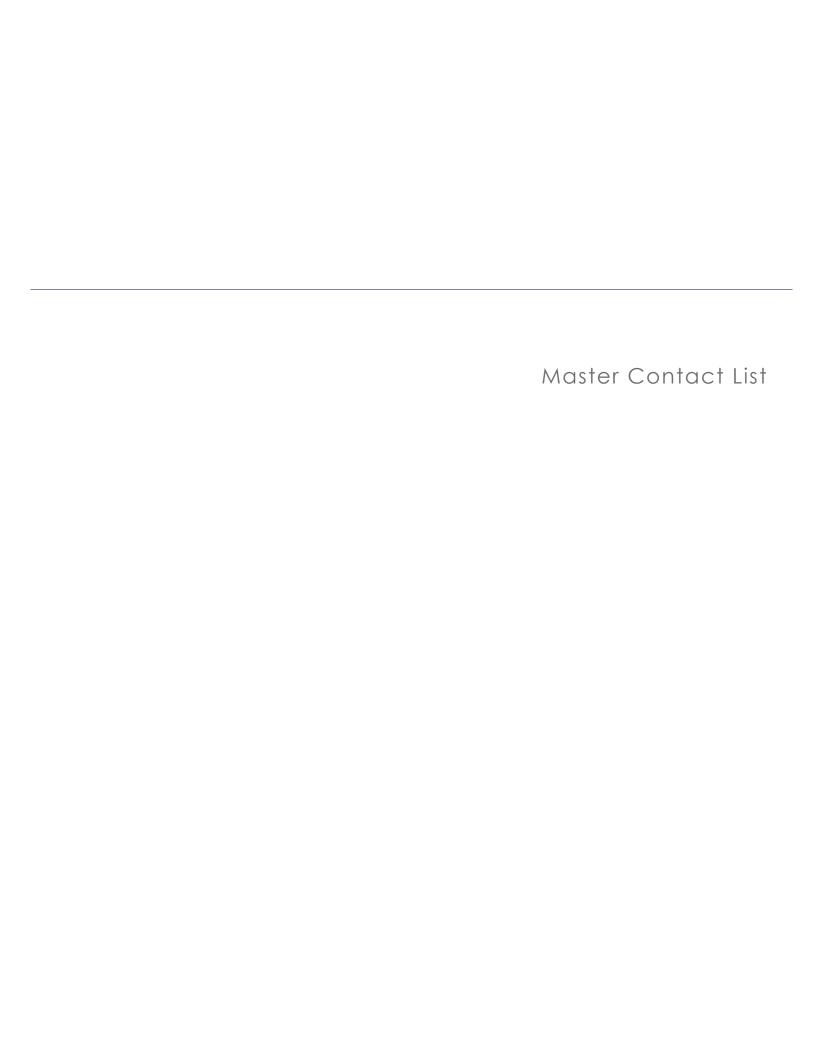
If you have any questions or comments or wish to obtain more information, please contact:

Tom Gray, C.E.T. Manager of Public Works Town of South Bruce Peninsula 315 George St, PO Box 310, Wiarton, ON NOH 2TO Phone: (519) 534-1400 Ext 131

E-mail: tsbppwmanager@bmts.com

John Slocombe, P.Eng. Project Manager GM BluePlan 1260 2nd Avenue East, Unit 1 Owen Sound, ON N4K 2J3 Phone: (519)376-1805 E-mail: john.slocombe@gmblueplan.ca

This Notice first issued on the 24th of October, 2014







MAST	ER CONTACT LIST		UPDATED:	July 15, 2015												
	Туре	Title	First Name	Last Name	Company	Department	Job Title	Address 1	Address 2	City	Province	Postal Code	Business Phone	Business Fax	Email Address	Comments
1	Local	Mr.	Andrew	Sorensen	Grey Sauble Conservation Authority	Environmental Planning	Environmental Planning Coordinator	237897 Inglis Falls Road	R.R. 4	Owen Sound	ON	N4K 5N6	519-376-3076 x 227		a.sorensen@greysauble.on.ca	
2	Provincial	Mr.	Chris	Stack	Ministry of Tourism, Culture and Sport	Regional and Corporate Services Division	Manager- West Region	4275 King Street, 2nd Floor		Kitchener	ON	N2P 2E9	519-650-3421	519-650-3425	Chris.Stack@ontario.ca	
3	Provincial	Mr.	Corwin	Troje	Ministry of Aboriginal Affairs	Consultation Unit, Aboriginal Relations and Ministry Partnerships Division	Manager	160 Bloor Street East, 9th Floor		Toronto	ON	M7A 2E6	416-325-4044		corwin.troje@ontario.ca	
4	Provincial	Mr.	Tony	Amalfa	Ministry of Health and Long-Term Care	Environmental Health Policy & Programs	Manager	393 University Avenue, 21st Floor		Toronto	ON	M7A 2S1	416-327-7624	416-327-0984	tony.amalfa@ontario.ca	
5	Provincial	Ms.	Carol	Neumann	Ministry of Agriculture and Food	Food Safety and Environmental Policy Branch	Rural Planner	6484 Wellington Road 7, Unit	t	Elora	ON	N0B 1S0	519-846-3393	519-846-8178	carol.neumann@ontario.ca	
6	Provincial	Mr.	Bruce	Curtis	Ministry of Municipal Affairs and Housing	Community Planning and Development	Manager	659 Exeter Road, 2nd Floor		London	ON	N6E 1L3	519-873-4026	519-873-4018	Bruce.curtis@ontario.ca	
7	Provincial	Ms.	Kim	Benner	Ministry of Natural Resources and Forestry	Midhurst District	District Planner	2284 Nursery Road		Midhurst	ON	LOL 1X0	705-725-7534	705-725-7584	Amanda.mclachlan@ontario.ca	
8	Provincial	Mr.	Rick	Chappell	Ministry of the Environment and Climate Change	Owen Sound District Office	Manager	101 17th Street East, 3rd Floor		Owen Sound	ON	N4K 0A5	519-371-6022	519-371-2905	rick.chappell@ontario.ca	
9	Provincial	Ms.	Agatha	Garcia-Wright	Ministry of the Environment and Climate Change	Environmental Approvals Branch	Director	2 St Clair Avenue West, Floor 12A	г	Toronto	ON	M4V 1L5	416-314-7288	416-314-8452	agatha.garciaweight@ontario.ca	
10	Provincial	Ms.	Annamaria	Cross	Ministry of the Environment and Climate Change	Environmental Approvals Branch- Environmental Assessment Services	Manager	2 St Clair Avenue West, Floor 12A	г	Toronto	ON	M4V 1L5	416-314-7967	416-314-8452	annamaria.cross@ontario.ca	
11	Provincial	Ms.	Jennifer	Arthur	Ministry of the Environment and Climate Change	Source Protection Planning	Land Use Planner	3232 White Oak Road		London	ON	N6E 1L8	519-873-5151		Jennifer.Arthur@ontario.ca	
12	Provincial	Ms.	Judy Lynn	Malloy	Ministry of the Environment and Climate Change	Aboriginal Affairs Branch	Director	135 St. Clair Ave West, 12th Floor		Toronto	ON	M4V 1P5	416-327-6953	416-326-8114	judy.lynn.malloy@ontario.ca	
13	Provincial	Mr.	Joseph	Muller	Ministry of Tourism, Culture and Sport	Culture Services Unit, Programs and Services Branch	Heritage Planner	401 Bay Street, Suite 1700		Toronto	ON	M7A 0A7	416-314-7145	416-314-7175	Joseph.muller@ontario.ca	
14	Provincial	Ms.	Nancy	Mott	Niagara Escarpment Commission		Senior Strategic Advisor	232 Guelph Street		Georgetown	ON	L7G 4B1	905-877-8363	905-873-7452	Nancy.Mott-Allen@ontario.ca	
15	Provincial	Mr.	Ted	Smider	Ontario Clean Water Agency		Client Relations Team	434 Kaireen Street		Sudbury	ON	P3E 5R9			tsmider@ocwa.com	
16	Provincial	Mr.	Richard	Laliberte	Ontario Clean Water Agency		Senior Operations Manager	78 Centennial Road, Unit 6		Orangeville	ON	L9W 1P9	519-941-1938		rlaliberte@ocwa.com	
17	Provincial	Mr.	Charles	O'Hara	Ontario Growth Secretariat	Growth Policy	Manager	777 Bay Street, 4th Floor, Suite 425		Toronto	ON	M5G 2E5	416-324-5794	416-325-7403	charles.o'hara@ontario.ca	
18	Local	Ms.	Janice	Jackson	Town of South Bruce Peninsula		Mayor	106 Eleventh Street North		Sauble Beach	ON	N0H 2G0	519-422-2552		mayorjanicejackson@gmail.com	
19	Local	Mr.	Jay	Kirkland	Town of South Bruce Peninsula		Deputy Mayor	791 Bruce Road 8		South Bruce Peninsula	ON	N0H 2T0	519-422-1449 (h) 519-372-4757 (c)			
20	Local	Mr.	Craig	Gammie	Town of South Bruce Peninsula		Councillor	531 Third Avenue North		Sauble Beach	ON	N0H 2G0	519-422-3599		councillorgammie@gmail.com	
21	Local	Mr.	Matt	Jackson	Town of South Bruce Peninsula		Councillor	157 Mallory Beach Road		South Bruce Peninsula	ON	N0H 2T0	519-372-7580		councillormatt@gmail.com	

7/15/2015 1 of 3





MAST	ER CONTACT LIST		UPDATED:	July 15, 2015												
	Туре	Title	First Name	Last Name	Company	Department	Job Title	Address 1	Address 2	City	Province	Postal Code	Business Phone	Business Fax	Email Address	Comments
22	Local	Ms.	Ana	Vukovic	Town of South Bruce Peninsula		Councillor	471 Bay Street		South Bruce Peninsula	ON	N0H 2T0				
23	Regional	Ms.	Donna	Van Wyck	Bruce County	Clerk's Office - Treasury	Deputy Clerk	30 Park Street		Walkerton	ON	N0G 2V0	519 881 1291 x 310		dvanwyck@brucecounty.on.ca	
24	Regional	Mr.	Chris	Laforest	Bruce County	Planning Department	Director	30 Park Street		Walkerton	ON	N0G 2V0	519 534 2092 x 102		claforest@brucecounty.on.ca	
25	Regional	Mr.	Randy	Scherzer	Grey County	Planning & Development	Director	595 9th Avenue East		Owen Sound	ON	N4K 3E3	519-372-0219 x 1237	519-376-7970	randy.scherzer@grey.ca	
26	Local	Ms.	Holly	Morrison	Township of Georgian Bluffs		CAO/Clerk	177964 Grey Road 18	R.R. 3	Owen Sound	ON	N4K 5N5	519-376-2729 x 225	519-372-1620	hmorrison@georgianbluffs.on.ca	
27	Provincial				Ontario Provincial Police	Bruce Peninsula Detachment		50 Berford Street	#6 Highway	Wiarton	ON	N0H 2T0	519-534-1323	519-534-1334		
28	Local	Mr.	Daniel	Robinson	South Bruce Peninsula Fire Department	Station 30 (Wiarton)	Manager of Emergency Services	382 George Street		Wiarton	ON	N0H 2T0	519-534-1400 x 142			
29	Local	Mr.	Steve	Blake	Bluewater District School Board	Director's Office	Director of Education	351 1st Avenue North	P.O. Box 190	Chesley	ON	N0G 1L0	519-363-2014	519-370-2909	communications@bwdsb.on.ca	
30	Local	Ms.	Catherine	Montreuil	Bruce Grey Catholic District School Board		Director of Education	799 16th Avenue		Hanover	ON	N4N 3A1	519-364-5820	519-364-5882	bruce_grey@bgcdsb.org	
31	Local	Ms.	Hazel	Lynn	Grey Bruce Health Unit		Medical Officer of Health	101 17th Street East		Owen Sound	ON	N4K 0A5	519-376-9420			
32	First Nations and Aboriginal Groups	Ms.	Arlene	Chegahno	Chippewas of Nawash Unceded First Nation		Chief	#135 Lakeshore Boulevard		Neyaashiinigmiing	g ON	N0H 2T0	519-534-1689	519-534-2130	cnadministrator@nawash.ca	
33	First Nations and Aboriginal Groups	Mr.	Aly	Alibhai	Métis Nation of Ontario	Lands, Resources and Consultations	Director	75 Sherbourne Street, Suite 311		Toronto	ON	M5A 2P9	416-977-9881		alya@metisnation.org	
34	First Nations and Aboriginal Groups	Mr.	David	Dusome	Georgian Bay Métis Council		President	355 Cranston Crescent		Midland	ON	L4R 4K3	705-526-6335			
35	First Nations and Aboriginal Groups	Mr.	George	Govier	Historic Saugeen Métis	Lands and Resources Consultation	Land Use Planning Coordinator	204 High Street	P.O. Box 1492	Southampton	ON	N0H 2L0	519-483-4001	519-483-4002	saugeenmetisadmin@bmts.com	
36	First Nations and Aboriginal Groups	Ms.	Doran	Ritchie	Saugeen Ojibway Nation Environment Office	Land Use Planning		25 Maadookii Subdivision		Neyaashiinigmiin	g ON	N0H 2T0	519-534-5507 x 226	519-534-5525	d.ritchie@saugeenojibwaynation.c	<u>a</u>
37	Provincial	Ms.	Judy	Rhodes-Munk	Niagara Escarpment Commission			99 King Street East	P.O. Box 308	Thornbury	ON	N0H 2P0	519-599-3464		judy.rhodes-munk@ontario.ca	
38	Regional	Mr.	Brian	Knox	Bruce County	Highways	Professional Engineer	30 Park Street	P.O. Box 398	Walkerton	ON	N0G 2V0	519-881-2400 x 263		bknox@brucecounty.on.ca	
39	Environemental Group	Mr.	John	Whitworth	Bruce Trail Association		President	Arboretum Section Royal Botanical Gardens, Old		Dundas	ON	L9H 5Y6			ajwhitworth@rogers.com	
40	First Nations and Aboriginal Groups	Mr.	Vernon	Roote	Saugeen First Nation		Chief	6493 Highway 21	R.R. 1	Southampton	ON	N0H 2L0				
41	First Nations and Aboriginal Groups	Mr.	Peter	Couture	MNO Great Lakes Métis Council		President	380 9th Street East		Owen Sound	ON	N4K 1P1	519-370-0435	519-370-0436		
42	First Nations and Aboriginal Groups	Mr.	James	Wagar	Métis Nation of Ontario	Natural Resources and Consultations	Manager	75 Sherbourne St., Suite 311		Toronto	ON	M5A 2P9	416-977-9881 x 107		jamesw@metisnation.org	
43	First Nations and Aboriginal Groups	Dr.	Mark	Knell	Métis Nation of Ontario	Environmental Assessments and Regulatory Issues	Manager	75 Sherbourne St., Suite 311		Toronto	ON	M5A 2P9	416-977-9881		markk@metisnation.org	
44	First Nations and Aboriginal Groups	Mr.	Archie	Indoe	Historic Saugeen Métis		President	204 High Street	P.O. Box 1492	Southampton	ON	N0H 2L0	519-483-4000			

7/15/2015 2 of 3

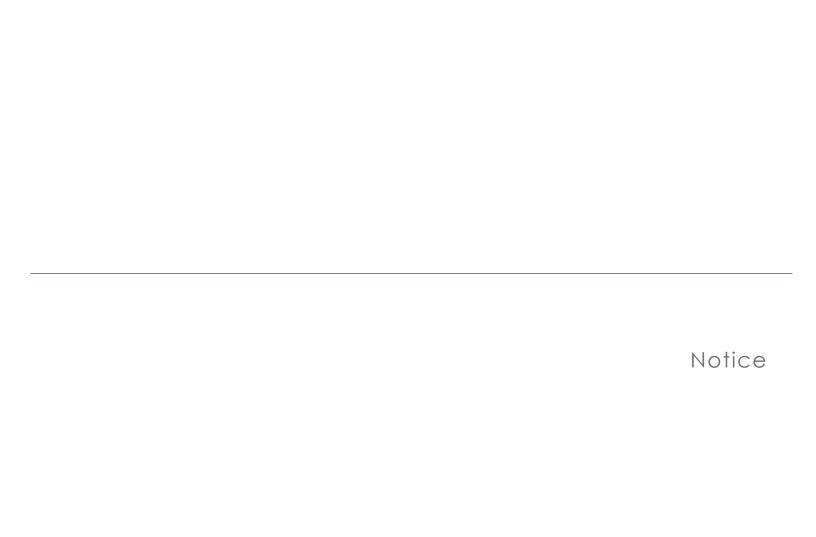




MAST	ER CONTACT LIST		UPDATED:	July 15, 2015												
	Туре	Title	First Name	Last Name	Company	Department	Job Title	Address 1	Address 2	City	Province	Postal Code	Business Phone	Business Fax	Email Address	Comments
45	Provincial	Ms.	Kathy	Dodge	Ministry of Natural Resources and Forestry	Midhurst District	Management Biologist	1450 7th Avenue East		Owen Sound	ON	N4K 2Z1	519-371-8422		kathy.dodge@ontario.ca	
46	Local	Mr.	Doug	Hill	Grey Sauble Conservation Authority		Director of Operations	237897 Inglis Falls Road	R.R. 4	Owen Sound	ON	N4K 5N6				
47	Federal	Ms.	Cheyenne	Loon	Aboriginal Affairs and Northern Development Canada	Land and Trust Services	Senior Enviornmental Advisor	25 St. Clair Avenue East, 8th Floor		Toronto	ON	M4T 1M2	416-952-9601			
48	Provincial	Mr.	John	Ritchie	Ministry of the Environment and Climate Change	Water Compliance	Supervisor- Owen Sound Office	101 17th Street East, 3rd Floor		Owen Sound	ON	N4K 0A5	519-371-4687	519-371-2905	john.s.ritchie@ontario.ca	
49	Provincial	Mr.	Léo-Paul	Frigault	Ontario Clean Water Agency		Operations Manager	897 Bayview Avenue		Wiarton	ON	N0H 2T0	519-534-1610		LFrigault@ocwa.com	
50	Other	Mr.	Arun	Jain	EXP Services Inc.	Linear Infrastructure, Central Ontario	Practice Leader - Linear Infrastructure	1595 Clark Boulevard		Brampton	ON	L6T 4V1	905-793-9800 x 2373		arun.jain@exp.com	
51	Provincial	Ms.	Janine	Dunlop	Ministry of Tourism, Culture and Sport		Regional Advisor	200 McNab Street, Suite 103		Walkerton	ON	N0G 2V0	519-881-1081	519-881-0525	janine.dunlop@ontario.ca	
52	Utilities	Mr.	Corey	Taylor	Eastlink Cable								902-431-4812 (Work) 902-452-0060 (Cell)			
53	Utilities	Mr.	Jeremy	Miller	Union Gas		Utility Service Manager						519-376-6970 x 5336007 519-377-0367 (cell)		jpmiller@uniongas.com	
54	Utilities	Mr.	Steve	Tackleberry	Hydro One								519-372-5742			
55	Local	Mr.	Tom	Gray	Town of South Bruce Peninsula	Public Works	Manager	315 George Street		Wiarton	ON	N0H 2T0	519-534-1400 x 131		tsbppwmanager@bmts.com	
56	Other	Mr.	Don	Scott	Cuesta Planning Consultants Inc.			978 First Avenue West		Owen Sound	ON	N4K 4K5	519-372-9790	519-372-9953	cuesta@cuestaplanning.com	
57	Other	Mr.	Allan	Hunter					 	1						
58	Local	Mr.	Jack	Van Dorp	Town of South Bruce Peninsula	County of Bruce Planning & Economic Development Department	Planner	315 George Street	P.O. Box 310	Wiarton	ON	N0H 2T0	519-534-2092 x 125		jvandorp@brucecounty.on.ca	
59	Local	Mr.	Brent	Miller	Frosty Freeze			498 Berford Street		Wiarton	ON	N0H 2T0	519-534-5613			
60	Local	Mr.	Barry	Kruisselbrink	Barry's Construction and Insulation Ltd.			R.R. 2		Allenford	ON	N0H 1A0	519-934-3374	519-934-3461	barry@barryconstruction.ca	

7/15/2015 3 of 3







Town of South Bruce Peninsula

PO Box 310, 315 George St. Wiarton ON N0H 2T0

Tel: (519) 534-1400 Fax: (519) 534-4862 Toll Free (in 519 area only): 1-877-534-1400

October 24, 2014

Our File: 214128

Re: Notice of Study Commencement and Public Information Centre #1 for the Wiarton Master Servicing Plan and Municipal Class Environmental Assessment Study

Dear Sir or Madam,

GM BluePlan has been retained by the Town of South Bruce Peninsula to complete a Master Servicing Plan for water, wastewater and stormwater services. The objective of the Study is to develop a comprehensive funding and implementation strategy for providing water, wastewater and stormwater servicing to existing and new growth areas in the Town of Wiarton to 2029.

This project is being planned in accordance with Municipal Engineers Association Municipal Class Environmental Assessment document (as amended August 2011). This project will follow Approach #2 which will fulfill the requirements for Schedule A, A+ and B projects, and also become the basis for future investigations for specific Schedule C projects recommended through the study.

As part of the Study's consultation program you are currently included in the Study Contact List. If you wish to be removed or would like to suggest an alternative representative please contact the undersigned. Should we not hear from you, your details will remain on the Study Contact list and you will be notified of all future consultation opportunities during the undertaking of this Class EA study.

Please find enclosed the Notice of Study Commencement and Public Information Centre (PIC) #1 for the Wiarton Master Servicing Plan- Municipal Class Environmental Assessment Study. The PIC #1 will take place from 4:30 – 6:30 pm on Thursday October 30th 2014 at the Wiarton Arena (Upstairs) - 526 Taylor Street, Wiarton.

You are welcome to attend the PIC #1 to ask questions or raise concerns, as well as meet the project team and provide input to the ongoing study

To provide your comments or to request additional information concerning this project, please contact one of the following Project Team members:

John Slocombe, P.Eng	Tom Gray, P.Eng.
John Siocombe, F.Eng	Tom Gray, Ling.

Project Manager
GM BluePlan Engineering Limited
1260 2nd Avenue East, Unit 1
Owen Sound, ON N4K 2J3
519-376-1805
john.slocombe@gmblueplan.ca

Manager of Public Works
Town of South Bruce Peninsula
315 George St, PO Box 310,
Wiarton, ON N0H 2T0
519-534-1400 ext 131
tsbppwmanager@bmts.com

Thank you,

James Jorgensen,

J.A. Jargenon

GM BluePlan Engineering
Infrastructure Planning, Partner
289 527 0570
james.jorgensen@gmblueplan.ca

Notice of Study Commencement and Public Information Centre #1 Town of South Bruce Peninsula, Wiarton Master Servicing Plan Municipal Class Environmental Assessment Study

Background

The Town of South Bruce Peninsula has initiated a Water, Wastewater and Stormwater Master Servicing Plan (MSP) for Wiarton to identify a preferred strategy to support existing servicing needs and projected growth. This strategy will accommodate anticipated demands as identified through the Town's Official Plan. This long term plan will address current service levels, policy, practices and procedures as well as identify gaps and opportunities to improve efficiency and effectiveness at present and in the future.

The study area for the Wiarton Master Servicing Plan (refer to map) is defined as the Town's limits and will encompass the entire existing urban area and future service areas as per the Town's Official Plan.

Goal

To develop a comprehensive funding and implementation strategy for providing water, wastewater and stormwater servicing to existing and new growth areas in the town of Wiarton to 2029.

The Class EA Process

This notice signals the commencement of the Wiarton Master Servicing Plan - a study that will define existing problems and opportunities, consider and evaluate solutions and identify a preferred water, sanitary and storm servicing strategy. The Study follows the approved master planning process as outlined in Section A.2.7 (Approach #2 in Appendix 4) of the Municipal Engineer's Association (MEA) Municipal Class Environmental Assessment (October 2000, amended in 2011).

The Class EA process includes public and review agency consultation, evaluation of alternatives, an assessment of the

potential environmental effects of the proposed improvements and identification of reasonable measures to mitigate any adverse impacts that may result. The Servicing Master Plan will become the basis for future investigations of any specific Schedule C projects that are proposed within.



The Town of South Bruce Peninsula wishes to ensure that anyone with an interest in this study has the opportunity to be involved and to provide input. Opportunities for input will include two Public Information Centres (PICs) as well as direct consultation. The PICs will be held at key points during the study to present the study findings to-date and gather feedback. Representatives from the Township and its consultants will be present at the PICs to answer questions and discuss the next steps in the study.

Public input and comments are welcome throughout the study process. With the exception of personal information, all comments received will become part of the public record.

The first Public Information Centre (PIC) is scheduled to take place Thursday October 30th 2014 from 4:30 pm to 6:30 pm at Wiarton Arena (Upstairs) - 526 Taylor Street, Wiarton.

If you have any questions or comments or wish to obtain more information, please contact:

Mr. Tom Gray, C.E.T..

Manager of Public Works
Town of South Bruce Peninsula

315 George St, PO Box 310,

Wiarton, ON N0H 2T0 519-534-1400 ext 131

tsbppwmanager@bmts.com

Mr. John Slocombe, P.Eng.

Project Manager

GM BluePlan

1260 2nd Avenue East, Unit 1

Owen Sound, ON N4K 2J3

519-376-1805

john.slocombe@gmblueplan.ca

Town of South Bruce Penhasia Warten Master Servicing Plan

Vivino Master Servicing Plan

Vivino

This Notice first issued on the 24th of October, 2014

214128

Public Notices

Public Notices

Public Notices

Public Notices

Public Notices

Notice of Study Commencement and Public Information Centre #1 Town of South Bruce Peninsula, Wiarton Master Servicing Plan -**Municipal Class Environmental Assessment Study**

Background

The Town of South Bruce Peninsula has initiated a Water, Wastewater and Stormwater Master Servicing Plan (MSP) for Wiarton to identify a preferred strategy to support existing servicing needs and projected growth. This strategy will accommodate anticipated demands as identified through the Town's Official Plan. This long term plan will address current service levels, policy, practices and procedures as well as identify gaps and opportunities to improve efficiency and effectiveness at present and in the future.

The study area for the Wiarton Master Servicing Plan is defined as the Town's limits and will encompass the entire existing urban area and future service areas as per the Town's Official Plan. The map is available on the Town's website www.southbrucepeninsula.com.

Goal

To develop a comprehensive funding and implementation strategy for providing water, wastewater and stormwater servicing to existing and new growth areas in the town of Wiarton to 2029.

The Class EA Process

This notice signals the commencement of the Wiarton Master Servicing Plan - a study that will define existing problems and opportunities, consider and evaluate solutions and identify a preferred water, sanitary and storm servicing strategy. The Study follows the approved master planning process as outlined in Section A.2.7 (Approach #2 in Appendix 4) of the Municipal Engineer's Association (MEA) Municipal Class Environmental Assessment (October 2000, amended in 2011).

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Public Consultation

The Town of South Bruce Peninsula wishes to ensure that anyone with an interest in this study has the opportunity to be involved and to provide input. Opportunities for input will include two Public Information Centres (PICs) as well as direct consultation. The PICs will be held at key points during the study to present the study findings to-date and gather feedback. Representatives from the Township and its consultants will be present at the PICs to answer questions and discuss the next steps in the study. Public input and comments are welcome throughout the study process. With the exception of personal information, all comments received will become part of the public record.

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If you have any questions or comments or wish to obtain more information, please contact:

Tom Gray, C.E.T. Manager of Public Works Town of South Bruce Peninsula 315 George St, PO Box 310, Wiarton, ON NOH 2TO

Phone: (519) 534-1400 Ext 131 E-mail: tsbppwmanager@bmts.com John Slocombe, P.Eng. **Project Manager** GM BluePlan 1260 2nd Avenue East, Unit 1 Owen Sound, ON N4K 2J3 Phone: (519)376-1805

E-mail: john.slocombe@gmblueplan.ca

This Notice first issued on the 24th of October, 2014

ELL ANYTHING HERE!

(EVEN YOUR MOUNTED MOOSE HEAD)

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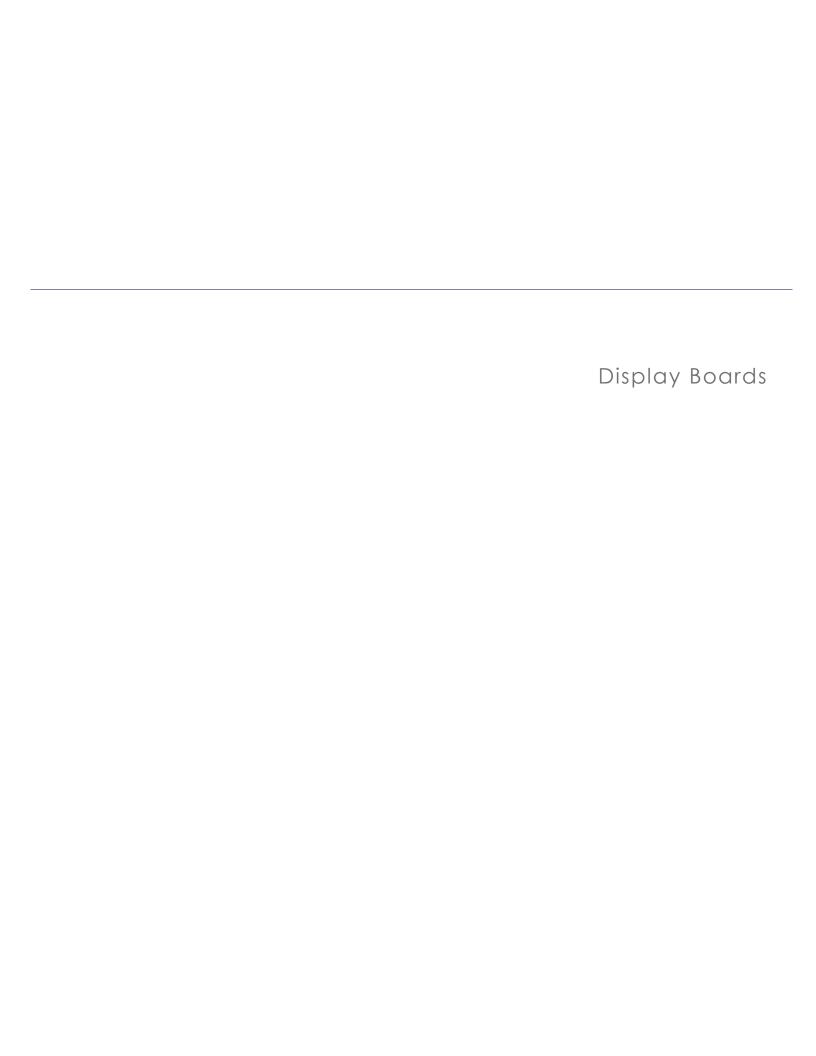
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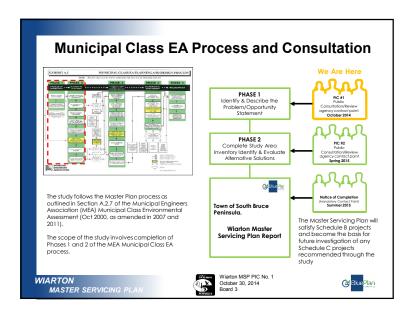
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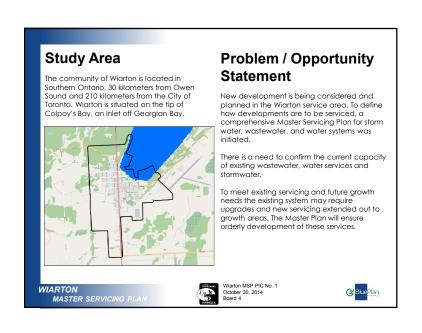
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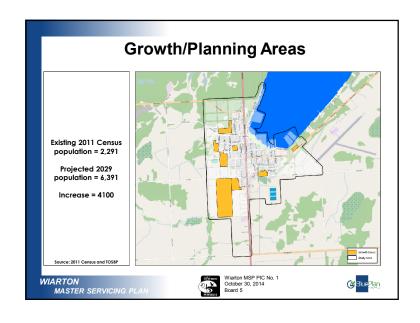


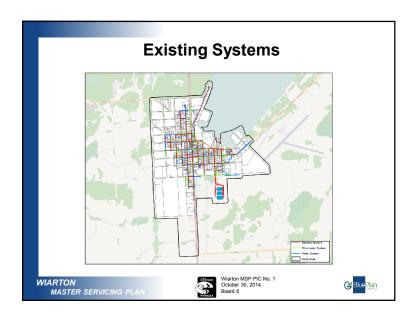


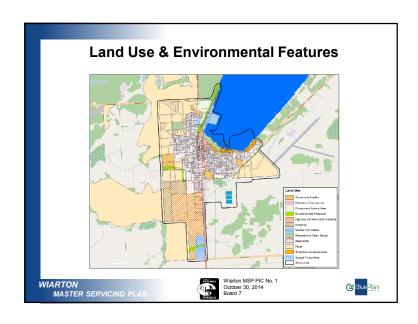


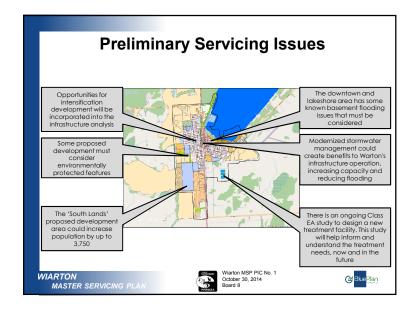
Why Are We Here? Purpose of the Study The Town of South Bruce Peninsula has initiated a Wiarton Master Servicina Plan Get an understanding of (MSP) to identify a preferred water the MSP process sanitary and stormwater servicing strategy to support existing servicing needs and projected growth Hear about **MSP** preliminary servicing issues Ideas The MSP will provide the business case for PIC No. the need, timing and cost of servicing and infrastructure Provide your The MSP will conduct the study following feedback early in the MSP process the Class Environmental Assessment Stay involved ... process for Master Plans - this is inclusive and consultative Wiarton MSP PIC No. 1 October 30, 2014 WIARTON Blue Plan MASTER SERVICING PL Board 2











Preliminary Servicing Concepts and Ideas

- Determine traditional treatment, pumping and storage requirements generated from existing use and projected growth
- Improve/optimize existing facilities to avoid new infrastructure where possible
- Plan for new pipes in intensification areas with older infrastructure that require rehabilitation anyway
- Look for opportunity to reduce demands and flows in order to reduce need to expand the system. E.g. disconnect impermeable areas, promote water efficiency measures.
- Plan for lot level stormwater controls and low impact development (LID) to minimize stormwater infrastructure
- Consider innovative use of technologies and servicing concepts like grey water use to optimize system capacity

WIARTON MASTER SERVICING PLAN





How to Get Involved

Please ...

- · Fill out the comment sheet provided
- Contact the project team with your input

Mr. John Slocombe, P.Eng.

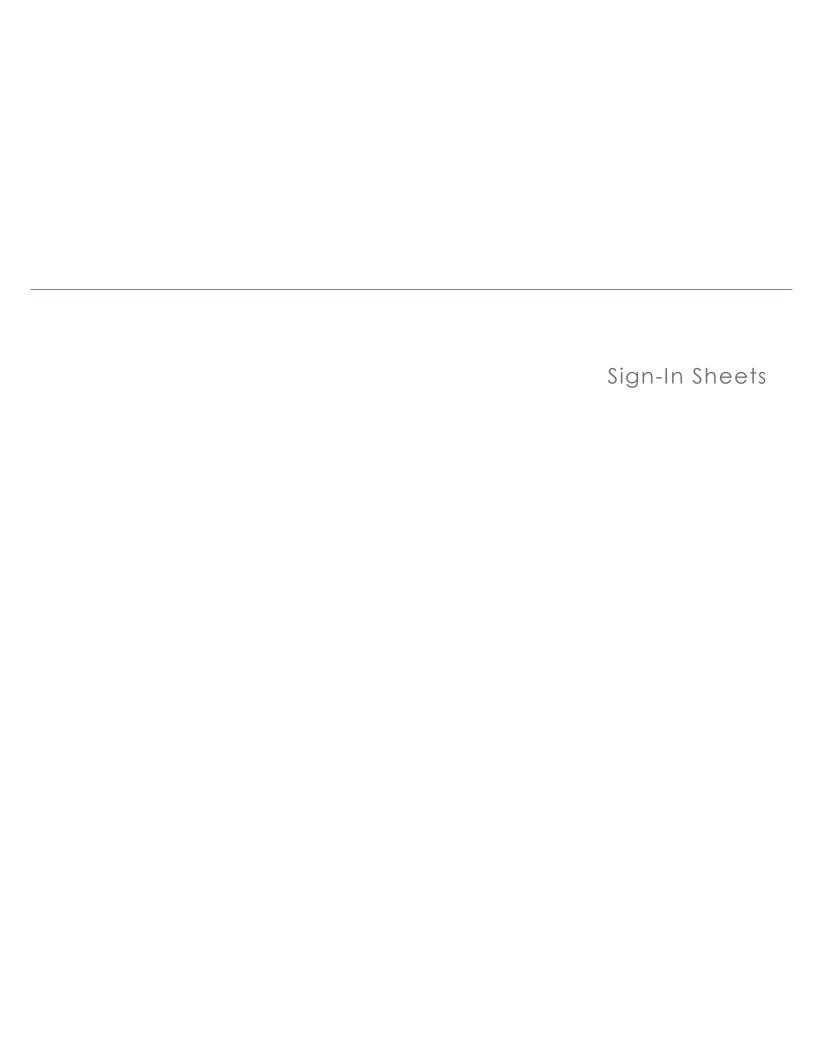
Project Manager GM BluePlan 1260 2nd Avenue East, Unit 1 Owen Sound, ON N4K 2J3 519-376-1805 john.slocombe@gmblueplan.ca

Mr. Tom Gray, P.Eng.
Manager of Public Works
Town of South Bruce Peninsula
315 George St, PO Box 310,
Wiarton, ON NOH 2TO
519-534-1400 ext 131
tsbppwmanager@bmts.com

WIARTON MASTER SERVICING PLAN







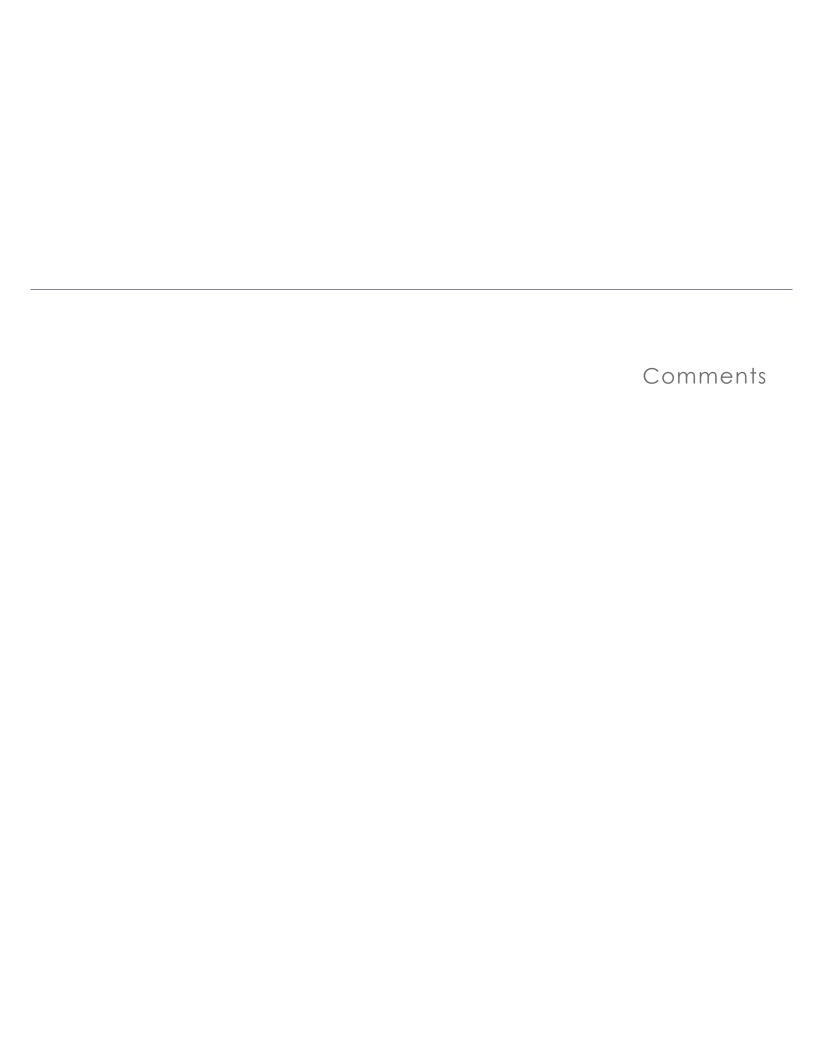




Town of South Bruce Peninsula – Wiarton Master Servicing Plan for Water, Sanitary, and Stormwater Services Public Information Centre #1 – October 30th, 2014

SIGN IN SHEET

Name (and Organization if applicable)	Street Address	City	Postal Code	Phone No.	Email
JOKOB VONDORP					
Jakos VanDorp	•				





Wiarton Master Servicing Plan for Water, Sanitary and Stormwater Public Information Centre # – October 30th, 2014

COMMENT SHEET

Contact Information:

Comments: MAIN CONCERNS AS FO

MAIN CONCERNS AS FULLOWS.

- PROBLEM EXISTS WITH STORM WATER INFILTRATION TO

SANITARY SINERS, SANITARY SINERS ARE OVERWHILMED

CAUSING SANITARY SINERS TO BACK UP INTO LOW LYING.

PROPERTIES. THIS SITUATION MUST BE CORRECTED?!

- RAW SINAGE DIRECTLY DISCHARGED INTO BAY WHEN

SYSTEM OVERWHILMED, PUMPS CANNOT KEEP UP!

- IRESPONSIBLE DEVELOPMENT ONLY CONSIDERED WHEN.

SYSTEMS CAN BAFFLY HANDLE CAPACITY!

- DEVELOPERS TO INCUR UPGRADE INFRASTRUCTURE COSTS

; NOT RATE PAYERS.

- TOWN & COUNTY MUST DO DUE DILIGENCE WHEN PROPOSALS

RECEIVED FROM DEVELOPERS-NOT SIMPLY ACCEPT

ENGINEERING REPORTS FROM THEIR MAIN CONSULTANTS, ALL

POLEVENT FACTORS MUST BE CONSIDERED. PROP TO APPRIMA

Please place your comment sheet in the drop box provided, or return by mail or fax within 7 days to:

Mr. John Slocombe, P.Eng.
Project Manager
GM BluePlan
1260 2nd Avenue East, Unit 1
Owen Sound, ON N4K 2J3
519-376-1805
john.slocombe@gmblueplan.ca

Mr. Tom Gray, P.Eng.
Manager of Public Works
Town of South Bruce Peninsula
315 George St, PO Box 310,
Wiarton, ON N0H 2T0
519-534-1400 ext 131
tsbppwmanager@bmts.com

Subject: FW: Wiarton Comprehensive Review

Attachments: A_2011_PAC_Report_SBPOPA_30.pdf; Wiarton Comp Review Final Report Oct2011.pdf

From: Jack Van Dorp [mailto:jvandorp@brucecounty.on.ca]

Sent: Friday, October 31, 2014 10:26 AM

To: 'john.slocombe@gmblueplan.ca'; James Jorgensen - GM BluePlan

Cc: Tom Gray (tsbppwmanager@bmts.com); Chris Laforest

Subject: Wiarton Comprehensive Review

Good morning Gentlemen,

A pleasure to meet with you yesterday at the P.I.C. for the Wiarton Master Servicing Plan and Municipal Class Environmental Assessment Study.

I have attached the comprehensive review that I mentioned (which I think that you already have).

In terms of land requirements for anticipated growth within the Wiarton Settlement area, my summary of this review (drawn from my 2011 staff report to TSBP Council regarding the proposed OPA #30, (full report attached) was as follows:

The Town commissioned a comprehensive review and initiated this application in order to meet the requirements of the PPS as it pertains to this [removal of lands from employment areas] section. The review:

- Focused upon the Wiarton Settlement Area as the only fully-serviced community within the Town, anticipating that the majority of new development will occur in Wiarton over the next 20 years;
- Identified that based on traditional growth and density projections an additional 12.5 hectares of employment lands will be required to meet employment growth demands for the next 20 years, including industrial, commercial, and institutional types of employment;
- Identified 137 hectares of available employment lands within the Wiarton settlement area, much of which is located in the Wiarton South area;
- Concluded that the lands are not required for employment purposes over the long term;
- Identified that 39.4 hectares of residential land are required to accommodate anticipated growth over the next 20 years based on traditional projections of population growth and density of development an estimated;
- Identified 23.9 hectares of residential land that are available for development, yielding a requirement of 15.5 additional hectares of residential land; and
- Concluded that there is demand for the designation of additional residential lands.

$[\dots]$

- The review does not provide a great deal of information about the need to expand the boundary of the Wiarton Settlement Area in order to accommodate the proposed development. This is due in part to the proposed expansion being outside of the original terms of reference for the review. Recognizing this limitation, I offer the following comments:
- There are significant areas of land which are within the Wiarton Settlement area boundary and which are designated "Rural" and zoned "FD" Future Development.
- These areas are noted as "Phase 3" (long term) in the Towns Infrastructure Phasing section of the Official Plan.
- It does not appear that circumstances favour the development of these lands, which include the former landfill site (now Dan Davidson ball diamond) and areas which are either lower than existing developed areas or high with bedrock near the surface making it difficult to install infrastructure.

• There is no rationale based on population growth models to **expand** the urban boundary to accommodate anticipated residential growth. The review has indicated that it is reasonable to expand the boundary to accommodate a stormwater management facility, as the proposed area for expansion appears to provide a reasonable location for such a facility. The proposed amendment will leave the lands within the rural designation, suitable for the stormwater management function.

I should also note that the comprehensive review did not evaluate *which* 12.5 hectares (or more) should be assigned for anticipated I/C/I uses.

From our discussions about the issues associated with lack of a stormwater outlet for the lands immediately adjacent to Highway 6 (given jurisdictional issues) it may be worth considering retaining industrial and highway commercial land designations within areas that can drain to the west to accommodate growth in the event that jurisdictional issues cannot be resolved. I look forward to further discussions in respect of this area and to working with yourselves and the Town to identify the appropriate mixture of uses to inform infrastructure demand values for this area.

Sincerely,

Jack.

Jakob Van Dorp, B.Sc., M.Pl.
Planner
County of Bruce
Planning and Economic Development
(519) 534-2092 x 125
jvandorp@brucecounty.on.ca

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Town of South Bruce Peninsula Planning Report

APPENDIX A - NOV 15 REPORT TO PAC

Application: SBP LOPA SBP OPA 30

Date: November 15, 2011



FROM: Jakob Van Dorp, Planner for the Town of South Bruce Peninsula

County of Bruce Planning & Economic Development Department

SUBJECT: Amendment to the Town of South Bruce Peninsula (TSBP) Official Plan

REASONS FOR AND NATURE OF THE APPLICATION:

The Town of South Bruce Peninsula (TSBP) has made an application to amend its Local Official Plan to:

- Change land use designations and policies within the Wiarton settlement area from Industrial and Highway Commercial to Residential and Village Core.
- Amend policies regarding the development of lands within the Highway Commercial designation,
- Add approximately 20.65 hectares of land to the Town Boundary, placing it within the rural designation.

A comprehensive review has been provided as required by the Provincial Policy Statement (PPS) to support the conversion of lands designated for employment to non-employment uses.

SUMMARY OF APPLICATION:

Section 16 of the Planning Act outlines the contents of an Official Plan as containing the goals, objectives and policies established primarily to manage and direct physical change and the effects on the social, economic and natural environment of the Municipality. Sections 21 and 22 outline the process for Council to follow in order to consider an amendment to its Official Plan. The following recommendation is made:

PRELIMINARY RECOMMENDATION:

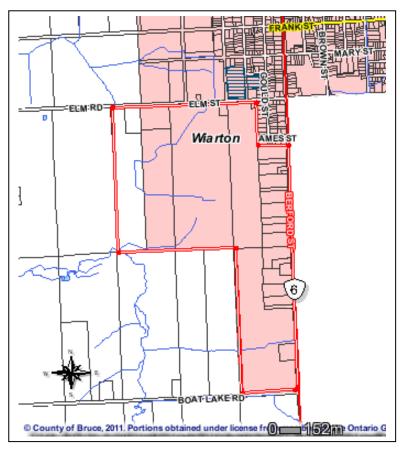
Subject to review of objections and submissions arising from the public hearing the following recommendation is made:

THAT the Planning Committee receive report SBP OPA 30, and;

THAT the Planning Committee DEFER any decision on this application until the Ministry of Municipal Affairs and Housing has provided comments on the application.

SBP OPA 30 Town of South Bruce Peninsula

I. CONTEXT



The subject lands consist of the southwest corner of the Wiarton Settlement area, and are proposed to be accessed via Elm Street and Highway 6 through the proposed "Thomas Norris Drive." The majority of the lands drain to the west and to the north-west, with areas near Highway 6 draining to the east under Highway 6 and into the Township of Georgian Bluffs.

An airphoto is included in Appendix 'A' and a draft amendment schedule is included in Appendix

II. PROPERTY INFORMATION SUMMARY

Related File(s)	N/A		
Applicant	Town of South Bruce Peninsula		
Agent	Cuesta Planning Consultants, Inc.		
Legal Description	Pt Lots 1,2,3 Concession 21 (Amabel and Wiarton)		
Municipal Address	N/A		
Lot Description: Frontage Depth Area	+/-800 m (ft) +/-1006 m (ft) +/- 95 hectares (235 acres)		
Uses Existing Proposed	Rural, Residential Residential, Commercial, Village Core		
Structures Existing Proposed	Barn, Silo, Single-Detached dwelling, sheds Residential and Commercial		
Access	Year-Round Municipal Road - Elm Street, Thomas Norris Drive to be constructed		
Servicing	Municipal Water and Sewer to be provided		
Planning County Official Plan Policies	Wiarton Urban Area, Rural Designation, Agricultural Designation, karst constraint		
Local Official Plan	Residential, Industrial, Highway Commercial and Industrial, Rural, Agricultural		
Zoning By-law	122-2009 FD-a Future Development, C6-h Highway Commercial Holding		
Subject Lands	See attached key map on reverse.		
Surrounding Land Uses	Residential, Rural, Highway Commercial, Industrial		

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III. MATTERS ARISING FROM AGENCY CIRCULATION

The standard agencies were circulated for their comments regarding the application.

Grey County advised that it has no concerns subject to MTO approval of the application.

The **Historic Saugeen Metis** have no objection / opposition to the application, but have requested all information related to the "Adult Lifestyles" development with regard to environmental and archaeological studies.

<u>Comment</u>: Environmental and Archaeological studies have not been required for this stage of the development approval process. HSM will be notified of further applications related to the subject lands.

The **Town staff** has no objection to the application provided it complies with all applicable law.

The **Bruce County Highways Department** has no concerns as the subject lands are not located on a County Road.

The **Ministry of Transportation** advised they have not yet received copies of a by-law that opens "Thomas Norris Drive" and as such the road cannot be considered to provide an access to the lands from Highway 6. MTO staff advised that the Municipality move to open this road as quickly as possible.

Comment: MTO also forwarded their comments to the Town.

The Grey Sauble Conservation Authority reported that portions of the lands proposed for redesignation are regulated under Ontario Regulation 151/06 Regulation of Development, Interference with Wetlands & Alteration to Shorelines & Watercourses. GSCA also identified hazard lands susceptible to flooding and erosion of watercourses and wetland features on the property, and further identified that areas of the property exhibit local drainage issues and a high water table which, though not mapped as natural hazards, may constrain development and require additional considerations. Additionally, watercourses on the property may provide habitat for fish species, requiring a 30 metre setback and preservation of native vegetation buffers. GSCA requested that the hazard lands as indicated be included on the proposed Official Plan Schedule, and advised that an EIS scoped to focus on potential impacts on fish habitat will be required prior to development.

<u>Comment</u>: The recommendations of the Conservation Authority have been included in the Schedule for the Official Plan Amendment. *Section 10.1 Land Use Boundaries and Roads* provides that:

It is intended that the boundaries of the land use classifications and the location of roads, as shown on the Schedules attached hereto, are considered as approximate and absolute only where bounded by roads, railways, shorelines, rivers, canals or other similar geographical barriers. Therefore, amendments to be Official Plan will not be required in order to make minor adjustments to the location of land use boundaries provided that the general intent of the Official Plan is preserved. Such minor deviations need not be reflected on the attached Schedules.

It is important to indicate the boundaries of these hazard features to ensure their consideration and protection, and it is noted that the boundaries of these features may be further refined subject to the studies undertaken to support the development of the site.

The **Ministry of Municipal Affairs and Housing** has requested additional time to review the application and its supporting information.

<u>Comment:</u> The Ministry of Municipal Affairs and Housing is not the approval authority for the application; however it may file an appeal if it disputes the consistency of the application with the Provincial Policy Statement. MMAH concerns may be most effectively addressed prior to adoption of the amendment, through which a lengthy and potentially costly appeal may be avoided.

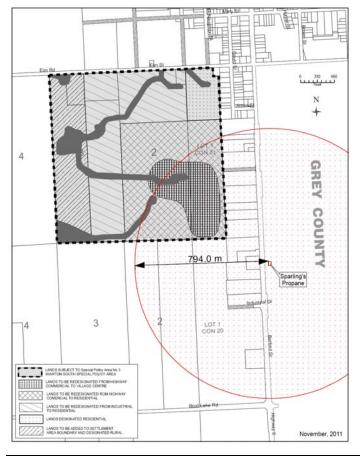
IV. MATTERS ARISING FROM PUBLIC CIRCULATION

The application was circulated to the public within 120 m (400 ft) of the property on October 24, 2011. Signs were posted on the subject lands advising of the application, and notice was placed in the Owen Sound Sun Times on October 25th and the Wiarton Echo on November 1st.

At the time that this report was written one letter in objection the development and one letter in support of the development has been received. (Please see Appendix C).

The letter of objection was received from Sparling's Propane; the company has a propane depot located at 010097 Highway 6 (Part Lt 1 Concession 20, Township of Georgian Bluffs). The facility is now subject to O. Reg. 440-08 and the TSSA regulations.

The regulations require that each propane facility calculate a hazard distance; the hazard distance of the Wiarton facility is 794 m and shown below. Sparling states that any sensitive uses such as aged care and other facilities difficult to evacuate should be located outside of the hazard distance.



Ontario Regulation 440-08 Propane Storage and Handling are the result of the explosion at Sunrise Propane in Toronto 2008. The regulations came into force and effect only recently and there is little information currently available for municipalities on how to deal with the situation. The Planning Department together with Town staff will investigate further and provide more information as soon as possible.

Any further comments received in the interim have been compiled for presentation to Council at the public meeting.

IV. MATTERS ARISING FROM PROVINCIAL INTERESTS, POLICY STATEMENTS OR PLANS

See Appendix 'D'. Under Section 3 of the *Planning Act*, the Municipality "shall be consistent with" matters of provincial interest as set out in the Provincial Policy Statement (PPS). The sections as outlined in Appendix 'C' apply. Further discussion is provided below.

Section 1 of the PPS outlines priorities for building strong communities, largely through efficient use of land and infrastructure.

Section 1.1.3.9 deals with settlement areas, and provides that

A planning authority may identify a *settlement area* or allow the expansion of a *settlement area* boundary only at the time of a *comprehensive review* and only where it has been demonstrated that:

- a. sufficient opportunities for growth are not available through *intensification*, *redevelopment* and *designated growth areas* to accommodate the projected needs over the identified planning horizon;
- b. the *infrastructure* and *public service facilities* which are planned or available are suitable for the development over the long term and protect public health and safety;
- c. in prime agricultural areas:
 - 1. the lands do not comprise specialty crop areas;
 - 2. there are no reasonable alternatives which avoid prime agricultural areas; and
 - 3. there are no reasonable alternatives on lower priority agricultural lands in *prime agricultural areas*; and
- d. impacts from new or expanding *settlement areas* on agricultural operations which are adjacent or close to the *settlement area* are mitigated to the extent feasible.

Section 1.3 of the PPS deals with employment areas and provides that:

- **1.3.1** Planning authorities shall promote economic development and competitiveness by:
 - 1. providing for an appropriate mix and range of employment (including industrial, commercial and institutional uses) to meet long-term needs;
 - 2. providing opportunities for a diversified economic base, including maintaining a range and choice of suitable sites for employment uses which support a wide range of economic activities and ancillary uses, and take into account the needs of existing and future businesses;
 - 3. planning for, protecting and preserving employment areas for current and future uses; and
 - 4. ensuring the necessary *infrastructure* is provided to support current and projected needs.

The PPS further directs that:

1.3.2 Planning authorities may permit conversion of lands within *employment areas* to non-employment uses through a *comprehensive review*, only where it has been demonstrated that the land is not required for employment purposes over the long term and that there is a need for the conversion.

The Town commissioned a comprehensive review and initiated this application in order to meet the requirements of the PPS as it pertains to this section. The review:

 Focused upon the Wiarton Settlement Area as the only fully-serviced community within the Town, anticipating that the majority of new development will occur in Wiarton over the next 20 years;

- Identified that based on traditional growth and density projections an additional 12.5 hectares of employment lands will be required to meet employment growth demands for the next 20 years, including industrial, commercial, and institutional types of employment;
- Identified 137 hectares of available employment lands within the Wiarton settlement area, much of which is located in the Wiarton South area;
- Concluded that the lands are not required for employment purposes over the long term;
- Identified that 39.4 hectares of residential land are required to accommodate anticipated growth over the next 20 years based on traditional projections of population growth and density of development an estimated;
- Identified 23.9 hectares of residential land that are available for development, yielding a requirement of 15.5 additional hectares of residential land; and
- Concluded that there is demand for the designation of additional residential lands.

The PPS defines a Comprehensive Review as:

an official plan review which is initiated by a planning authority, or an official plan amendment which is initiated or adopted by a planning authority, which:

 is based on a review of population and growth projections and which reflect projections and allocations by upper-tier municipalities and provincial plans, where applicable; considers alternative directions for growth; and determines how best to accommodate this growth while protecting provincial interests;

<u>Comment</u>: Forecasts used in the review were based on shares of population growth going to primary and secondary communities (such as Wiarton and Sauble Beach) versus hamlets and rural areas.

2. Utilizes opportunities to accommodate projected growth through intensification and redevelopment;

<u>Comment</u>: The review's Land availability estimates included an inventory of available vacant lands and an assumption that lands suitable for infilling would be pursue for development prior to applications for lot creation.

3. confirms that the lands to be developed do not comprise specialty crop areas in accordance with policy 2.3.2;

Comment: The lands are either vacant or used for pasture only.

4. Is integrated with planning for infrastructure and public service facilities; and

<u>Comment</u>: The review identified that Infrastructure capacity is available to initiate service to the site:

- Water supply services will require extension of water mains within the site.
- The municipal sewage system has limited additional capacity, and the proposal will require an additional pumping station, forcemain and trunk sewer, upgrades to the existing Elm Street / Taylor Street pumping station, and construction of local sanitary sewers.
- Preliminary investigations into Stormwater management have indicated maintaining existing drainage patterns and constructing onsite ponds as a solution.

In addition, previous investigations of infrastructure to the area have proposed to include extension of services to enable further development of industrial and commercial-designated lands to the South. Inability to secure MTO approval for underground infrastructure along Highway 6 suggests that servicing this area from a an internal road / infrastructure network may be required.

5. considers cross-jurisdictional issues.

Comment: Cross-jurisdictional issues are related to stormwater management. The Ministry of Transportation is unwilling to accept additional flows from the Wiarton South through its drain beneath Highway 6, which leads into Georgian Bluffs. The proponents of the "Adult Lifestyle" Community have indicated a willingness to consider receiving stormwater flows from adjacent parcels into a comprehensive stormwater management system. This may address development constraints on parcels adjacent to Highway 6.

The review does not provide a great deal of information about the need to expand the boundary of the Wiarton Settlement Area in order to accommodate the proposed development. This is due in part to the proposed expansion being outside of the original terms of reference for the review. Recognizing this limitation, I offer the following comments:

- There are significant areas of land which are within the Wiarton Settlement area boundary and which are designated "Rural" and zoned "FD" - Future Development.
- These areas are noted as "Phase 3" (long term) in the Towns Infrastructure Phasing section of the Official Plan.
- It does not appear that circumstances favour the development of these lands, which include the former landfill site (now Dan Davidson ball diamond) and areas which are either lower than existing developed areas or high with bedrock near the surface making it difficult to install infrastructure.
- There is no rationale based on population growth models to **expand** the urban boundary to accommodate anticipated residential growth. The review has indicated that it is reasonable to expand the boundary to accommodate a stormwater management facility, as the proposed area for expansion appears to provide a reasonable location for such a facility. The proposed amendment will leave the lands within the rural designation, suitable for the stormwater management function.
- Infrastructure and service facility details have not been determined at this time.
- The lands are not within a prime agricultural area, and will have limited impact on agricultural operations adjacent or close to the settlement area. Investigation of the area indicates that there is one (1) bank barn outside of the settlement area boundary which is located approximately 182 metres from the closest lot line of the proposed expanded urban boundary. Conservative Minimum Distance Separation (MDS) calculations based on the dimensions of this facility would require a setback of 226 metres (See Appendix D). The barn appears to serve approximately 75 acres of open pastured area. No livestock were visible on the property at the time of the visit. Other barn outside of the settlement area which may be affected by the expansion appear in 2006 airphotos of the area but have since collapsed.

In addition to comprehensive review policies, the PPS also provides specific direction regarding infrastructure:

Section 1.6.4 Sewage and Water

1.6.4.1 Planning for sewage and water services shall:

- a. direct and accommodate expected growth in a manner that promotes the efficient use of existing:
 - 1. municipal sewage services and municipal water services; and
 - 2. private communal sewage services and private communal water services, where municipal sewage services and municipal water services are not available;
- b. ensure that these systems are provided in a manner that:
 - 1. can be sustained by the water resources upon which such services rely;
 - 2. is financially viable and complies with all regulatory requirements; and
 - 3. protects human health and the natural environment;

- c. promote water conservation and water use efficiency;
- d. integrate servicing and land use considerations at all stages of the planning process; and
- e. subject to the hierarchy of services provided in policies 1.6.4.2, 1.6.4.3 and 1.6.4.4, allow lot creation only if there is confirmation of sufficient reserve sewage system capacity and reserve water system capacity within municipal sewage services and municipal water services or private communal sewage services and private communal water services. The determination of sufficient reserve sewage system capacity shall include treatment capacity for hauled sewage from private communal sewage services and individual on-site sewage services.

These directives of the PPS cannot be answered at this time due to the lack of information available. I would caution the Town to consider that concurrent to its consideration of this application and its associated infrastructure requirements there appear to be potentially significant issues with existing municipal sewage and water infrastructure in Wiarton. The Municipality may wish to consider its ability to sustain an increased infrastructure service system over the long term.

The application is consistent with the Provincial Policy Statement provided that it can be serviced for the long term.

V. MATTERS ARISING FROM COUNTY OFFICIAL PLAN

The County of Bruce Official Plan places the property within the **Wiarton Primary Urban Area**. Primary urban areas are intended to accommodate the largest concentration and widest range of residential, tourism, economic and social services and facilities, and the Plan directs the majority of permanent population growth to primary urban communities. Permitted uses include a broad variety of residential, home occupation, commercial, industrial, and institutional land uses.

The proposed re-designation of the lands is within the range of permitted uses and conforms to the objectives of the County Official Plan.

With regard to the expansion of the urban area, Section 5.3.3.5 Future Land Needs provides that

- .1 The land use policies of this Plan have been developed on the assumption that the majority of future urban growth in the County can be accommodated in existing urban areas designated for development purposes.
- .2 It is intended therefore that with the exception of minor boundary expansions, the County will not need to designate new urban areas to accommodate the anticipated future growth of the County over the planning period. However, should an application be proposed to add new large urban areas for development purposes, the following matters should be addressed:
 - A documented justification of need for the major expansion of the urban boundary including consideration of alternative areas for expansion with the intent of minimizing the impacts on the environment and natural resources, including agricultural lands;
 - ii) A major servicing strategy indicating how the currently designated lands, and proposed new lands will be serviced; and
 - iii) Any other studies required by the Municipal Council.

A report has been submitted in the form of the comprehensive review document. As noted, above, this report does not provide significant rationale providing a basis for the expansion of the urban area boundary. County staff have advised the Town and the proponents of the need to undertake a major servicing strategy for the entire Wiarton South area, with servicing of the existing and proposed expansion area designations as part of the amendment process and prior to consideration of the amendments. The Town has requested that the application proceed and

that the servicing strategy be initiated prior to development of the site and has included provisions to this effect in the proposed amendment.

This approach would adds lands to the urban boundary for which there is no rationale save for their potential to assist in stormwater management but provides no documentation or demonstration that these lands can or will fulfill that function. The proposed expansion is likely premature, and should Council wish to proceed with the expansion, Council should have the confidence that sufficient resources are available to proceed with the strategy and its recommendations.

The proposal to expand the urban boundary appears to be premature; however, the application maintains the intent and purpose of the policies of the Bruce County Official Plan provided the major servicing strategy required in 5.3.3.5.2 (ii) is undertaken.

VI. MATTERS ARISING FROM LOCAL PLANNING DOCUMENTS

TOWN OF SOUTH BRUCE PENINSULA OFFICIAL PLAN

The local Official Plan designates the subject lands as **Residential**, **Industrial**, **and Highway Commercial and Industrial**. The proposal would place the lands in the **Residential** and **Village Centre** designations within a special policy area.

Section 11.5.2 provides criteria for amendment to the Wiarton Community Plan.

The submission of a Community Plan Amendment to the Town shall be accompanied by a detailed site plan of the proposed development and a report which addresses the following questions:

i) Does the Amendment comply with the Vision for the Town of Wiarton?

Wiarton's Vision is based on ensuring the highest quality of life possible for all its residents. Central to this is the protection of the health of the Community and the wise and sustainable use of the area's natural resources.

Wiarton will continue to play a prominent regional role and create a positive economic climate for new investment and employment opportunities. These new opportunities will emphasize Wiarton as a tourist destination and promote the enjoyment and appreciation of the natural and cultural resources of the Community and the Bruce Peninsula.

The future growth of Wiarton will complement its small town atmosphere and recognize the Community's heritage as being of central importance to its sense of identity. The enhancement of the heritage resources of the downtown will reinforce its role as the commercial, social and cultural centre of the Community.

Demands placed upon Wiarton's services will grow as the area continues to attract individuals looking for an improved quality of life. The provision of these services will be balanced with the Community's ability to pay for them and the co-operation of the surrounding municipalities to ensure that the services meet the diverse needs of the area residents.

Comment: The proposal has the potential to contribute to a positive economic climate for new investment and employment opportunities. I have advised the Town and proponent and continue to be concerned about the impact of the proposed development on the plan function of the downtown as the commercial, social and cultural centre of the Community and the Highway Commercial area along Highway 6 as the optimal location for larger format and vehicle-oriented uses that cannot be accommodated in the downtown core.

ii) Does the Amendment further the Goals and Actions of the Plan?

It is a goal to:

- Recognize Wiarton's heritage as being of central importance to the Community's sense of identity.
- b) Protect and enhance Wiarton's built heritage for its cultural, historic and economic value to the Community.

- c) Provide a positive economic climate which will encourage private investment and create a wide range of employment opportunities within the Community.
- d) Protect, enhance, and where warranted, restore Wiarton's healthy environment by minimizing air, water and land pollution and by the wise use of the area's natural resources.
- e) Improve community facilities and infrastructure that address the social, environmental and economic needs of the Community.
- f) Provide a full range of affordable, municipal services to meet the social, environmental and economic needs of the Community.
- g) Promote the waterfront as Wiarton's primary recreation and tourism resource.
- h) Ensure that municipally owned lands provide a broad range of recreation and open space opportunities for all area residents and visitors.
- i) Support the protection of the Niagara Escarpment for its ecological, visual and economic importance to the Community.
- j) Promote a transportation system which allows for the efficient movement of goods and people, and provides for economic opportunities within the Community.
- k) Promote a mixed and affordable supply of housing to meet the present and future needs of all segments of the Community.
- Promote a diverse and balanced commercial base which serves the needs of area residents and visitors.
- m) Make the downtown the economic focus of the Community.
- n) Promote the establishment of light and environmentally clean industry in order to diversify the economic base and employment opportunities within Wiarton.
- o) Maintain and enhance the existing regional and community institutions within the Town for their economic, social and cultural importance.

Comment: The application is generally consistent with the majority of these goals. In particular, discussions with the proponents to date have referred to a desire to advance goal (k) being to provide for affordable housing for the present and future needs of all segments of the community; this goal is further elaborated in the Residential Land Use Policies (11.3.1) section related to providing a range of housing types and designs and housing affordability.

The application does not appear to further goal (m) which emphasizes that the downtown should be the economic focus of the Community. Goals and Actions within the Commercial land use designations (Section 11.3.2) include "Maintain and enhance the downtown as the economic focus of the Community." And "Permit commercial development outside the downtown core only if it cannot be located within the downtown or will not have a negative impact on the viability of the downtown." As noted the proposal has potential to contribute to a positive economic climate for new investment and employment opportunities.

iii) If the Amendment does not further the Goals and Actions, have circumstances changed to make the Goals and Actions invalid in relation to the proposal development?

Comment: The application is for the most part consistent with or does not affect the Goals and Actions of the plan. Please note the following:

- The application proposes to change circumstances through significant amendment to the plan to establish a new community to the South of Town.
- Residential growth of the scale forecasted will have some commercial demands which may
 not be readily met by the existing downtown, in part due to its distance, and will also create
 some demand for additional commercial development.
- The 14 hectare size of the proposed "Village Centre" is very close to that of the +/- 16 hectare downtown area which is currently fully serviced and zoned for a variety of uses. No information has been provided to demonstrate that the sum of the proposed residential and commercial development will enable the downtown to remain the economic focus of the community while retaining development configurations and characteristics of a "Highway Commercial" area. The text of the amendment provides

that "Development in the "Village Centre" designation shall not affect the economic viability of other commercial areas in the Town" but makes no specific provision to ensure that this will be the case. The amendment proposes 1000 square metres (10,760 sq ft) of commercial floor area to serve up to 150 dwelling units within the first phase, prior to Environmental Assessments and the master development agreement being completed.

iv) Is the Amendment in keeping with Provincial and County policy?

Comment: These policies have been discussed above.

v) Is there a demonstrated need for the proposed development?

Comment: The comprehensive review has indicated a need for approximately 39.4 hectares of residentially-designated lands within the Wiarton Settlement Area in the next 20 years.

vi) Can the lands affected be adequately serviced to accommodate the proposed development? What improvements shall be required to properly service the land?

Comment: Details are not available at this time as Environmental Assessments have not been completed. Preliminary indications are that total infrastructure capacity of water and sewer systems is not sufficient at this time to enable the complete "build out" of the site. It is expected that at minimum, in addition to onsite infrastructure an additional pumping station, forcemain and trunk sewer, and upgrades to the existing Elm Street / Taylor Street pumping station will be required. Existing issues with Town infrastructure have been noted above.

vii) What impacts will the proposed development have on surrounding land uses, traffic movements, servicing, built heritage and natural environment. How can these impacts be eliminated or minimized?

Comment: Details are not available at this time. The amendment, which proposes to permit Highway Commercial, Industrial, Multi-family residential, assisted living, professional services and institutional uses, community facilities, and open space within the "village centre" designation may create juxtapositions of incompatible uses and limit development opportunities of adjacent lands within other designations such as the industrial and industrial-commercial designations to the south and east.

Highway Commercial Policy Amendments:

The amendment proposes to revise Section 11.3.3.4 Highway Commercial and Industrial area policies as follows:

#	Current Policy	Proposed Policy
a	Council shall encourage the majority of new Highway Commercial and Industrial development to locate between the Ames Street intersection with Highway #6 and the southern boundary of the settlement area	Council shall encourage the majority of new Highway Commercial and Industrial development to locate in the south end.
	Rationale: simplifies the policy	
b	In the absence of municipal sewer and water systems, highway commercial and industrial uses which do not require or create large volumes of water and can be serviced by septic tanks and private well systems shall be permitted. Appropriate highway commercial and industrial uses shall be determined on an individual basis and shall be assessed by the Ministry of the Environment and Energy, or their agent, based upon the type and volume of waste	Deleted

		<u> </u>				
	produced, the size of the proposed lot and the nature of					
	the soils.	Deleted				
С	If development takes place on private services, the	Deleted				
	developer shall be required to enter into an agreement					
	covering the equitable distribution of the costs of					
	eventually extending municipal services to the					
	development. As new development occurs on private					
	services, each site must be pre-engineered for future					
	connection to municipal water and sewage systems.	en en la company de la company				
	Rationale: Town Staff recommend that all new developr municipal services.	nent be required to have full				
d	In order to ensure that the Highway Commercial and	ADD to beginning:				
u	Industrial lands develop as attractive entrances to the	"The area provides the				
	community, it shall be a policy of the Town that the	principal entrance to the				
		community and "				
	following site development standards be satisfactorily	ADD to (ii)				
	addressed by all Highway Commercial and Industrial					
	development proposals: i) landscaping shall be provided between any Highway	"Uses containing outdoor storage areas are				
	commercial and Industrial use or parking areas and the	encouraged to locate on				
	adjacent highway, except for designated entrances and	interior streets, not fronting				
	exits;	onto the highway"				
	ii) all outdoor storage for uses other than automotive and	ADD to (iii)				
	recreational vehicle dealerships should be located to the	"No billboards are permitted				
	rear or side of the main building on the lot and shall be	and freestanding signs are				
	fenced or suitably screened from adjacent uses;	discouraged;"				
	iii) signs shall be limited in number and designed to be	discouraged,				
	functional and avoid visual clutter and distraction, and					
	where possible should be consolidated on shared sign					
	structures;					
	iv) underground wiring for hydro, telephone, and other					
	transmission lines shall be promoted; and,					
	v) vehicular parking for employees shall be restricted to the					
	side or rear of the principal building and screened from					
	surrounding uses and views from the street. Rationale: These proposals have been put forward by the Town's consultant for the					
	Comprehensive Review. The report notes "The prime focus of					
	to provide a more attractive streetscape for the southern er					
	development standards could be strengthened by prohibiting	3				
	front of buildings by means of a zoning By-law modification.					
	limited to fascia and ground signage or prohibiting free stan					
	In order to achieve effective implementation of these stand					
	to municipal zoning and sign by-laws.	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2				
f	Adequate off-street customer parking facilities shall be	INSERT "Parking between the				
	provided and shall be located to the rear and side of the	principal building and the				
	principal building fronting on Highway #6 (Berford Street).	highway shall generally be				
	Development proposing customer parking in the front yard	prohibited."				
	must demonstrate that no other feasible option exists for	p. stillottost				
	accommodating the needed parking.					
	Rationale: This added text follows-up and reconfirms the inter	nt of the policies applied to				
	employee parking to screen Highway 6 from parking areas.					
h	All parking areas shall be appropriately illuminated to	ADD: "Dark sky lighting shall				
`	ensure the safety of pedestrian and vehicular access.	be required."				
ш	chaire the safety of peacethan and verifical access.	1 20 10 quillou.				

	Rationale: The Peninsula is a dark sky area. Dark sky lighting fixtures are now widely available			
	and provide a number of benefits including energy efficiency. As above, complete			
	implementation may require amendment to other policies.			
k	The minimum lot size shall be dependent on the nature of	DELETE "and the method of		
	the use, the topography and drainage, and the method of	sewage treatment and		
	sewage treatment and disposal.	disposal."		
	Rationale: Maintain consistency requirements discussed above for development to proceed			
	based on full municipal services.			

Summary:

The proposed amendment appears to be premature in the absence of detailed information indicated in the plan. Information which is available identifies a surplus of industrial and commercial lands and a need to designate additional lands for residential uses over the next 20 years. I caution against an amendment which would provide detailed information only after the principle of development has been committed. If the Town proceeds with the amendment at this time a requirement for market studies be included alongside the Environmental Assessments as part of the Master Plan development process. This is needed to ensure that the outcome of the amendment will remain consistent with the plan functions of the existing designated Downtown and Highway Commercial and Industrial designations. The proposed amendments to existing "Highway Commercial and Industrial" policies are consistent with the intent of the plan and the desired development outcome for the area.

TOWN OF SOUTH BRUCE PENINSULA COMPREHENSIVE ZONING BY-LAW 122-2009

CURRENT ZONING FD-a Future Development, C6-h

PROPOSED ZONING

To be determined

The existing FD-a zoning permits Agricultural uses excepting no new buildings, structures or expansions to existing uses, buildings and structures, Existing uses at the date of passage of this By-law (September 2009), Home occupations, and detached dwellings on private septic and municipal water in accordance with R1A (unserviced detached residential) zone provisions.

The C6-H zoning permits Highway Commercial uses subject to the holding provision being lifted from the property. A summary of these uses is provided in Appendix E. Lands within the Special Policy Area which are subject to the C6-h zone do not currently front onto an opened and maintained road.

The current proposal will yield an official plan schedule which does not coincide with the boundaries of the zoning schedule. Zoning amendments and lifting of holding provisions will be required to pursue development on the subject lands, and should be pursued as part of the approval process for the master plan and for the "Phase 1" which is proposed.

The proposal conforms to the intent and purpose of the TSBP Comprehensive Zoning By-Law 122-2009.

VIII. OTHER MATTERS

The review of Provincial, County and Local policies provided above makes it clear that major redesignations of land and urban boundary expansions need to be accompanied by sufficient information about the ability of the lands to be efficiently and sustainably serviced. If Council wishes to pursue the amendment in advance of this information being developed and provided it should provide sufficient direction to initiate and ensure completion of the required studies.

VII. SUMMARY & RECOMMENDATION

THAT the Planning Committee receive report SBP OPA 30, and;

THAT the Planning Committee DEFER a decision on this application until the Ministry of Municipal Affairs and Housing has provided comments on the application.

Submitted by:

Jakob Van Dorp B.Sc. M.Pl.

Position: Municipal Planner – Town of South Bruce Peninsula County of Bruce, Planning & Economic Development

APPENDIX A - AIR PHOTO



APPENDIX B DRAFT AMENDMENT SCHEDULE



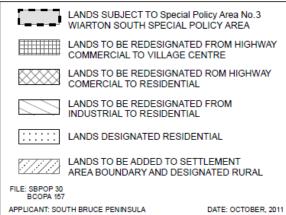
SCHEDULE 'A'

το

Amendment No. 30

TOWN OF SOUTH BRUCE PENINSULA OFFICIAL PLAN

Lot 1 to 3 Concession 21 Town of South Bruce Penisula (Wiarton) COUNTY OF BRUCE



APPENDIX C PUBLIC COMMENTS

(see following pages)

November 7, 2011

Via e-mail to bcplwi@brucecounty.on.ca

Sabine Robart County of Bruce Planning Department 578 Brown Street Wiarton, Ontario NOH 2T0

<u>Subject: Official Plan Amendment - Your File SBP OPA 30 and Associated File BCOAPA 158 and Sparling's Propane Facility - 010097 Highway 6, Wiarton, Ontario</u>

Dear Ms. Robart,

We have received Notice of a Public Meeting regarding an Official Plan Amendment to the Town of South Bruce Peninsula Official Plan. The proposed amendments would change the designation of the lands across the road from our facility from Highway Commercial and Industrial to Residential to accommodate an adult lifestyle community.

We are opposed to the amendment as the proposed use is not compatible with our existing use. The proposed use includes retirement home, nursing home, hospice and other similar uses. We believe these are not appropriate uses adjacent to existing industrial uses.

Sparling's Wiarton facility is subject to Ontario Regulation (O. Reg.) 440-08 and the Technical Standards & Safety Authority (TSSA) regulations. TSSA uses the modified Major Industrial Accidents Council of Canada (MIACC) criteria for "acceptable level risk" for new, existing and modified propane facilities. Dependent upon the location of the sensitive institutions (such as aged care facilities) this may affect our risk assessment.

O. Reg. 440-08 requires that each propane facility calculates an estimation of hazard distance using the United States' Environmental Protection Authority (EPA)



Sparling's Propane Co. Ltd.

Head Office: 82948 London Road, P.O. Box 423, Blyth, Ontario NOM 1H0

Phone: 519.523.4256 Fax: 519.523.9130 E-mail: infoBL@sparlings.com Web: sparlings.com

formula. The hazard distance calculated and submitted to the TSSA for our facility is 794-metres, as shown on the attached drawing. Hazard distance is the distance at which 1-pound per square (psi) inch overpressure would potentially be felt resulting from a vapour cloud explosion (worst case scenario) involving the contents of the single largest propane vessel at a particular site. The end point of the 1-psi overpressure was established as the threshold for potential serious injuries to people as a result of property damage caused by an explosion (e.g. injuries from flying glass from shattered windows or falling debris from damaged houses).

As shown on the drawing, part of the proposed change in designation falls within the hazard distance.

The hazard distance is also used by emergency responders to determine the approximate area to evacuate in the event of a major accident. While the probability of an incident of this nature is very remote and Sparling's meet and exceed the provincial regulations, evacuation of facilities such as nursing and retirement homes is difficult and onerous. This would be particularly difficult since the resources of the fire services are limited as the majority of the personnel are volunteers. Our view is that any sensitive uses such as aged care and other facilities difficult to evacuate should be located outside the hazard distance.

In addition to the foregoing, we oppose the change in designation for the following reasons:

- 1. there will be traffic issues;
- 2. there are other areas designated residential that are more suitable; and,
- 3. servicing for the proposed project is not satisfactory.

Thank you for the opportunity to comment.

Sincerely,

G. R. Steven Sparling President & CEO

6R Steumli

grss@sparlings.com

APPENDIX A - NOV 15 REPORT TO PAC Wiarton Planning Department

From:

To: Lynda Steinacker; Sabine Robart; Jack Van Dorp;

FW: File SBP OPA 30 - Town of South Bruce Peninsula Official Plan Amendment Subject:

Date: Wednesday, November 02, 2011 3:14:06 PM

From: James McKane[SMTP:JAMCKANE@GMAIL.COM]

Sent: Wednesday, November 02, 2011 3:12:43 PM

To: Wiarton Planning Department

Subject: File SBP OPA 30 - Town of South Bruce Peninsula Official Plan

Amendment

Auto forwarded by a Rule

ATTN: Jakob Van Dorp

An *Adult Lifestyle*

Community would be a perfect fit for Wiarton. The population growth taking place in the peninsula area is heavily weighted with retirees and those close to retirement. Many of these people are seeking to down-size to properties more suitable to their lifestyle which require little or no maintenance with a certain amount of conveniences readily available.

Most towns and cities with which I am familiar have

Village Centre -type developments

within residential areas of this size. These Village

Centres are necessary for convenience-type shopping by residents of the immediate area. In addition, the downtown core of Wiarton is some distance from this development and doubtfully could handle the additional parking requirements for convenience-type shopping on a day-today basis.

My understanding of the location involved would mean the added population would enhance the possibility and probability of further commercial/retail development along the Highway 6 corridor.

I look forward with great anticipation to the approval of this Official Plan Amendment.

Jim McKane 528 Mallory Beach Rd. Wiarton NOH 2TO 519-534-0988

APPENDIX D PPS DUE DILIGENCE

	I. PROVINCIAL POLICY STATEMENT (PPS)		
Policy Applies	Section Policy		Comment
	1.0	Building Strong Communities	
✓	1.1	Managing and Directing Land Use to Achieve Efficient Development and Land Use Patterns	
✓	1.1.3	Settlement Areas	
	1.1.4	Rural Areas in Municipalities	
	1.1.5	Rural Areas in Territory Without Municipal Organization	
	1.2	Coordination	
✓	1.3	Employment Areas	
	1.4	Housing	
	1.5	Public Spaces, Parks and Open Space	
	1.6	Infrastructure and Public Service Facilities	
✓	1.6.4	Sewage and Water	
	1.6.5	Transportation Systems	
	1.6.6	Transportation and Infrastructure Corridors	
	1.6.7	Airports	
	1.6.8	Waste Management	
	1.7	Long-Term Economic Prosperity	
	1.8	Energy and Air Quality	
✓	2.0	Wise Use and Management of Resources	CA had no objection;
✓	2.1	Natural Heritage	EIS / EAs to be required for development
	2.2	Water	
	2.3	Agriculture	
	2.3.3	Permitted Uses	
	2.3.4	Lot Creation and Lot Adjustments	
	2.3.5	Removal of Land from Prime Agricultural Areas	
	2.4	Minerals and Petroleum	
	2.4.2	Protection of Long-Term Resource Supply	
	2.4.3	Rehabilitation	
	2.4.4	Extraction in Prime Agricultural Areas	
	2.5	Mineral Aggregate Resources	
	2.5.2	Protection of Long-Term Resource Supply	
	2.5.3	Rehabilitation	
	2.5.4	Extraction in Prime Agricultural Areas	
	2.5.5	Wayside Pits and Quarries, Portable Asphalt Plants and Portable Concrete Plants	
	2.6	Cultural Heritage and Archaeology	
✓	3.0	Protecting Public Health and Safety	CA had no objection
	3.1	Natural Hazards	application
	3.2	Human-made Hazards	

APPENDIX E - MDS CALCULATIONS

Minimum Distance Separation I (MDS I) Report

MDS 1.0.2 26-Oct-2011 14:43 Page 1

26-Oct-2011 Application Date:

BCOPA 157, SBP OPA 30 File Number:

Preparer Information

Applicant Information Corporation of the Town of South Bruce @euninty.udaBruce Jakob Van Dorp

County of Bruce Town of South Bruce Peninsula Town of The South Bruce Peninsula

Box 129 Geotownship: AMABEL 578 Brown Street Concession: 21 Wiarton, ON, Canada N0H 2T0 Lot: 1 to 3

Burt Barn

NW of Lands to be added to urban boundary

Adjacent Farm Contact Information

Allan Burt

Town of South Bruce Peninsula

530 George St

Wiarton, ON, Canada N0H 2T0

Farm Location County of Bruce

Town of The South Bruce Peninsula

Geotownship: AMABEL Concession: Range 6 Lot: Park Lot 1 to 3

Roll Number: 410254000418900

Manure	Type of Livestock/Material	Existing	Existing	Estimated
Form		Capacity	NU	Barn Area
Solid	Beef; Shortkeepers (12.5 - 17.5 months)	30	15.0	181 m²

Encroaching Land Use Factor: Type B Land Use

This calculation is required for the purposes of a settlement area expansion. Manure/Material Storage Type: V3. Solid, outside, no cover, >= 30% DM

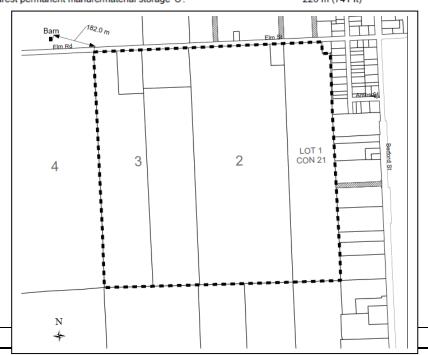
Factor A (Odour Potential): 8.0 Factor B (Nutrient Units): 183 Factor D (Manure/Material Type): Factor E (Encroaching Land Use): 2.2 Total Nutrient Units:

Distance from nearest livestock building 'F' (A x B x D x E): Distance from nearest permanent manure/material storage 'S':

Required Setback 226 m (741 ft) 226 m (741 ft)

Actual Setback 182 m (597 ft)





APPENDIX F - C6 HIGHWAY COMMERCIAL ZONE PROVISIONS

(see following pages)

HIGHWAY COMMERCIAL C6 APPENDIX A - NOV 15 REPORT TO PAC

22.1 SCOPE

No uses are permitted on lands zoned Highway Commercial Zone C6 unless expressly permitted by this Bylaw.

22.2 PERMITTED USES

- Assembly Hall
- Auction Sales Arena
- Automotive Body Repair Shop
- Automotive Sales & Service Establishment
- Automotive Service Station
- Automotive Washing Establishment*
- Bakery
- Banquet Hall
- Building Supply Outlet
- Bulk Fuel Depot
- Bulk Sales Establishment
- Bus Depot
- · Business & Professional offices
- Catering Establishment
- Place of Worship/ Place of Worship
- · Clinic, Veterinarian
- · Club, Private & Commercial
- Commercial Nursery or Greenhouse
- · Commercial school or studio
- Computer Programming Establishment
- Convenience Store
- · Data Processing Establishment
- Dry Cleaning Depot
- Equipment Sales, Rental & Leasing Outlet
- Factory Outlet
- Farm Implement Sales & Service Outlet
- Farm Supply Outlet
- · Farmer's Market
- Fitness Centre
- Flea Market
- Funeral Home
- Gas Bar
- Garden Centre
- Heavy Equipment Sales and Rental

- Hotel
- Kennel
- Laundromat
- · Motel, Motor Hotel
- Marine, Recreation and Small Engine Establishment
- Nursery /Garden Center / Greenhouse
- Parking Lot
- Personal Service Shop
- Post Office
- Public Uses
- Public Buildings
- Rental Outlet
- Restaurants (Dining, Drive-In, Drive-Thru, Take-Out)
- · Retail Food Store
- Retail Store
- · Recreational facilities
- Service or Repair Shop
- Shopping Centre/Mall
- Trailer, Recreational Sales and Service Establishment
- Tavern
- U-Brew Establishment
- Wholesale Outlets
- Wayside Pits
- Accessory Uses, Buildings & Structures in accordance with Section 6.1
- An 'Accessory Dwelling Unit Apartment above or behind the
 primary commercial use, the total
 floor area of which shall not exceed
 thirty percent (30 %) of the total
 ground floor area of the building

22.3 ZONE PROVISIONS

PROVISIONS	No municipal services	One or more municipal services	Full municipal services – Commercial Uses	Full municipal services – Industrial Uses
Minimum lot area	4,000 m ² (43,000 ft ²)	2,000 m ² (21,528.5 ft ²)	557.4 m ² (6,000 ft ²)	929 m ² (10,000 ft ²)
Minimum lot frontage	40 m (132 ft)	40 m (132 ft)	18 m (59 ft)	20 m (65.6 ft)

Minimum front yard	7.6AP (35 (1) DIX A	7.600(35隻) RFF	できずできずAC	7.6 m (25 ft)
Minimum interior side yard	10 m (33 ft)	10 m (33 ft)	3 m (9.8 ft)	10 m (33 ft)
Minimum exterior side yard	7.6 m (25 ft)	7.6 m (25 ft)	7.6 m (25 ft)	7.6 m (25 ft)
Minimum rear yard	7.6 m (25 ft)	7.6 m (25 ft)	7.6 m (25 ft)	7.6 m (25 ft)
Maximum building height	12.5 m (41 ft)	12.5 m (41 ft)	12.5 m (41 ft)	12.5 m (41 ft)
Maximum lot coverage	15 %	20 %	40 %	40 %

22.4 SPECIFIC REGULATIONS FOR AUTOMOTIVE SERVICE STATION; AUTOMOTIVE WASHING ESTABLISHMENT OR GAS BAR

Minimum lot area	1393.5 m ² (15,000 ft ²)
Minimum lot frontage	30.5 m (100 ft)
Minimum front yard	7.6 m (24.9 ft)
Minimum interior side yard	4.5 m (14.8 ft)
Minimum exterior side yard	7.6 m (24.9 ft)
Minimum rear yard	7.6 m (25 ft)
Maximum building height	12.5 m (41 ft)
Maximum lot coverage	40 %

22.5 FUEL PUMP ISLANDS/GAS KIOSKS

- a) Minimum Building Setback is 7.6 m (25 ft) from the front lot line. No fuel pump island, gas bar kiosk is to be located within the required Sight triangle established by Section 6.9 this By-law.
- b) Despite the above, canopies over pump islands and underground storage tanks are allowed to project 1.5 m (5 ft) from the Street Line.

22.6 ACCESSORY RESIDENTIAL UNITS

Despite any other provisions of this By-law to the contrary, accessory dwelling units are not permitted in association with an automotive service station, automotive washing establishment or gas bar.

22.7 REGULATIONS FOR ACCESS

Any point of ingress and egress to an automotive service stations, automotive washing establishment or gas bar shall not be located within 9 m (29.5 ft) of a street intersection, as measured at the curb line.

22.8 PROVISIONS FOR HOTELS AND MOTELS

Minimum lot area	1393.5 m ² (15,000 ft ²)
Minimum lot frontage	30.5 m (100 ft)
Minimum front yard	7.6 m (25 ft)
Minimum interior side yard	Half (½) the building height but in no case less than 3 m (9.8 ft)

Minimum exterior sign rand 13.6 m (850t) 15 REPORT TO PAC				
Minimum rear yard	7.6 m (25 ft)			
Maximum building height	12.5 m (41 ft)			
Maximum lot coverage	40 %			

22.8.1 Parking Space Regulation - Visitor

In addition to the required number of parking spaces set out in this By-law, a maximum of three visitor parking spaces for passenger vehicles may be provided in the required front yard for the first 15 m (49.2 ft) of front wall of the principal building plus one additional visitor parking space for each additional 7.5 m (24.6 ft) of front wall in excess of the first 15 m (49.2 ft).

22.9 SETBACK FOR WAYSIDE PITS AND TEMPORARY PORTABLE ASPHALT AND CONCRETE PLANTS

Wayside pits and quarries, portable asphalt plants and portable concrete plants used on public authority contracts shall be permitted, provided that no temporary portable asphalt plant may be situated closer than 90 m (295 ft) from a residential building.

APPENDIX G - DRAFT AMENDMENT

(see following pages)

POLICY RECOMMENDATIONS FOR THE WIARTON SOUTH SETTLEMENT AREA

TOWN OF SOUTH BRUCE PENINSULA OFFICIAL PLAN PROPOSED AMENDMENT

AMENDMENT NO. ___ TO THE TOWN OF SOUTH BRUCE PENINSULA OFFICIAL PLAN

PURPOSE OF THE AMENDMENT

The following amendment modifies certain provisions of Section 11 of the Town of South Bruce Peninsula Official Plan (Wiarton Community Plan) and adds a Special Policy Area which will reduce the amount of land presently shown as employment lands and provide for the staged development of a new residential community. Certain minor modifications will also be included that will recognize the need to provide an attractive entrance to the Wiarton Settlement Area. Schedule "A" to this amendment will modify Schedule "B" to the Town of South Bruce Peninsula Official Plan.

TITLE AND CONTENTS OF THE AMENDMENT

This amendment document contains the following text and Schedule "A" which amends Schedule "B" of the Town of South Bruce Peninsula Official Plan. The addition of Special Policy Area #2 will be referred to as the Wiarton South Policy Area and applies to approximately 95 hectares (235 acres) including all or parts of Lots 1,2 and 3, Concession 21 in the geographic Township of Amabel which had been incorporated into the former Town of Wiarton.

This amendment is based on the findings of a comprehensive Background Study prepared by Cuesta Planning Consultants Inc. as well as comments received from the public, local and county staff, agencies and municipal councilors.

The Background Study assessed the historic and projected growth rate, corresponding land use requirements, environmental constrains and municipal servicing limitations and infrastructure capability.

The background material and consultation process generated a need to assess various components of the previous growth management strategy, in particular, the allocation of employment lands within the Wiarton South Study Area. The reconsideration of the land use policies in the Wiarton South area was also

influenced by a large residential community development proposal which could not be accommodated within the existing residential designations of the settlement area. Any type of development of significant proportion proposed for small rural urban centres generally encounters difficulties because of the stringent settlement area boundaries imposed by the Provincial Policy Statement. The lack of development over the past three decades in the southern section of the settlement area suggests merit in an assessment of the need for the large areas of industrial and commercial lands.

The Background Study determined that the employment needs of the Town for the 20-year planning period require approximately 12.5 hectares of land. The study area contains 137.7 hectares of vacant employment land rendering a surplus of approximately 125 hectares over the planning period.

The surplus of employment lands would permit the municipality to consider other land use options for a portion of the study area. The re-designation of the northern portion of the study area for a residential community is reasonable and would represent a natural extension of the residential area north of Elm Street and along the extension of Gould Street.

DETAILS OF THE AMENDMENT

The following amendment and Schedule "A" will consider primarily the lands south of Elm Street and Ames Street. Schedule "A" reflects a revised boundary of the settlement area including a minor extension to the west of the existing settlement area. This adjustment is required in order to accommodate a storm water management system for Special Policy Area # 3. Unless amended by this subject amendment, all other provisions of Section 11 of the Official Plan apply.

To reflect the results of the Background Study and to encourage the development of a new residential neighbourhood, the Town of South Bruce Peninsula Official Plan is hereby amended by adding following section:

xx.x.x.x Special Policy Area # 3 – WIARTON SOUTH SPECIAL POLICY AREA

Special Policy Area # 3 covers approximately 95 hectares of land south of Elm Street and west of Highway # 6, to the revised western boundary of the Wiarton Settlement Area as shown on Schedule "A". It is intended that this area be developed as a new residential neighbourhood within the Wiarton Community. This is not an overlay designation, but will implement the direction of Council to set out the objectives, development criteria and policies to facilitate the orderly progression of growth and development within this special policy area.

The low historical growth rate for the Wiarton Settlement area requires that a staged growth management policy approach be established in Special Policy Area # 3 in order to avoid scattered uneconomical development and to encourage a natural expansion of the existing urban area. The development of this area will occur through a staged growth management approach subject to the following:

- 1) All development will occur on full municipal services.
- 2) A **Secondary Plan** shall be prepared and will form the basis of an overall site plan approval. The Secondary Plan will provide the following:
 - i) A preliminary land use pattern, including a transportation plan depicting primary and secondary roads, traffic and pedestrian circulation. The land use pattern shall also provide information relating to the design and location various housing types proposed, and exterior design elements.
 - ii) Development staging details, including population and dwelling unit growth anticipated for each development phase, subject to available municipal services, in addition to any residential servicing capacity limitation. Subsequent development stages will be determined based on the extent of completion of the previous stage, or a reasonable anticipated growth rate, as determined by the municipality. The

- municipality may utilize holding provisions to regulate staging of the development.
- iii) A demonstration of the interrelationship between the proposed residential neighbourhood community, the village centre area and surrounding lands within the commercial/industrial designation.
- iv) Areas identified for the following land use purposes:
 - Residential
 - Open Space and Recreation, including areas/blocks for stormwater management purposes
 - Environmental Protection
 - Village centre
- v) Lands identified in the Secondary Plan for the development of a "Village Centre" shall be conveniently located within the community. It is not intended that this village centre will an additional core commercial area within the Wiarton community, but the intent will be to provide for those convenience commercial and community service uses that will serve neighbourhood residents. Consideration shall be given to the relationship of the neighbourhood village centre with the existing downtown commercial core and avoid any potential impacts in this regard. Permitted uses within the neighbourhood "village centre" may include:
 - Public meeting space in the form of a plaza and/or recreation centre
 - Convenience commercial
 - Multiple-family residential
 - Professional services and institutional uses intended to serve the needs of the residents within the residential neighbourhood community.
- vi) Lands to be identified for "Residential" purposes in the Secondary Plan shall provide for the development of low density and medium density residential uses which may include single-detached, semi-detached low-rise apartment, townhouse or other similar forms of housing. A range of ownership and tenure options may be considered through each development phase which should be specified in the Secondary Plan.
- vii) Land use patterns, residential densities and building forms that efficiently utilize resources, energy and infrastructure shall be encouraged.
- viii) The development of a parkland system that is convenient and accessible to community residents.

- ix) An integrated trail system that enhances access to significant environmental areas as well as active and passive recreation areas.
- 3) Prior to any new development occurring, the municipality shall initiate the undertaking of an Environmental Assessment to consider municipal servicing issues related to the provision of sewer, water and stormwater management for those lands within the settlement area between Elm Street and the southern boundary of the settlement area. The following guidelines will be followed:
 - i) Any stormwater management system will be encouraged to employ a passive management system that is integrated with an open space network. Sufficient sewer and water capacity is available for Phase One of the new residential community to proceed prior to the completion of the Environmental Assessment. The initial stage consisting of residential development shall not exceed 80 % of the reserve capacity of the municipal sewer and water treatment systems.
 - ii) The extent of any necessary expansion and upgrades of the municipal water and sewage disposal servicing capacity, watermains, trunk sewer lines and other associated servicing infrastructure extending to the Wiarton South Special Policy Area will be determined.
 - iii) A stormwater management plan for Phase One will be required, and must be prepared in a manner which takes into consideration adjacent lands in anticipation of an overall neighbourhood stormwater management system, which may be subject to future modifications under the Environmental Assessment."
 - iv) The costs of the Environmental Assessment, once completed, will be shared among the benefitting property owners involved.
 - v) The main roads within the policy area will tie into existing municipal roads and provide connections to adjacent lands, where appropriate.
 - 4) In accordance with Section 34 (16) of the <u>Planning Act</u>, the municipality may, as a condition of any zoning by-law or modification in Policy Area # 3, require a landowner or proponent to enter into a registerable agreement related to servicing, stormwater management, roads, urban design, landscaping or architectural requirements or any other servicing or urban design issue.

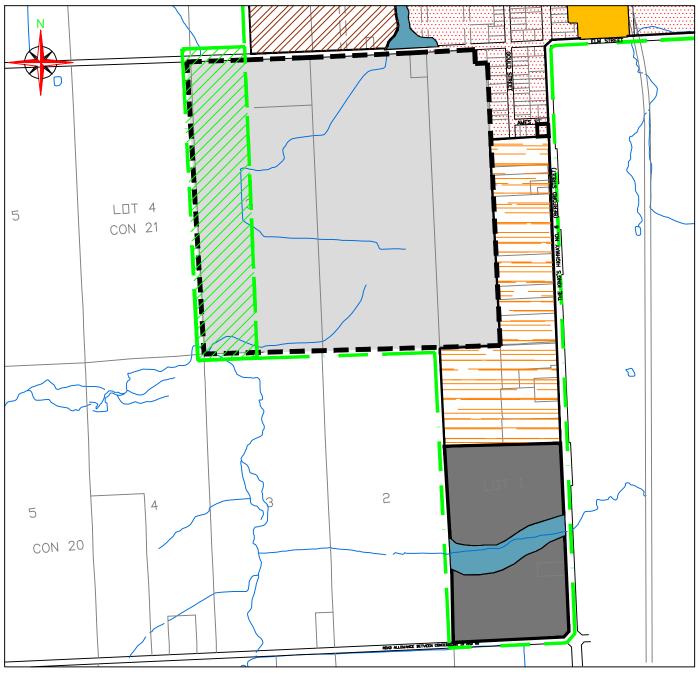
Section 11.3.3.4 is hereby replaced by the following:

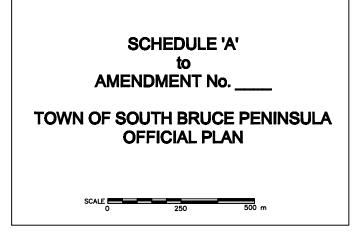
11.3.3.4. General Highway Commercial and Industrial Policies

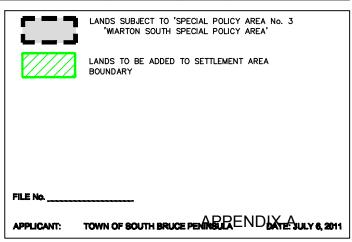
- a) Council shall encourage the majority of new Highway Commercial and Industrial development to locate between the Ames Street intersection with Highway 6 and the southern boundary of the settlement area.
- b) In the absence of municipal sewer and water systems, highway commercial and industrial uses which do not require or create large volumes of water and can be serviced by septic tanks and private well systems may be permitted. Appropriate highway commercial and industrial uses shall be determined on an individual basis and shall be assessed by the Ministry of the Environment, or its agent, based upon the type and volume of waste produced, the size of the proposed lot and the nature of the soils.
- c) If development takes place on private services, the developer shall be required to enter into an agreement covering the equitable distribution of the costs of eventually extending municipal services to the development. As new development occurs on private services, each site must be engineered for future connection to municipal water and sewage systems.
- d) The area provides the principal entrance to the community and in order to ensure that the Highway Commercial and Industrial lands develop as part of an attractive entrance to the community, it shall be a policy of the Town that the following site development standards be satisfactorily addressed by all Highway Commercial and Industrial development proposals:
 - i) landscaping shall be provided between any Highway Commercial and Industrial use and the adjacent highway, except for designated entrances and exits;
 - ii) all outdoor storage for uses other than automotive and recreational vehicle dealerships should be located to the rear or side of the main building on the lot and shall be fenced or suitably screened from adjacent uses. Uses containing outdoor storage areas are encouraged to locate on interior streets, not fronting onto the highway;
 - iii) signs shall be limited in number and designed to be functional and avoid visual clutter and distraction. No billboards are permitted and free-standing signs are discouraged;
 - iv) underground wiring for hydro, telephone, and other transmission lines shall be promoted; and,
 - v) vehicular parking for employees or the public, shall be restricted to the side or rear of the principal building and screened from surrounding uses and views from the street.
- e) To allow for the safe and efficient movement of traffic, strip development shall be prohibited. Highway Commercial and Industrial uses should be grouped for

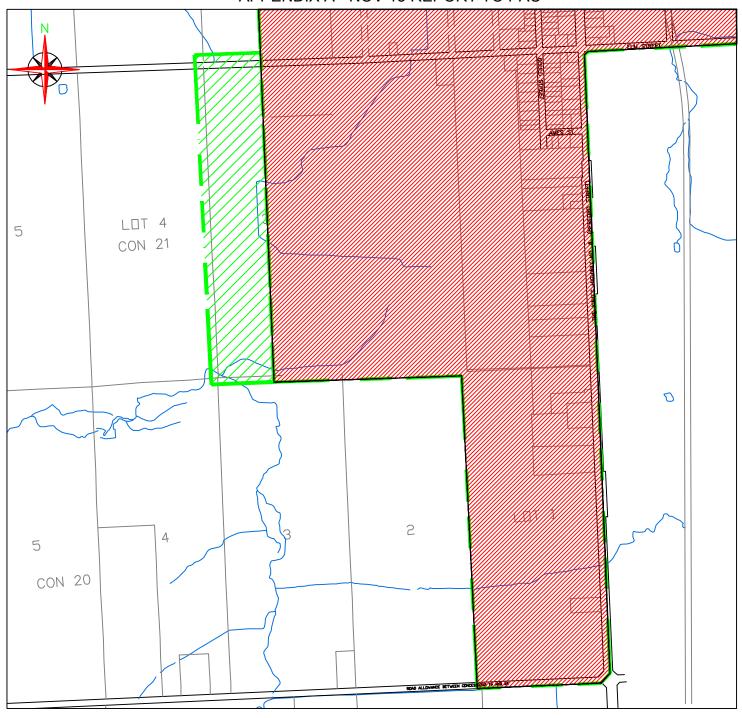
access and servicing advantages. Efforts shall be made to reduce access points by combining exits and entrances or by creating service roads where possible.

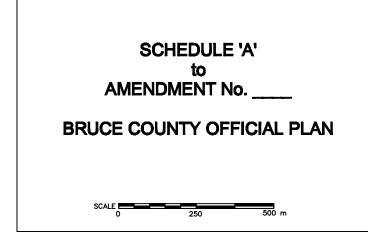
- f) Adequate off-street customer parking facilities shall be provided and shall be located to the rear and side of the principal building fronting on Highway #6 (Berford Street). Parking between the principal building and the street or highway shall generally be prohibited. Development proposing customer parking in the front yard must demonstrate that no other feasible option exists for accommodating the needed parking.
- g) Where necessary, off-street parking, drive-ways and/or loading areas adjacent to residential uses shall be suitably screened or buffered through the use of fences, berms or other appropriate landscape treatment.
- h) All parking areas shall be appropriately illuminated to ensure the safety of pedestrian and vehicular access. Dark sky lighting shall be required.
- i) Effects of Highway Commercial and Industrial development on adjacent uses shall be minimized by:
 - i) providing distance separation and/or the construction and maintenance of buffer strips and/or screening between such uses;
 - ii) the arrangement of lighting facilities and commercial signs to minimize impact on surrounding uses; and,
 - iii) ensuring that off-street parking facilities do not adversely affect surrounding uses.
- j) The establishment of a fully serviced "Business Park" for Highway Commercial and Industrial development shall ensure an efficient and coherent pattern of development and appropriate municipal servicing. The lot arrangement and road pattern shall be designed to ensure access to an internal road system with no individual road access onto an arterial or collector road.
- k) The minimum lot size shall be dependent on the nature of the use, the topography and drainage and the method of sewage treatment and disposal.
- I) Where feasible, similar uses should be encouraged to be grouped together to avoid land use conflicts. For example, uses which serve the travelling public should be separated from those which require large amounts of land.

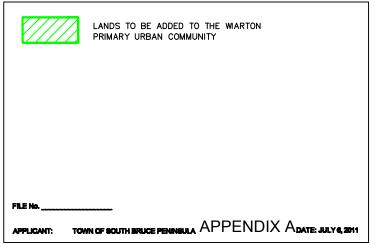












GROWTH MANAGEMENT REPORT Wiarton South Settlement Area

Comprehensive Review of Land Use Designations in the Town of Wiarton

Prepared for:

The Town of South Bruce Peninsula P.O. Box 310 315 George St. Wiarton, ON N0H 2T0

Prepared by:

Cuesta Planning Consultants Inc. 978 First Avenue West Owen Sound, ON N4K 4K5

Tel: 519-372-9790 Fax: 519-372-9953

cuesta@cuestaplanning.com www.cuestaplanning.com

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1.0 INTRODUCTION

1.1 Purpose of Study

Cuesta Planning Consultants Inc. was retained by the Town of South Bruce Peninsula in October, 2008 to undertake a Comprehensive Review of Land Use Policies and Land Use Designations within the Wiarton Primary Urban Area. The purpose of this study is to estimate how much residential and employment land is required to accommodate long-term growth in the community and recommend its preferred location.

The need for this study arises from recent development interests proposing to redesignate employments lands within the southwest area of the Town of Wiarton for future residential development purposes. The study has also been undertaken to assist the Town in addressing other issues, such as the allocation of future infrastructure servicing and the overall desire to provide sufficient employment opportunities for residents to foster a self-sustaining economic base for the Town.

The Town of Wiarton, like many other rural communities in Ontario, is coming under increased pressure to re-designate its employment land supply to other uses, typically for future residential purposes. A proposal has been submitted to develop an adult lifestyle community on approximately 95 hectares (235 acres) located in the southwest area of the Town of Wiarton on part of Lots 1, 2 and 3, Concession 21. The majority of these lands are presently designated for employment purposes and this proposal will require a conversion to residentially-designated lands as well as an expansion of the existing settlement area boundary. Prior to converting employment lands to another use or expanding the urban boundary, a "Comprehensive Review" is necessitated in accordance with the minimum requirements of the Provincial Policy Statement (PPS).

This analysis of residential and employment land need in the Town of Wiarton is undertaken within the context of a clear Provincial policy direction to encourage the development of self-sustaining communities which foster a strong economy. The Provincial Policy Statement emphasizes the importance of a diversified economic base including maintaining a range of housing, sufficient supporting infrastructure and the need to provide sufficient opportunities for employment activities. The requirement for a planning authority to complete a comprehensive review upon consideration of employment land conversion or urban boundary expansion proposals fulfills this provincial direction.

1.2 Study Context

This comprehensive review assessment is prepared in accordance with applicable residential and employment land supply objectives provided in the County Official Plan and Provincial Policy Statement. The purpose of this report is to review the demand and supply of residential and employment land in the Town of Wiarton and recommend the extent and arrangement of future development designations specifically within the south-western settlement area. Accordingly, this report is structured as follows:

- Assess the policy framework within which the comprehensive review requirements are prescribed as well as those policy elements that must be reflected, i.e. upper tier growth projections, in the comprehensive review document.
- Outline the process and methodology used to complete this comprehensive review report including the methods to which housing and employment land demand versus supply has been considered.
- Provide an assessment of past population growth and development trends which, in turn, are used to provide future population projection scenarios for the municipality.
- 4. Anticipate the residential housing growth expected for the Town. Existing vacant residential lands are calculated and a comparison of housing demand vs. supply is established. Conclusions are provided on the need for additional residential land designations.
 - Similar to the manner in which housing growth is projected, the employment forecast, including the number of jobs that will need to be accommodated on employment land is reviewed. The amount of existing employment land designated within the town is compared against the anticipated employment growth to determine if future employment land is required, or if a reduction of employment land is appropriate.
- 5. Assess existing infrastructure servicing as well as potential expansions or upgrades that would be required for future development within the study area.
- 6. Review the existing policy framework applicable to the Wiarton south study area. Provincial and County policy objectives as well ad detailed land use policies contained in the local Official Plan are discussed. General recommendations on development design and layout are also considered.
- 7. Consider options that are available to accommodate the Town's anticipated growth. A preferred location for alternative designations is recommended based on a review of existing and planned infrastructure, planned development concepts recently submitted for municipal input as well as strategic land use planning considerations.

2.0 POLICY IMPLICATIONS FOR COMPREHENSIVE REVIEW

2.1 Provincial Policy Statement

The Provincial Policy Statement, 2005 (PPS) provides policy direction on matters relating to land use planning that are of provincial interest. It is issued under the authority of Section 3 of the Planning Act and any decision by any authority that affects a planning matter "shall be consistent" with the PPS.

The 2005 PPS contains policies requiring municipalities to ensure sufficient land is made available to accommodate anticipated growth. Such growth is to be accommodated through intensification and redevelopment and, if necessary, designated growth areas to allow for an appropriate range and mix of employment opportunities, housing and other land uses to meet the projected needs for a time horizon of up to 20 years. The PPS further requires that municipalities maintain a minimum 10 year land supply availability through residential intensification and redevelopment and, if necessary, vacant lands which are designated and available for residential development. Municipalities are also required to maintain a 3 year supply of residential land with servicing capacity which is suitably zoned to facilitate residential intensification and redevelopment, or in draft approved and registered plans of subdivision.

The PPS promotes growth in settlement areas and requires that their vitality and regeneration be promoted. Giving priority to compact form, redevelopment, intensification and brownfield redevelopment, as well as ensuring settlement area boundary expansions are only considered when supported by a comprehensive review, helps to create sustainable communities for the long term.

There are increasing pressures in many communities to convert employment lands to other uses, such as low-density housing. The PPS recognizes the importance of protecting needed employment lands for the long term and requires that communities have sufficient land available to support their future economic prosperity. The PPS requires that a comprehensive review be undertaken to permit the expansion of settlement area boundaries and/or conversion of lands within employment areas to non-employment uses. In this regard, the PPS states that a planning authority may permit the conversion of lands within employment areas to non-employment uses through a comprehensive review, only where it has been demonstrated that the land is not required for employment purposes over the long term and that there is a need for the conversion.

The PPS defines a comprehensive review as "an official plan review which is initiated by a planning authority, or an official plan amendment which is initiated or adopted by a planning authority, which:

1. is based on a review of population and growth projections and which reflect projections and allocations by upper-tier municipalities and provincial plans, where applicable; considers alternative directions for growth; and determines how best to accommodate this growth while protecting provincial interests;

- 2. utilizes opportunities to accommodate projected growth through intensification and redevelopment;
- 3. confirms that the lands to be developed do not compromise specialty crop areas in accordance with policy 2.3.2;
- 4. is integrated with planning for infrastructure and public service facilities; and
- 5. considers cross-jurisdictional issues.

2.2 County of Bruce Official Plan (1999)

The policies of the Bruce County Official Plan encourage and strengthen the role of Primary Urban Communities, including Wiarton and Sauble Beach as regional service centres within the County. It is further specified that the majority of anticipated permanent population growth shall be directed to Primary Urban Communities (5.2.2.2)". Industrial growth particularly that which requires municipal water and sewage services is also encouraged to locate within primary urban communities.

The comprehensive review requirements of the PPS noted above state that any review of population and growth projections must reflect those projections of the upper tier municipality. Section 4.4.2 of the Bruce County Official Plan specifies that the County is expected to grow by approximately 21,300 permanent residents to the year 2016. These projections are based on those population projections supplied by the Ontario Ministry of Finance. Based on an average household size of 2.7 persons per unit, the County anticipates a total of 7,900 additional units will be required to house the projected population growth in the County over this period. It is the policy of this official plan to direct the majority of this growth to Primary and Secondary Urban Communities and Hamlet Communities in the following proportional breakdown:

Category	Area	Population Increase	Percentage of Total
1	Primary & Secondary Urban Communities plus Sauble Beach and Tobermory	13,202	62.0%
2	Rural Bruce Peninsula including hamlets, shoreline areas and inland lake areas	4,915	23.1%
3	Rural South Bruce Lakeshore including shoreline and hamlet areas	2,166	10.2%
4	Rural South Bruce Interior including hamlets and inland lake areas	1,011	4.7%
TOTAL		21,294	100.0%

For the purposes of this study, the above noted proportional breakdown will be applied to the municipal population growth projections when determining the allocation of new development towards Wiarton and Sauble Beach primary urban communities.

2.3 Town of South Bruce Peninsula Official Plan

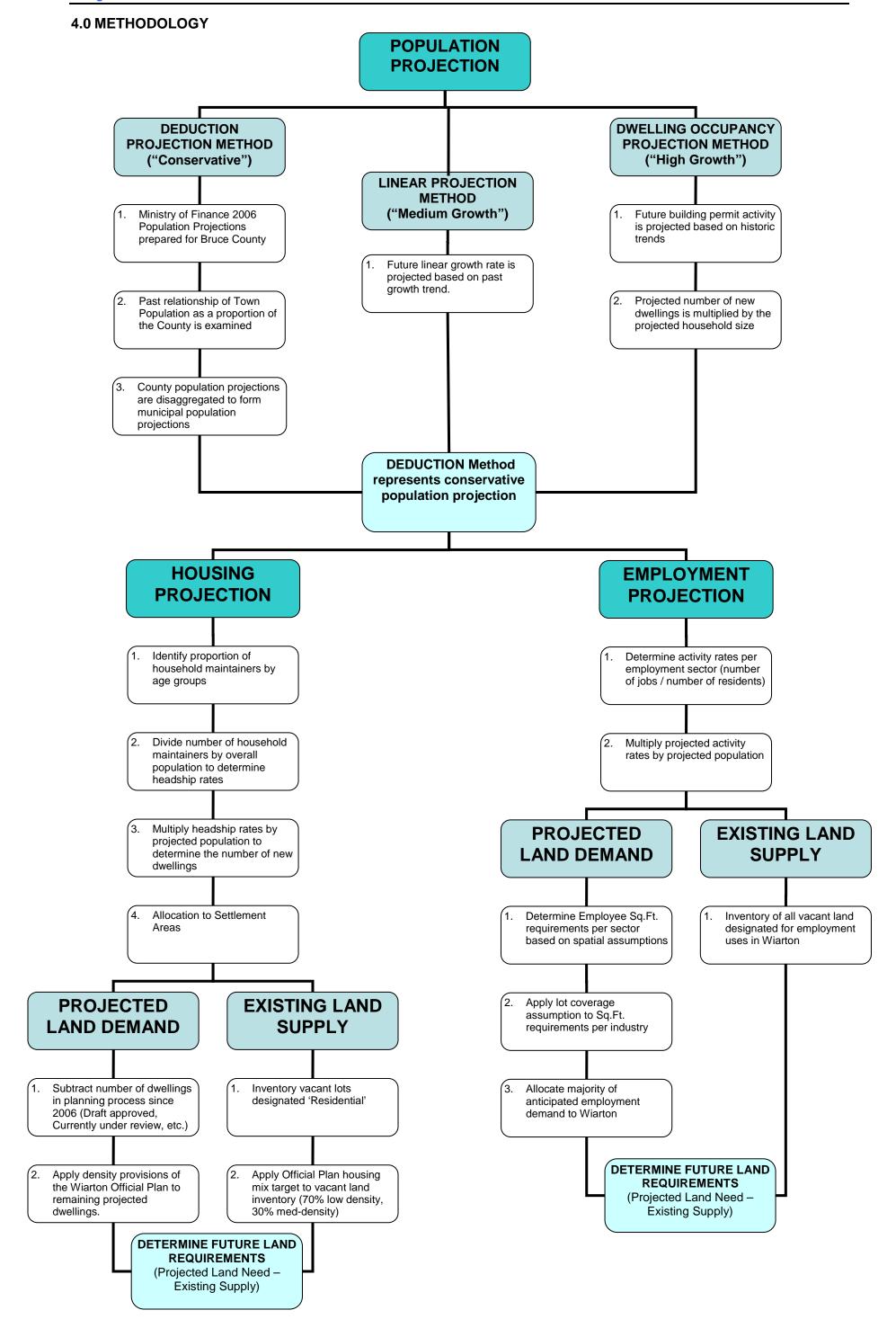
The instilment of more detailed land use policies which guide and control development within defined settlement area boundaries is directed to local Official Plans. The Town of South Bruce Peninsula Official Plan indicates that in 1996, the population for the town equalled 8135 which is slightly higher than the present day (2001) population of 7,500 persons. This Official Plan predicts a population increase to 9,800 persons by the year 2021 which represents an increase of approximately 821 dwelling units based on an assumed household size of 2.8 persons per unit. Similar to the County of Bruce Official Plan, the growth policies for the South Bruce Peninsula Official Plan requires that the "majority of growth be directed towards areas serviced with municipal sewer and water, such as Wiarton". Given that the Sauble Beach primary urban community is presently undertaking an environmental assessment process for the provision of municipal sanitary servicing for its core area, Sauble beach will also be deemed as a primary receptor for anticipated population growth for the purposes of this study.

3.0 STUDY PROCESS SUMMARY

The purpose of this report is to provide a review of projected population growth and associated housing and employment land demand anticipated for the municipality for the next twenty year planning period (2009 – 2029). This population, housing and employment forecast will allow for a comparison against the amount of land presently designated and available to accommodate this anticipated growth. In meeting the comprehensive review requirements of the Provincial Policy Statement, population projections for the municipality are prepared in accordance with the existing population projections specified in the County and local Official Plans.

In order to ensure the residential land supply requirements of the Provincial Policy Statement and the County Official Plan can be satisfied, the forecasted population growth is used to derive the anticipated residential demand for the Town of Wiarton. This projected housing demand is compared to the existing estimated supply of residential land, including known potential infilling and intensification opportunities within Wiarton. Based on this assessment of projected housing demand against existing land supply, this study examines whether intensification opportunities and the supply of vacant residential development lands within Wiarton are adequate to accommodate the projected residential growth for the short and long-term planning periods.

A similar exercise is undertaken for employment lands. The study inventories the supply of vacant employment lands, both serviced and designated future growth areas within Wiarton. The employment forecast for the town is based on the projected population for the municipality and is assessed against current land availability. The study then determines whether the current supply of vacant employment land is adequate to accommodate the projected employment growth during the planning period.



5.0 GROWTH FORECASTS

5.1 POPULATION PROJECTION

Population projection may be based on a number of methodologies such as the gravity based model, a cohort survival model, a population cap, or a linear projection.

The gravity based model assumes that an area has an inherent level of attraction and it will draw people to the area like gravity. The saturation point is achieved, or capacity is reached at an unknown point in time when people are no longer drawn to the area because the very elements that attracted the people in the first place have changed as a result of the number of people present. It is possible that a new gravity force can then come into play if the new environment attracts or appeals to yet another group of people. With the gravity based approach, it is a wait-and-see method of planning where the approval authority is reactive rather than pro-active with projection formulation. Communities that are oriented around a dominant feature of attraction, such as recreation amenities, special employment circumstances, etc. are best suited for the gravity based projection approach. The gravity based model has been utilized for future projections in the Blue Mountain area because of the abundant recreational amenities in this location. This "magnetic approach" appears to have substantial validity in this instance as witnessed by the intrawest resort developments and corresponding permanent and seasonal population growth that is not explained by the traditional cohort survival technique.

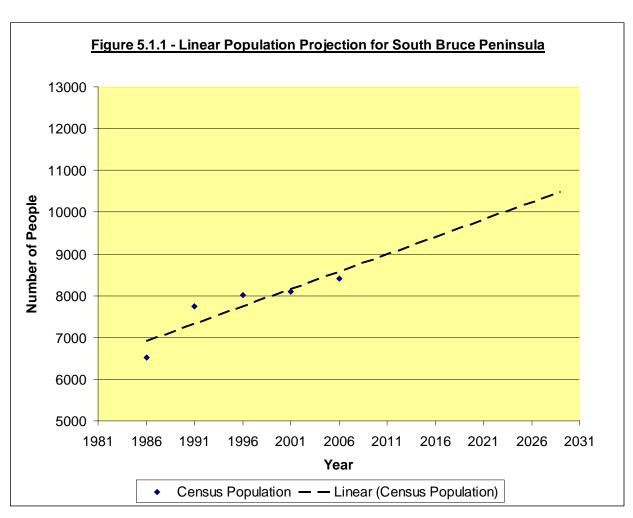
As stated by the adult lifestyle community proponents, the proposal intends to be an attractive new community for senior lifestyle purposes. The community is not intended to be a "seniors-only" environment, but also intends to appeal to younger adults seeking moderately priced dwelling units. The proposal appears to follow a vacant condominium format in which residents will retain ownership of their individual units with the overall land ownership and maintenance being the responsibility of the development corporation. It is anticipated that this development will consist of 1200 to 1500 new residential units to proceed through phased development over the long term (15 to 20 year time period is anticipated).

The proponent anticipates that this adult lifestyle community concept will be an attraction for prospective new residents which will foster development to occur at a faster pace than what may be predicted from historical growth trends. Therefore the "magnet approach' to formulating population projections may provide a logical approach to determining population projections. However, the difficulty in applying this type of projection rationale to a small community such as Wiarton is that there is some uncertainty as to the degree of residential attraction for this area, and the extent that this element of attraction would support a large-scale development of this nature. Historically, there does not appear to be an enhanced level of attraction to this area that would skew traditional projection methodology. However, for the purposes of this report, a population projection range has been provided for the Township's consideration in the formulation of future growth policies.

5.1.1 Linear Population Projection

The population forecast for the Town of South Bruce Peninsula was derived from known values for population and occupied dwellings through available 1986 to 2006 census information. The forecasts were calculated by supplementing the known census values with other dwelling and building permit information provided by the Town.

The linear projection method was initially considered as it is one of the simplest projection methods typically applied to smaller rural communities with slower growth rates. The linear projection method involves the projection of a municipal population based on an extension of observed historic growth trends. Figure 3.1.1 below depicts the linear population for the Town through the 2029 planning period. Using this approach, by 2029, the population for the Town is anticipated to reach 10,490 residents which accounts for an increase of 2,080 permanent residents through the planning period.



5.1.2 Deduction Projection Method

A population projection by deduction utilizes an established population projection for a larger area which is further disaggregated to determine the share of population for a constituent local area. The Ontario Ministry of Finance prepares population projections for the province and for various counties, districts and regional municipalities. These are updated every five years following census data years. The province utilizes the cohort survival method which derives population counts by single years of age and sex in the base year. This base population is then aged one year at a time, with the expected number of births, deaths, international migrants and interporvincial migrants being added and subtracted each year.

The municipal population as a share of the County population has gradually increased through observed census years 1986 to 2006. This may be attributable to the abundance of shoreline areas, Sauble Beach and other recreational amenities within the municipality which are attracting a greater number of residents to the area. In 1986, the Town of South Bruce Peninsula accounted for 11.1% of the County population whereas in 2006, this share of the County population increased to 12.8%. If it is anticipated that this proportional relationship of the County's overall population will level off around 13%, the following population projections can be derived for the Town of South Bruce Peninsula as a proportional deduction of the Bruce County population projections.

Table 5.1.2 - TOWN OF SOUTH BRUCE PENINSULA POPULATION PROJECTIONS						
(2009-2029 PLANNING PERIOD)						
	2006 (census)	2009	2014	2019	2024	2029
0-4	320	414	462	486	484	465
5-9	375	405	436	481	508	509
10-14	450	491	449	476	519	549
15-19	510	593	509	465	490	531
20-24	400	581	548	484	443	461
25-29	305	506	518	506	461	422
30-34	305	397	514	533	534	495
35-39	420	409	423	524	546	555
40-44	560	484	436	444	533	559
45-49	585	673	519	474	480	566
50-54	690	691	701	560	517	521
55-59	770	700	756	786	651	608
60-64	695	697	767	843	896	766
65-69	615	571	731	811	904	980
70-74	515	452	527	679	757	854
75-79	435	306	355	419	545	614
80-84	235	194	219	257	307	404
85-89	225	99	111	127	152	186
90+		44	55	64	75	90
Total	8410	8,706	9,033	9,417	9,803	10,134

The deduction method therefore depicts a lower-growth population scenario which anticipates an overall population of 10,134 residents in 2029. This represents an increase of 1,724 new permanent residents through the planning period.

5.1.3 <u>Dwelling Occupancy Projection Method</u>

In order to account for more localized economic conditions, historic building permit activity has been considered in comparison to the foregoing projection methods. Projecting population by dwelling occupancy considers the anticipated yearly increase in occupied dwellings which is then multiplied by a projected average household size. The Bruce County Housing Study prepared by Social Housing Strategists Inc. in March, 2005 provides a projected household size for the municipality through to 2021. The initial observed household size of 2.29 persons per unit derived from the 2006 census is projected to decline to 2.20 persons per household by 2021. This rate of decline is projected to remain constant at 2.20 persons per household unit through the 2029 planning period.

Table 5.1.3 lists the number of residential building permits issued for new residential dwelling construction in the Town from 1999 to the end of 2008. From this table it is apparent that building permit activity for both residential and non-residential uses varies considerably from year to year, but has averaged approximately 56 new dwellings per year over the past decade.

Table 5.1.3 - Municipal Building Permit Activity

	Building Permits Issued		
Year	Residential	Industrial/Commercial/Institutional	
1999	21	23	
2000	59	22	
2001	38	15	
2002	56	11	
2003	73	3	
2004	68	7	
2005	70	12	
2006	70	12	
2007	60	25	
2008	49	10	

Accordingly, the forecasted population was derived by multiplying the average household size by the projected number of occupied dwellings. The forecasted population for the year 2029 calculated through this method is 10,720 persons. This higher-growth projection scenario may be attributable to the thriving economic conditions enjoyed through 2004 to 2008 which are reflected in the increased building permit activity during this period. In light of the more recent economic downturn, it may not be as reasonable to assume this level of residential building permit activity will continue into the future.

As with any population projection method, future projections are based on past trends and assumptions that they will remain valid into the future. It is a best-guess approach to anticipating future development demand that a municipality can expect to accommodate. For the purpose of this report, low, medium and high-growth projection scenarios have been provided for municipal consideration. Table 3.2.2 below summarizes the range of growth projection scenarios that may be used to determine housing and employment land use requirements.

Table 5.1.4: Growth Scenarios - Summary								
2009 2019 2019 2009-2029 Increase								
Deduction Method (Low)	8,706	9,417	10,134	1,428				
Linear Method (Medium)	8,830	9,660	10,491	1,661				
Dwelling Occupancy Method (High)	8,425	9,572	10,720	2,295				

The Town of South Bruce Peninsula is anticipated to grow by approximately 1,500 to 2,300 new permanent residents through the 2029 planning period based on the foregoing projection scenarios. This population growth range will be applied to housing and employment demand forecasts in the following sections of this report.

5.2 HOUSING PROJECTIONS

Household demand projections have been prepared according to the Province's projection guidelines. The preceding process used to calculate future housing demand for the municipality is summarized as follows:

- 1. Identify the proportion of households maintained by specific age groups to determine headship rates.
- Determine the household demand propensities for those age groups by housing structure type.
- Apply the household demand propensities to the forecasted population by fiveyear projection periods to determine projected housing demand by dwelling structure type.

The data used to determine household headship rates and housing demand propensity is based on 2006 census data obtained from Statistics Canada. The methodology is consistent with that used by other counties, regions and municipalities as well as the Ministry of Municipal Affairs and Housing (MMAH) and the Canadian Mortgage and Housing Corporation (CMHC).

Household demand propensity describes the demand for certain types of housing by people within various age groups. Household demand propensities tend to change over a person's life span typically resulting from changes in lifestyle preferences and affordability. Table 4.0.1 below depicts the household demand propensities by age group for various dwelling types based on 2006 census information for the Municipality. The proportions generated by these propensities are assumed to remain constant throughout the planning projection period.

Table 5.2.1 - 2006 DW	Table 5.2.1 - 2006 DWELLING DEMAND PROPENSITIES BY AGE OF PRIMARY HOUSEHOLD MAINTAINER									
Structural type of dwelling	Under 25 years	25 - 34 years	35 - 44 years	45 - 54 years	55 - 64 years	65 - 74 years	75 + years	Total - Age groups of primary household maintainer		
Single-detached house	65	195	450	715	695	640	420	3175		
Movable dwelling	0	0	10	0	0	0	0	15		
Semi-detached house	0	0	0	10	0	10	0	25		
Row house	0	0	0	0	0	0	15	15		
Apartment, duplex	0	10	10	10	10	0	0	40		
Apartment, building that has fewer than five storeys	20	30	35	30	25	35	80	265		
Other single-attached house	0	10	0	0	15	20	0	45		
Total - Structural type of dwelling	80	250	510	765	745	710	520	3580		

Source: Statistics Canada - 2006 Census. Catalogue Number 97-554-XCB2006034.

The foregoing indicates the household demand propensity suggestive of a rural municipality. The overwhelming preference is the single family dwelling for all household maintainers regardless of age group.

Housing demand projections were prepared by applying these housing demand propensities and calculated headship rates (Number of household maintainers divided by the overall population) to the population projections provided in Section 3.1 of this report. Based on this assessment, a projected demand of 840 new housing units is anticipated for the Town of South Bruce Peninsula for the planning period to 2029. The following table provides a breakdown of the anticipated housing demand per dwelling type.

	Table 5.2.2 - HOUSING DEMAND PROJECTION SUMMARY										
YEAR	Single- Detached	Movable Dwelling	Semi- Detached House	Row House	Apartment, Detached Duplex	Apartment Less Than 5 Storeys	Other Single- attached House	Projected Total	5-yr Increase		
2006	3,180	10	20	15	40	255	45	3,565	N/A		
2009	3,275	10	20	11	46	263	49	3,674	109		
2014	3,376	10	21	13	46	265	55	3,786	111		
2019	3,568	10	23	15	47	286	61	4,009	223		
2024	3,746	11	23	18	46	310	62	4,216	208		
2029	3,907	11	25	22	45	332	62	4,405	188		
Total Increase:								840			

Table 4.0.2 indicates that the total number of households is projected to increase from approximately 3,565 in 2006 to 4,405 in 2029, a gain of 840 dwellings. This represents a total increase in the order of 21% for the projected planning period, or a five year average increase of 5.2% (186 units per five year period). The residential building permit activity from the end of 2006 to the end of 2008 has been applied to the 2006 census base year housing figures in the above noted table. A total of 107 new residential building permits were issued during this period which has been applied to the 2006 dwelling counts.

It should be noted that the foregoing household projection statistics are conservatively derived from the low-growth projection scenario which depicted a population of 10,134 by 2029. Alternatively, if the more liberal growth scenarios are considered, an additional 255 new housing units may be anticipated in addition to the projected 840 dwellings projected for the planning period. This equates to a rather negligible difference of approximately 12 additional dwelling units per year. For the purposes of this study, the conservative low-growth projection scenario has been applied to future housing and employment projections.

5.2.1 Growth Allocation to Settlement Areas

The Bruce County Official Plan directs the majority of growth (approximately 62%) to Primary and Secondary Urban Communities and Hamlet Communities. The foregoing housing and population projections have been derived at a municipal-wide level and must be proportionately allocated to primary settlement areas within the municipality. Wiarton is presently the only fully serviced settlement area in the municipality and the Official Plan for the Town of South Bruce Peninsula stipulates that the majority of growth be directed towards areas serviced with municipal sewer and water, such as Wiarton. For the purposes of this report, an assumption that approximately 75% of all future development within the municipality will be allocated to Wiarton. The following Table 5.2.3 provides a breakdown of projected dwellings for Wiarton.

Tal	ble	5.	2.	3

PROJECTED	PROJECTED NUMBER OF ADDITIONAL DWELLING UNITS REQUIRED BY TYPE PER 5-YEAR PERIOD (WIARTON)										
PERIOD	Single- Detached	Semi- Detached House	Row House	Apartment, Detached Duplex	Apartment Less Than 5 Storeys	Other Single- attached House	Projected Total				
2006-2009	71	0	-3	4	6	3	82				
2010-2014	75	0	1	0	2	5	83				
2015-2019	145	1	2	0	15	4	167				
2020-2024	133	0	3	0	18	1	155				
2025-2029	121	2	3	-1	16	0	141				
TOTAL	545	4	5	4	58	13	629				

5.2.2 Projected Residential Land Demand

The foregoing housing projections are converted into the overall residential land requirements that will be needed to accommodate the anticipated housing growth. The above noted figures for projected housing demand by housing type are based on current demand predispositions which maintain the single detached dwelling as the predominant housing choice.

From the projected long term housing need for the 2009 to 2029 period, the number of vacant lots currently in the planning process must be deducted from this projected total. The remaining future dwelling units required are converted to the total amount of land needed based on applicable gross density provisions stated in the Official Plan as follows:

- Low Density (11.3.1.5)
 - o Single detached: 15 units per hectare
 - Semi-detached/Duplex: 20 units per hectare
- Medium Density (11.3.1.6)
 - o 35 units per hectare

Table 4.2.1 below summarizes the conversion of anticipated housing demand to corresponding vacant land requirements based on the foregoing density provisions. A total of 37.6 hectares will therefore be required for new low-density housing development and 1.8 hectares anticipated for projected medium-density residential development.

Table 5.2.4 - FUTURE LAND REQUIREMENTS BY DWELLING TYPE

		Single- Detached	Other Single- attached House	Semi- Detached House	Apartment, Detached Duplex	Row House	Apartment Less Than 5 Storeys	Projected Total
Official Plan Dans	sity (units per hectare)	4.5	LOW DE		20		M DENSITY	
Official Plan Dens	sity (units per nectare)	15	15	20	20	35	35	
5 Year Immediate	Projected Housing Need (2014)	146	8	0	2	2	8	165
Land Requirement (2009-2014)	Hectares Required	9.73	0.53	0.00	0.10	0.06	0.23	10.65
			10.3	7		(
10 Year Short Term	Projected Housing Need (2019)	291	12	0	4	3	33	331
Land Requirement (2009-2019)	Hectares Required	19.40	0.80	0.00	0.20	0.09	0.94	21.43
			20.4					
20 Year Long Term Land Requirement (2009-2029)	Projected Housing Need (2029)	545	13	4	4	5	58	629
	Hectares Required	36.33	0.87	0.20	0.20	0.14	1.66	39.40
			37.6			1.80		

5.2.3 Residential Land Supply within the Town of Wiarton

A vacant lot inventory for Wiarton has been derived from Geographic Information Systems (GIS) data provided by the County of Bruce Planning and Economic Development Department based on current Municipal Property Assessment Corporation (MPAC) assessment information. This MPAC vacant parcel data has been verified by examining available 2006 aerial imagery. Three categories of residential land supply are outlined in Table 4.3.1 according to anticipated time periods for development build-out potential.

TABLE 5.2.5 - VACANT RESIDENTIAL LANDS BY BUILD-OUT PERIOD

Immediate Supply	1 to 3 years (2009 to 2012)	Existing vacant lots of record, vacant lots in registered plans of subdivision (LESS THAN 0.3 Hectares).
Short Term Supply	10 years (2009 to 2019)	 Lots within draft approved Plans of Subdivision. Existing vacant lots less than 0.3 Hectares but are subject to constraints (i.e. access limitations, hazard lands, etc).
Long Term Supply	20 years (2009 to 2029)	Vacant lands presently designated for future residential uses which are: - Greater than 0.3 Hectares - Lands that are presently designated for residential purposes and are suitable for future plans of subdivision.

The time periods used to define immediate, short and long-term lot supply periods are stated solely for information purposes and do not reflect any particular assumption in population growth rate periods. They have been derived based on the anticipated time frame devoted to meeting conditions of approval for plans of subdivision and administrative review procedures.

Appendix 1 to this report illustrates all vacant parcels designated for residential purposes in accordance with the Town of Wiarton Community Plan. As noted in Table 5.2.5, all existing vacant residential lots less than 0.3 hectares (0.75 acres) as well as vacant lots in registered plans of subdivision are categorized as immediate residential land supply for future development. The premises behind this grouping is that a building permit can be obtained for these parcels without further administrative review, subject only to municipal zoning provisions. All other vacant properties within the Town which are designated for residential development have been categorized as short and long-term residential land supply based on the following criteria:

Lots within draft approved plans of subdivision as well as existing lots which are less than 0.3 hectares and subject to development constraints (i.e. water feature, hazard lands, no access to a public street, etc.) which will require further administrative review prior to the issuance of a building permit and are categorized as residential lands available for the short-term planning period (2009-2019).

 Lots which are greater than 0.3 hectares which may be subdivided into additional building lots are considered available residential lands for the long-term planning period (2009-2029).

Table 4.3.2 summarizes the vacant residential land supply within the Town. There is presently a total of 23.8 hectares of vacant residential land available to accommodate future residential development within Wiarton.

Table 5.2.6

VACANT LAND INVENTORY SUMMARY									
LAND CATEGORY	NUMBER OF PARCELS	TOTAL HECTARES	TOTAL ACRES						
VACANT RESIDENTIAL - IMMEDIATE SUPPLY (< 0.3 ha, Unconstrained)	61	6.402	15.8						
VACANT RESIDENTIAL - SHORT TERM SUPPLY (< 0.3 ha, Draft Approved, Require Further Review)	81	8.941	22.1						
VACANT RESIDENTIAL - LONG-TERM SUPPLY (Greater than 0.3 Hectares, Subdivision Potential)	3	8.507	21.0						
T0TAL	145	23.850	58.9						

5.2.4 Residential Land Required to Accommodate Projected Growth

The Provincial Policy Statement stipulates that in order to provide for an appropriate range of housing types and densities, planning authorities shall maintain a minimum 10year land supply to accommodate future residential growth. Planning authorities shall also provide at least a three year supply of residential lands with sufficient servicing capacity as well as lands within draft approved and registered plans in order to accommodate new development. In this regard, the above noted vacant residential land supply must be assessed against the anticipated residential land demand. This will determine the amount of any additional land needed to accommodate the anticipated residential growth for the Town. The 23.9 hectares of vacant residential land must be allocated to low density and medium density developments to compare against the anticipated residential dwelling land requirements established in Section 5.2.2. The Official Plan specifies a housing mix target for new development to be in the order of 70% low density to 30% medium density. Past trends in new residential development activity, however, indicate a predominance of low density development which accounts for approximately 90% of all new residential dwellings. In order to meet the Official Plan target mix provisions while recognizing past development trends, an assumed target mix of 80% low density residential will be applied to the vacant land inventory in Table 5.2.7.

Table 5.2.7 - <u>NEW RESIDENTIAL LAND REQUIREMENT - SUMMARY</u>

		LOW	DENSITY	MEDIUM DENSITY		
		TOTAL HECTARES	NUMBER OF DWELLING UNITS	TOTAL HECTARES	NUMBER OF DWELLING UNITS	
5 Year Immediate Land Requirement (2009- 2014)	Projected Housing Need (2014)	10.37	156	0.29	10	
2014)	LAND SUPPLY	5.12	49	1.28	12	
	NEW LAND REQUIRED		5.25	-0.99		
		LOW DENSITY		ENSITY MEDIUM DENSITY		
10 Year Short Term		TOTAL HECTARES	NUMBER OF DWELLING UNITS	TOTAL HECTARES	NUMBER OF DWELLING UNITS	
Land Requirement (2009-2019)	Projected Housing Need (2019)	20.40	307	1.03	36	
	LAND SUPPLY	7.15	65	1.79	16	
	NEW LAND REQUIRED	,	13.25	-0.76		
		LOW	DENSITY	MEDIUM DENSITY		
20 Year Long Term Land Requirement (2009-2029)		TOTAL HECTARES	NUMBER OF DWELLING UNITS	TOTAL HECTARES	NUMBER OF DWELLING UNITS	
	Projected Housing Need (2029)	37.60	566	1.80	63	
	LAND SUPPLY	6.81		1.70		
	NEW LAND REQUIRED	30.79		0.10		

Table 5.2.7 demonstrates that the majority of future residential growth and resulting land demand will gravitate towards single detached dwellings. This is based on historic development trends which is to be expected for a rural community such as Wiarton. The Town of Wiarton requires an additional 5.25 hectares of additional land to accommodate anticipated residential growth for the immediate five-year planning window. This additional land requirement is based on the availability of those existing vacant residential parcels which are best suited for residential infill opportunities.

For the short and long term planning periods of 10 and 20 years, the additional land required for future residential growth amounts to 13.25 hectares and 30.79 hectares respectively. This is based on existing availability of those larger vacant parcels which are suitable for plans-of-subdivision or similarly, smaller vacant parcels which are encumbered by various constraints and will require further administrative review before development is realized. This is based on an assumption that new residential dwellings will be constructed on existing vacant lots prior to any future developments involving further lot creation or new residential land designation. The most appropriate allocation of the foregoing future residential development land will be examined later in this report.

5.3 EMPLOYMENT PROJECTIONS

Employment projections have been derived for the municipality based on the activity rate method, which is defined as the number of jobs in a municipality divided by the number of residents. Employment activity rates have been calculated for the projection period based on an assessment of historical trends in the calculated rate over past census periods in order to capture differing local economic cycles. The employment activity rates applied to this projection are derived for key employment sectors categorized as follows:

PRIMARY INDUSTRIAL EMPLOYMENT

- Categories which relate to local land-based resources such as Agriculture, Forestry, Aggregates, etc.

INDUSTRIAL

 Categories which relate to manufacturing, construction, transportation, storage, communication and other utilities

POPULATION RELATED EMPLOYMENT (COMMERCIAL)

 Categories related to population growth and commercial services within the municipality including Wholesale and retail trade, finance, real-estate, business services, accommodation, food services, etc.

INSTITUTIONAL

 Categories which relate to government services, education health and social services, etc.

OTHER SERVICES

Home occupation

As noted, employment activity rates are derived from previous census periods with future rates being calculated based on past trends and assumptions. The projected population for the municipality established in Section 3.1 for a given five-year period is then multiplied by the anticipated activity rate for a specific employment category in order to provide a projected total employment figure for that sector.

Table 5.3.1

1 abic 5.5.1		EMPLOYMENT (Projected Number of Jobs)							
Year	PRIMARY INDUSTRY	INDUSTRIAL	COMMERCIAL	INSTITUTIONAL	OTHER SERVICES	TOTAL			
(Census) 2006	380	780	1360	655	900	4075			
2009	419	813	1449	724	953	4359			
2014	456	846	1535	786	1006	4629			
2019	493	885	1625	848	1062	4913			
2024	529	924	1714	906	1116	5189			
2029	561	958	1790	957	1164	5431			
20 Year Growth	142	146	341	233	210	1072			

5.3.1 Employment Land Demand

From the employment projections noted in Table 5.0.1, assumptions regarding employment densities must be applied to determine the amount of land required to accommodate the anticipated growth in employment for the municipality.

Building square footage estimates per employment sector have been calculated based on the following employee spatial requirements:

- 1,000 square feet per employee for industrial employment
- 500 square feet per employee for commercial employment
- 500 square feet per employee for institutional employment

Table 5.3.2

ESTIMATED SQUARE FEET PER EMPLOYMENT SECTOR								
	2009	2014	2019	2024	2029	20 YEAR GROWTH		
INDUSTRIAL (1000 sq.ft./Employee)	812,603	846,317	885,271	924,361	958,218	145,614		
COMMERCIAL (500 sq.ft/Employee)	725,000	767,500	813,000	857,000	895,000	170,000		
INSTITUTIONAL (500 sq.ft/Employee)	362,000	393,000	424,000	453,000	479,000	117,000		
TOTAL EMPLOYMENT	1,899,603	2,006,817	2,122,271	2,234,361	2,332,218	432,614		

The building square footage figures per employment sector are converted into overall future land requirements. Lot coverage assumptions based on existing employment uses and applicable zoning provisions are then applied to these square footage figures. Lot coverage assumptions for Commercial, Industrial and Institutional uses in the Town of Wiarton are applied as follows:

- Commercial Employment 30%
- Industrial Employment 30%
- Institutional Employment 40%

Table 5.3.2 summarizes the conversion of the anticipated growth in new jobs per sector from 2009 to 2029 into the amount of additional employment lands that will be needed to accommodate this employment growth. Based on a total growth of 720 new jobs in the Industrial, Commercial and Institutional employment sectors (excluding growth in primary industry and work-at-home employment sectors), a modest demand of 12.5 hectares of land is anticipated for new employment uses to 2029.

Table 5.3.3

1 4510 0.0.0	9							
ESTIMATED EMPLOYMENT LAND REQUIRED - 2029								
	NEW	DENSITY (PER	FLOOR AREA	FLOOR AREA	ASSUMED LOT	LAND REQUIRED		
LAND USE	JOBS	EMPLOYEE)	(sq.ft.)	(Hectares)	COVERAGE	(Hectares)		
INDUSTRIAL	146	1000 sq.ft.	146000	1.356	30%	4.521		
COMMERCIAL	341	500 sq.ft.	170500	1.584	30%			
INSTITUTIONAL	233	500 sq.ft.	116500	1.082	40%	2.706		
·	-	-	-		TOTAL:	12.507		

5.3.2 Employment Land Designations in Wiarton

The supply of employment lands in the Town of Wiarton includes those lands designated DOWNTOWN COMMERCIAL, HIGHWAY COMMERCIAL AND INDUSTRIAL, MARINE COMMERCIAL and INDUSTRIAL in the Wiarton Community Plan. Each of these designations is intended to accommodate different employment functions, scales of development and permitted uses. The designations are summarized as follows:

DOWNTOWN COMMERCIAL (Section 11.3.2.3) – The downtown commercial core serves as the focus for business, retail and service facilities and remains the primary gathering place for administrative and social functions. A wide variety of uses are permitted with a more intensive form of development focused on the scale of the pedestrian. Permitted employment uses specifically include retail, office, service, administrative, cultural, community facility, medical, and entertainment functions.

MARINE COMMERCIAL (Section 11.3.2.4) – The lands subject to this designation are situated along the western shoreline of Colpoys Bay at the base of the Niagara Escarpment. Predominant land uses include marinas and facilities for the sale, rental, servicing, repair and storage of water recreation vehicles.

HIGHWAY COMMERCIAL AND INDUSTRIAL (Section 11.3.3) – The most predominant area is located at the south end of Wiarton, along Highway 6. The primary purposes of those lands that fall within this designation is to accommodate commercial uses serving the travelling public or those uses considered to be incompatible with the downtown area. In addition, these areas support those uses which require larger sites to accommodate buildings, storage and parking as well as a perceived need for visible access to vehicular traffic. Permitted employment uses in this designation include motels, motor vehicles sales and service centres, agricultural and industrial sales and service facilities, contractor yards and fuel storage depots.

INDUSTRIAL (section 4.12) – Lands within this designation are also situated within the southern portion of Wiarton along Highway 6 as well as additional lands south of Elm Street in the southwest extent of the settlement area. These lands intend to accommodate various industrial, office and retail and service commercial establishments requiring large sites or those uses which are not suitable for a commercial area. Permitted employment uses include traditional industries such as manufacturing, processing, fabrication, assembly, warehousing and repair establishments.

5.3.3 Supply of Vacant Employment Lands

For the purposes of this study, all vacant employment properties were categorized according to commercial and industrial designations. Presently, there are no vacant parcels subject to an institutional (Community Facility) designation and therefore institutional employment lands have not been considered in the employment land supply analysis. The vacant Land Summary map in Appendix 1 to this report depicts all vacant commercial and industrial lands in Wiarton.

There are 59.6 hectares (147.4 acres) of vacant commercial lands within the Town of Wiarton, with an overwhelming majority of these lands (57.34 hectares (141.69 acres) being situated in the highway commercial designation within the Wiarton south study area. The remaining vacant commercial lands are situated within the Downtown Commercial core area and generally consist of vacant parcels less than 0.2 hectares (0.5 acres) in area.

The only lands designated for industrial purposes are situated in the Wiarton-south study areas and consist of two potential industrial-park sites, one of which is situated adjacent to Highway 6 and the other adjacent to Elm Street at the westerly settlement area boundary limit. These designated lands consist entirely of vacant parcels which constitute 78.1 hectares (192.9 acres).

The foregoing vacant employment land inventory is assessed against the anticipated employment land demand in order to determine if additional land is required. Table 5.4 outlines the amount of additional employment land needed as a factor of the amount of land anticipated minus the existing supply. The resulting figure is an overall land surplus of 125 hectares of vacant lands designated for employment purposes within the Town.

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EMPLOYMENT LAND SUPPLY VS. DEMAND TO 2029 - SUMMARY							
ESTIMATED EMPLOYMENT			VACANT LAND				
		LAND					
		REQUIRED	NUMBER OF	TOTAL	ADDITIONAL LAND		
LAND USE	NEW JOBS	(Hectares)	PARCELS	HECTARES	REQUIRED		
INDUSTRIAL	146	4.521	3	78.052	-73.531		
COMMERCIAL	341	5.280	27	59.637	-54.357		
INSTITUTIONAL	233	2.706	0	0	2.706		
TOTAL:	720	12.507	30	137.689	-125.182		

A major surplus of employment land exists predominantly within the south Wiarton study area in comparison to the projected employment established in Section 5.0. Notwithstanding this employment land assessment has been based on an ambitious assumption that most, if not all of the new employment development anticipated for the town, specifically highway commercial and industrial sectors, will be directed to occur in

Wiarton. A total of 125.1 hectares of surplus designated vacant employment land exists and will serve as a prime candidate for potential land use re-designation.

5.4 PROJECTED GROWTH SUMMARY

The foregoing intends to provide an assessment of historical population and development growth trends as a precursor for projected future growth within the municipality. The established future growth in population, housing and employment has been compared to existing residential and employment land inventory in order to determine the amount of additional land required to accommodate expected growth in accordance with provincial policy.

Residential Development

Based on the PPS preference for new residential dwellings to locate on existing vacant lots of record prior to new residential land allocation, an additional 30.89 hectares of residential land are required to accommodate long term growth in Wiarton for the 2009 to 2029 planning period. Given the rural nature of this region, the majority preference for single-detached dwellings is prevalent. With regard to medium density residential lands, a minor deficit of development lands exists to accommodate medium density housing for the long-term.

Employment Lands

The majority of vacant commercial and industrial employment lands exist within the southern extent of the Wiarton settlement area, south of Elm Street and west of Highway 6. Lands within this area designated for highway commercial and industrial purposes account for 135.4 hectares which represents 98% of all vacant employment lands in Wiarton. Based on the projected employment activity anticipated for the municipality, 12.5 hectares of employment lands are required to accommodate the projected employment growth. This is based on an ambitious assumption that most, if not all new employment, specifically industrial, highway commercial and institutional sectors will be allocated to Wiarton. Therefore, a significant surplus of employment lands exists and is in the order of 125 hectares of land beyond the anticipated employment demand. It is apparent that these surplus vacant employment lands may be appropriately re-designated to other land uses.

6.0 INFRASTRUCTURE

6.1 Wiarton Water Treatment and Distribution System

In April, 2009 a review of uncommitted, remaining water and sewage capacity was prepared by Genivar Consultants (Henderson Paddon & Associates Ltd.) for the Town of Wiarton. A summary table of the uncommitted reserve water capacity analysis is included in Appendix 2 to this report.

There are 1,157 actual, existing residential, institutional, commercial and industrial connections on the Wiarton water system. Based on the systems rated capacity coupled with the observed maximum and average day water demand from 2005 to 2007, an additional 935 remaining connections can be accommodated on this water system. However, there are 301 committed, but unconnected connections at this time which consist of the following:

- Watson Street extension (30 new connections)
- Dawson Street/John Street extension (16 new connections)
- Elm Street extension (15 new connections)
- South lands servicing extension Highway 6 and Part Lot 1, Concession 20 (50 new connections)
- Approved Subdivisions (94 new connections)
- Vacant lots on existing services (96 connections)

The net remaining, uncommitted reserve capacity is 634 connections (935 connections minus 301 committed but unused connections).

A preliminary review of fire flow availability in the Wiarton south settlement area lands was also provided in the Genivar report. This analysis was undertaken as the elevation of the lands south of Elm Street and West of Highway 6 are quite high (approximately 210 m A.S.L.) compared to the bottom of the fire storage component of the water tower (235 m A.S.L.). The analysis concluded that a fire flow of approximately 112 L/s should be available at the last hydrant on the existing 300 mm diameter watermain south of Elm Street on Highway 6 which exceeds the required 95 L/s. As development occurs in this area, it is anticipated that additional watermains would be constructed to provide a local watermain grid system to reinforce water flows in the area. Pending final details of the proposed adult lifestyle community anticipated for this area, no significant additional water distribution infrastructure such as booster stations or additional reservoirs appear to be required at this time.

6.2 Wiarton Sewage System

The sewage system analysis contained in the Genivar report provides a review of the average day sewage flow treatment capacity of the Wiarton lagoon system. The sewage system consists of 965 existing wastewater connections. A summary table of the uncommitted reserve wastewater capacity evaluation is included in Appendix 3 to this report. Based on the average rated flow capacity of 2,500 m³/day coupled with the observed average day flow from 2005 to 2007(1,848 m³/day), an additional 494 remaining connections can be accommodated on this system. Similarly to the water treatment system, there are 331 committed, but unconnected connections at this time in which are comprised of the following:

- Watson Street extension (30 new connections)
- Frank Street extension (30 new connections)
- Dawson Street/John Street extension (16 new connections)
- Elm Street extension (15 new connections)
- South lands servicing extension Highway 6 and Part Lot 1, Concession 20 (50 new connections)
- Approved Subdivisions (94 new connections)
- Vacant lots on existing services (96 connections)

The net remaining, uncommitted reserve capacity is 163 connections (494 connections minus 331 committed but unused connections).

With regard to a review of wastewater servicing specifically within the study area, a new sewage pumping station, forcemain and trunk sewer as well as local sanitary sewers will be required prior to any major new development. The sewage pumping station at Elm Street/Taylor Street is currently at maximum capacity during peak flow events and will also require improvements to increase this pumping capacity before any significant development occurs. Previous studies undertaken have estimated the capital cost to undertake the foregoing sewage infrastructure upgrades will be in the order of approximately \$1.5 million, as of 2008. This value excludes the costs of local sewers and the additional upgrades recommended for the Elm Street/Taylor Street sewage pumping station.

Based on the foregoing, no significant upgrades to the water supply, treatment or storage works would be required to expand water servicing in the Wiarton south study area. To expand wastewater servicing in this area, significant improvements are required, including upgrades to the existing Elm Street/Taylor Street pumping station as well as a new forcemain and trunk sanitary sewer. Details on any new servicing infrastructure as well as need improvements to the existing systems in this area will need to be evaluated in conjunction with a more detailed development proposal for the study area.

6.3 Transportation

Provincial Highway No. 6 is the major north-south transportation corridor for the Bruce Peninsula which borders the eastern boundary of the Wiarton south study area. This is a major thoroughfare for communities within the Bruce peninsula and links the City of Owen Sound with Tobermory. The study area is bound to the north by Elm Street (Concession Road 21) and Boat Lake Road (Grey Road 17). The majority of lands adjacent to Highway 6 are designated for Highway Commercial purposes in the Wiarton Community Plan. These lands are intended for those commercial and clean industrial uses that depend on a high degree of vehicular traffic access and visibility and also require a larger lot area than what typically may be available in the urban centre. Local Official Plan policy discourages strip commercial development in a manner which would create repetitive access points along Highway 6. It is also a mandate of the Ontario Ministry of Transportation to minimize direct access to Highway 6 in order to maintain safe and efficient vehicular movement along this corridor. Therefore, an internal road network to service these lands adjacent to Highway 6, including service road options should be implemented in a manner which integrates the existing surrounding road fabric and unopened road allowances for future development.

6.4 Stormwater Management

In May, 2009 Genivar Consultants (formerly Henderson Paddon & Associates Ltd.) prepared a preliminary stormwater management review summary for the Wiarton south planning area (Appendix 4). This preliminary stormwater review identifies three catchment areas, the first of which (Area A) is a 17.2 hectare northeast section. The current outlet of this section is northeasterly through the Township of Georgian Bluffs via an existing culvert under Highway 6 to an existing stormwater management pond (SWMP) owned by the Grey Sauble Conservation Authority. Area B consists of the northwest 48.5 hectare section of the study area which appears to have a surface runoff flow towards the northwest. The drainage outlet of this catchment area is northwesterly under Elm Street, then westerly as a municipal drain under North Acres Road through Clavering Creek to Boat Lake. Area C includes the remaining 96.7 hectare south section of the study area, of which the outlet is westerly to Clavering Creek, then northwards under Elm Street terminating in Boat Lake.

Preliminary measures suggested for accommodating increased capacity of stormwater runoff include generally maintaining the existing drainage pattern and constructing onsite stormwater management ponds within development parcels.

6.5 Public Service Facilities

There are a number of public service facilities that should be considered when evaluating proposed changes to land use designations and the settlement area boundary for the Wiarton south lands. Of special importance are facilities relating to health, education and municipal services.

Most of these services are situated within the Wiarton downtown area. Health services are provided by the Grey Bruce Health Services – Wiarton Hospital which is located near the southeast corner of Mary Street and Berford Street (Highway 6). The hospital provides emergency care to the high influx of seasonal visitors to the southern peninsula and Sauble Beach and is well suited for expanding development within the south study area.

The Peninsula Shores District School is the only school facility situated in Wiarton. It is a newly constructed public school offering junior kindergarten through grade 12. This school serves as the secondary school facility for students from Hepworth Central School, Amabel Sauble Community School and Cape Croker Elementary School. The school is situated at the southwest corner of George Street and Watson Street and is approximately 0.5 metres north of the study area.

The municipal office for the Town of South Bruce Peninsula is located in the downtown area at the corner of George Street and Berford Street (Highway 6).

7.0 EXISTING POLICY DIRECTION AND CONSIDERATIONS

7.1 Provincial Interests

The purpose and intent of this report is to examine the land use policy designations for the Wiarton South Study Area and evaluate projected growth that may warrant other designations in accordance with Provincial policy. Provincial interests emphasize sustainable development practices through growth initiatives within urban centres, enhanced environmental protection, service and infrastructure efficiencies and improvement of the public realm through community stewardship. The 2005 Provincial Policy Statement (PPS) encourages the accommodation of new development and growth through residential infill and intensification, more compact built form, mixed use, transit oriented and accessibility supportive development, reuse and rehabilitation of the built environment, and brown and greyfield developments. The PPS further promotes greater service, infrastructure and energy efficiencies, alternative and innovative regulatory standards, enhanced open spaces and public realms. These provincial policy objectives as well as the detailed land use policies outlined in the following subsection are to be assessed against future growth allocation options including the adult lifestyle community proposal.

7.2 Local Official Plan Policies

The Town of South Bruce Peninsula Official Plan is the primary vehicle for implementing long-range provincial and county policy directives and interests. The Wiarton Community Plan forms a component to the Town of South Bruce Peninsula Official Plan and contains goals, actions and policies intended to maintain and strengthen the economic, environmental and social fabric for the community of Wiarton. Appendix 5 shows the existing land use designations specific to the Wiarton south study area.

Residential

Section 11.3 of this plan outlines the policies for residential land uses within Wiarton. It is recognized that single detached homes are the predominant housing type in Wiarton and will continue to predominate future development initiatives. However there is a need to promote a mixed and affordable supply of housing to meet the current and future needs of all segments of the community. Residential objectives or "Actions" are prescribed as follows:

- Encourage a reasonable supply of building lots and blocks for future residential development.
- b) Encourage a wide range of housing types and designs.
- c) Promote a range of single detached residential lot sizes.
- d) Encourage the design of new residential areas for safe pedestrian travel.
- e) Promote new industrial and commercial development to decrease residential taxes.
- f) Attempt to maintain at least 25% of all residential housing opportunities affordable for low and moderate income.
- g) Improve housing opportunities for Community members with special needs including low income people, seniors and supportive housing for the physically and developmentally handicapped.
- h) Encourage new residential development to be consistent and compatible with surrounding heritage resources.

The Wiarton Community Plan prescribes housing mix target of 70% low density housing, 30% medium density housing. Low density residential development includes single detached, semi-detached and duplex dwellings and is subject to a maximum gross density of 20 units per hectare. Medium density residential development policies govern triplexes, 4-plexes, townhouses, row-houses and three-storey apartments. Historic residential development trends indicate 90% proportion of single detached dwellings. A greater policy emphasis should be placed on encouraging a wide variety of housing formats and densities to reflect this 70% single detached housing objective.

The following design criteria have been provided in the Wiarton Community Plan for future medium density residential development:

- i) compatibility with existing land uses in the immediate area and the historical
- ii) character of existing buildings;

- iii) designed with a maximum of three (3) stories and where possible, a building profile which conforms visually with the surrounding residential structures;
- iv) availability of adequate off-street parking and appropriate access and circulation for vehicular traffic, including emergency vehicles;
- v) necessary buffering from abutting uses;
- vi) suitable landscaping, lot grading, drainage and on-site amenities; and,
- vii) the availability of full municipal services to accommodate the proposed density of development.

This established design policy framework intends to ensure that new residential development is compatible with the existing development character, appropriate access and servicing are available and transition measures are provided for abutting uses. In consideration of future residential designations within the Wiarton South settlement area, there should be less reliance on standardized and somewhat rigid "cookie-cutter" zoning and infrastructure standards to regulate proposed developments. Greater encouragement should be given to innovative and flexible building formats and site design options which will allow for adaptation to changing adult lifestyles and family situations. Additionally, site design, infrastructure and servicing standards should be considered to best accommodate new development within a finite and increasingly compact built environment in a manner which differs from estate-style residential developments typical of the area. Innovative site, building and infrastructure design initiatives may serve to optimize the efficient use of available space to minimize potential environmental disruption, ensure infrastructure efficiency and create visibility amenity space, open spaces, passive and active recreational areas, streetscapes and pedestrian linkages.

Policy framework should be built around mechanisms that support and promote landscaping, greening, buffering, berming, screening, vegetation, accessibility and connectivity to man-made and natural heritage areas. Further emphasis should be given to innovative building design, building siting, facades, height, massing, and terracing to enhance ground level and above ground amenity and open space.

Highway Commercial

There is a predominant area designated for highway commercial purposes adjacent to Highway 6 within the Wiarton South study area. The intent of the highway commercial designation is to provide opportunities for the establishment of those commercial uses and environmentally clean industries that are dependent on a high degree of visible access and require larger sites that what can typically be provided in a downtown area. The primary goals of the highway commercial policies are to promote businesses that will provide a diversified economic base, greater employment opportunities and clean industries. In order to ensure that the highway commercial lands are developed as an attractive entrance to the community, the following site development standards are specified in the Wiarton Community Plan which regulates new highway commercial development proposals.

- i) landscaping shall be provided between any Highway Commercial and Industrial use or parking areas and the adjacent highway, except for designated entrances and exits;
- all outdoor storage for uses other than automotive and recreational vehicle dealerships should be located to the rear or side of the main building on the lot and shall be fenced or suitably screened from adjacent uses;
- ii) signs shall be limited in number and designed to be functional and avoid visual clutter and distraction, and where possible should be consolidated on shared sign structures;
- iii) underground wiring for hydro, telephone, and other transmission lines shall be promoted; and.
- iv) vehicular parking for employees shall be restricted to the side or rear of the principal building and screened from surrounding uses and views from the street.

It is also a policy of the official plan to prohibit strip development in order to allow for safe and efficient vehicular movement. Highway commercial and industrial uses should be grouped together for access and servicing efficiencies. Options such as combining entrances or service roads are promoted which will reduce access points onto Highway #6. A prime focus of the development standards is to provide a more attractive streetscape for the southern entrance to the community. The development standards could be strengthened by prohibiting parking and storage areas in front of buildings by means of a zoning By-law modification. As well, signage should be limited to fascia and ground signage or prohibiting free standing signage.

8.0 GROWTH ALLOCATION OPTIONS

8.1 Accommodating Projected Residential Growth

Based on historic growth observations, the Town of Wiarton can expect 629 new dwelling units to accommodate projected population growth to 2029. Assumed density provisions specified in the local Official Plan translate this to a total anticipated residential land demand of 39.4 hectares. There are a total of 23.9 hectares of vacant residential land available for development within the Town. Of which, 6.4 hectares consist of existing vacant residential parcels suited for infill development and 8.5 hectares consisting of larger parcels suitable for subdivision developments.

The comparison of projected residential growth against existing land supply is based on an assumption that new residential dwellings will be constructed on existing vacant lots prior to future developments requiring additional lot creation. In review of the long-term residential land requirements, an additional 30.8 hectares are required beyond what is presently available for future subdivision developments.

As noted earlier in this report, a proposal has been submitted for a 1200 to 1500 unit adult lifestyle community within the Wiarton South Study Area. It is anticipated that these units will be phased over a 15 to 20 year period. It may be difficult to comprehend the need for additional residential land to support a proposal for 1200 to 1500 additional dwelling units in light of the foregoing residential land supply versus demand review.

However, one must consider that a large-scale development of this nature may spawn its own form of "induced population demand" in which the development itself serves as an attractive destination for new residents from outside the region in a manner which would defy historic development trends. As noted in the foregoing section 5.1 of this report, it is difficult to model this type of induced growth which is outside of historical growth trends.

If growth is to be sustained for this area over the long-term, the Town must ensure a policy framework is in place which implements those provincial interests prescribed by the Planning Act and enforced through the Provincial Policy Statement. This means a move away from traditional housing developments and implementing a policy environment that supports and encourages more compact built form, mixed-use developments, higher density building formats and increased useability of surface landscapes. The proponent for the adult lifestyle community has suggested the development will include some commercial uses that intend to serve those needs specific to the adult lifestyle community. These uses will be included within a proposed village centre and would consist of home care, mobility services, health and fitness, leisure, convenience retail, and institutional facilities.

The proposed village centre presents an opportunity to implement those provincial directions including mixed-uses and higher density development options. As mobility and accessibility are prevalent issues amongst ageing demographic groups, consideration should be given to a built form which promotes the ease of mobility at the pedestrian level as well as alternative transportation formats. Various housing formats should also be available and the adult lifestyle community provides an opportunity to fulfill this provincial mandate. The majority of the existing housing stock for the municipality is the single-detached dwelling which accounts for 90% of all dwelling units. The Provincial Policy Statement encourages planning authorities to provide for a range and variety of housing options for existing and future residents and the adult lifestyle community should be development in a manner which provides greater housing variety.

8.2 Accommodating Projected Employment

The Town of Wiarton has 137.7 hectares of vacant commercial and industrial land available to accommodate future employment uses. The majority of this land is situated within the Wiarton South Study Area. It is estimated that a total of only 12.5 hectares of land will be required to accommodate projected employment activity through the 2029 planning period. This indicates that a substantial surplus of 125.1 hectares of vacant land is presently designated for employment uses. Consideration of other designations is appropriate given this abundant surplus anticipated for the planning period, coupled with the recent residential development interests expressed for these lands.

The Province recognizes the importance of providing a sufficient employment land base as a prerequisite to a viable local economy and requires that any proposal to redesignate employment lands to other uses necessitates a comprehensive review. One of the fundamental issues facing the Town of South Bruce Peninsula, along with many

localities in this region is the declining workforce due to an ageing population and small in-migration of working-aged people. Local businesses therefore experience ongoing difficulties associated with recruiting new employees and there is little incentive available for new business to locate to or start up within communities such as Wiarton.

Of primary concern to the Town is the declining employment activity and the corresponding increased perception of Wiarton as a retirement community. In this regard, the Town of South Bruce Peninsula commissioned the completion of an Economic Development Plan in 2005 to identify a strategy for improving the local economic conditions in the area. One of the key recommendations is to foster the role of the municipality as an enabler to economic development, in that, the municipality must ensure that sufficient land resources, services and facilities are available to spawn economic growth. The designation of abundant industrial and employment lands within the south study area of Wiarton may be a municipal response to ensuring adequate employment lands and services are provided. However, the preceding analysis indicates that even with the employment growth anticipated for the 2029 planning period, a significant abundance of the existing vacant employment lands will remain.

A re-designation of a portion of the existing lands designated industrial and highway commercial within the Wiarton South study area for residential purposes is appropriate. However, a complete replacement with a residential designation may be excessive in light of the preceding residential land supply versus demand analysis. It would be logical to re-designate a portion of these lands "residential", subject to a Special Policy Area outlining requirements to be fulfilled by the developer, including details on phasing, servicing allocation options, etc. A westward expansion of the settlement area boundary within Concession 21, south of Elm Street is appropriate, provided these additional lands are designated "Rural" to be incorporated into a broader comprehensive stormwater management plan for the development area and surrounding lands.

The servicing assessment contained in Section 6.0 of this report confirms that no significant upgrades to the water supply, treatment or storage works would be required to expand water servicing in the Wiarton south study area for future residential development. An expansion of wastewater servicing in this area however would require significant improvements, including upgrades to the existing Elm Street/Taylor Street pumping station as well as a new forcemain and trunk sanitary sewer.

9.0 PRELIMINARY GROWTH STRATEGY

Approximately 720 additional jobs are expected for the town through the 2029 planning period which will occupy approximately 12.5 hectares of land. Presently there are 137.7 hectares of vacant employment land within the Town which exceeds the employment projections by 125 hectares. Given this excessive oversupply, a proposal to redesignate these lands for other uses, primarily residential, is justified.

There is presently 23.9 hectares of vacant residential land available for future development. The majority of this however is only available in the form of existing vacant lots of record suitable for infill and intensification forms of new residential development. The existing long-term supply of residential suitable for larger subdivision developments consists of only 8.5 hectares.

Additional residential land designation in the Wiarton south area is desirable in light of the apparent oversupply of employment lands and recent development interest for additional residential lands. A slight over-supply of residential lands which exceeds anticipated demand may be beneficial for long-term planning purposes as it provides for:

- Greater than anticipated household growth;
- Land price competitiveness;
- Property ownership limitations;
- Choice of new residential locations; and
- Equity of growth distribution.

The following land use designations and policy modifications are recommended based on the foregoing comprehensive review. These recommended modifications consist of the following:

- 1) A re-designation of those lands subject to the Adult Lifestyle Community proposal to residential purposes. Additionally, these lands will be subject to a "Special Polciy Area" which outlines additional criteria to be fulfilled by the developer, to the satisfaction of the Town.
- 2) A westward expansion of the Settlement Area Boundary within Concession 21 to include all of those lands subject to the proposed "Adult Lifestyle Community". This area outside of the existing boundary should be designated "Rural" to be included in a comprehensive stormwater management plan for the overall area.
- 3) The amendment places a restriction on an initial phase of development, based current servicing capacity with consideration given to providing sufficient servicing capacity for various infill and redevelopment potential within the Town.
- 4) The Town is to initiate an EA for the entire study area to consider stormwater management and sewer and water servicing. As well, the servicing and stormwater management proposal must conform to the overall Environmental Assessment (EA) to be undertaken for the area.

- 5) Prior to the Town entertaining a phase one for a new residential area, the proponent is to prepare a Master Plan to the satisfaction of the Town; the requirements for which are outlined in this "Special Policy Area" criteria.
- 6) The amendment also provides for some policy modifications to Section 11.3.3.4 "General Highway Commercial" and Industrial Policies" in order to improve the aesthetic quality of the primary entrance to the Town.

10.0 POLICY RECOMMENDATION

AMENDMENT NO. ___ TO THE TOWN OF SOUTH BRUCE PENINSULA OFFICIAL PLAN

PURPOSE OF THE AMENDMENT

The following amendment modifies certain provisions of Section 11 of the Town of South Bruce Peninsula Official Plan (Wiarton Community Plan) and adds a Special Policy Area which will reduce the amount of land presently shown as employment lands and provide for the staged development of a new residential community. Certain minor modifications will also be included that will recognize the need to provide an attractive entrance to the Wiarton Settlement Area. Schedule "A" to this amendment will modify Schedule "B" to the Town of South Bruce Peninsula Official Plan.

TITLE AND CONTENTS OF THE AMENDMENT

This amendment document contains the following text and Schedule "A" which amends Schedule "B" of the Town of South Bruce Peninsula Official Plan. The addition of Special Policy Area #3 will be referred to as the Wiarton South Policy Area and applies to approximately 95 hectares (235 acres) including all or parts of Lots 1,2 and 3, Concession 21 in the geographic Township of Amabel which had been incorporated into the former Town of Wiarton.

This amendment is based on the findings of a comprehensive Background Study prepared by Cuesta Planning Consultants Inc. as well as comments received from the public, local and county staff, agencies and municipal councilors.

The Background Study assessed the historic and projected growth rate, corresponding land use requirements, environmental constrains and municipal servicing and infrastructure capability.

The background material and consultation process generated a need to assess various components of the previous growth management strategy, in particular, the allocation of employment lands within the Wiarton South Study Area. The reconsideration of the land use policies in the Wiarton South area was also influenced by a large residential community development proposal which could not be accommodated within the existing residential designations of the settlement area. Any type of development of significant proportion proposed for small rural urban centres generally encounters difficulties because of the stringent settlement area boundaries imposed by the Provincial Policy

Statement. The lack of development over the past three decades in the southern section of the settlement area suggests merit in an assessment of the need for the large areas of industrial and commercial lands.

The Background Study determined that the employment needs of the Town for the 20-year planning period require approximately 12.5 hectares of land. The study area contains 137.7 hectares of vacant employment land rendering a surplus of approximately 125 hectares over the planning period.

The surplus of employment lands would permit the municipality to consider other land use options for a portion of the study area. The re-designation of the northern portion of the study area for a residential community is reasonable and would represent a natural southward extension of the residential area north of Elm Street.

DETAILS OF THE AMENDMENT

The following amendment and Schedule "A" will consider primarily the lands south of Elm Street. Schedule "A" reflects a revised boundary of the settlement area including a minor extension to the west of the existing settlement area. This adjustment is required in order to accommodate a storm water management system for Special Policy Area # 3. Unless amended by this subject amendment, all other provisions of Section 11 of the Official Plan apply.

To reflect the results of the Background Study and to encourage the development of a new residential neighbourhood, the Town of South Bruce Peninsula Official Plan is hereby amended by adding following section:

xx.x.x.x Special Policy Area # 3 – WIARTON SOUTH SPECIAL POLICY AREA

Special Policy Area # 3 covers approximately 95 hectares of land south of Elm Street and west of Highway # 6, to the revised western boundary of the Wiarton Settlement Area as shown on Schedule "A". It is intended that this area be developed as a new residential neighbourhood within the Wiarton Community. A general land use configuration with a village centre area and residential lands are shown within Special Policy Area No. 3 on Schedule 'A'. The following policies will implement the direction of Council to set out the objectives, development criteria and provisions to facilitate the orderly progression of growth and development within this area.

The low historical growth rate for the Wiarton Settlement area requires that a staged growth management policy approach be established in Special Policy Area # 3 in order to avoid scattered uneconomical development and to encourage a natural expansion of the existing urban area. The development of this area will occur through a staged growth management approach subject to the following:

- 1) All development will occur on full municipal services.
- 2) Lands designated "Residential" within Special Policy Area 3 on Schedule 'B' shall provide for the development of low density and medium density residential uses which may include single-detached, semi-detached low-rise apartment, townhouse or other similar forms of housing. A range of ownership and tenure options may be considered through each development phase.
- 3) Lands designated "Village Centre" within Special Policy Area 3 on Schedule 'B' are intended to facilitate a mixed-use neighbourhood which is conveniently located in the community. Development in the "Village Centre" designation shall not affect the economic viability of other commercial areas in the Town. In some cases, multiple uses may be located in the same building. Permitted uses within this area may include:

- Uses permitted within the Highway Commercial and Industrial designation, in accordance with the provisions of Section 11.3.3.3.
- Multiple-family residential.
- Assisted living accommodations and associated facilities, including retirement home, nursing home, hospice and other similar uses.
- Professional services and institutional uses.
- Community facilities, including recreation centre, administration, meeting space, and maintenance.
- Open space, walkways, plazas, active or passive recreational uses and associated buildings or structures.
- 4) A **Master Plan** shall be prepared and will form the basis of an overall site plan approval. The Master Plan will provide the following:
 - i) A detailed land use pattern, including a transportation plan depicting primary and secondary roads, traffic and pedestrian circulation. The land use pattern shall also provide information relating to the design and location of various housing types proposed, and exterior design elements.
 - ii) Development staging details, including population and dwelling unit growth anticipated for each development phase. Subsequent development stages will be determined based on the extent of completion of the previous stage, or a reasonable anticipated growth rate, as determined by the municipality. The municipality may utilize holding provisions to regulate staging of the development.
 - iii) A demonstration of the land use compatibility between the proposed residential neighbourhood community and surrounding lands within the commercial and industrial designations.
 - iv) Areas identified for the following land use purposes:
 - Residential
 - Open Space and Recreation, including areas/blocks for stormwater management purposes
 - Environmental Protection
 - Village Centre
 - v) Land use patterns, residential densities and building forms that efficiently utilize resources, energy and infrastructure shall be encouraged.
 - vi) The development of a parkland system that is convenient and accessible to community residents.
 - vii) An integrated trail system that enhances access to significant environmental areas as well as active and passive recreation areas.
 - viii) The main roads within Special Policy Area No. 3 will tie into existing municipal

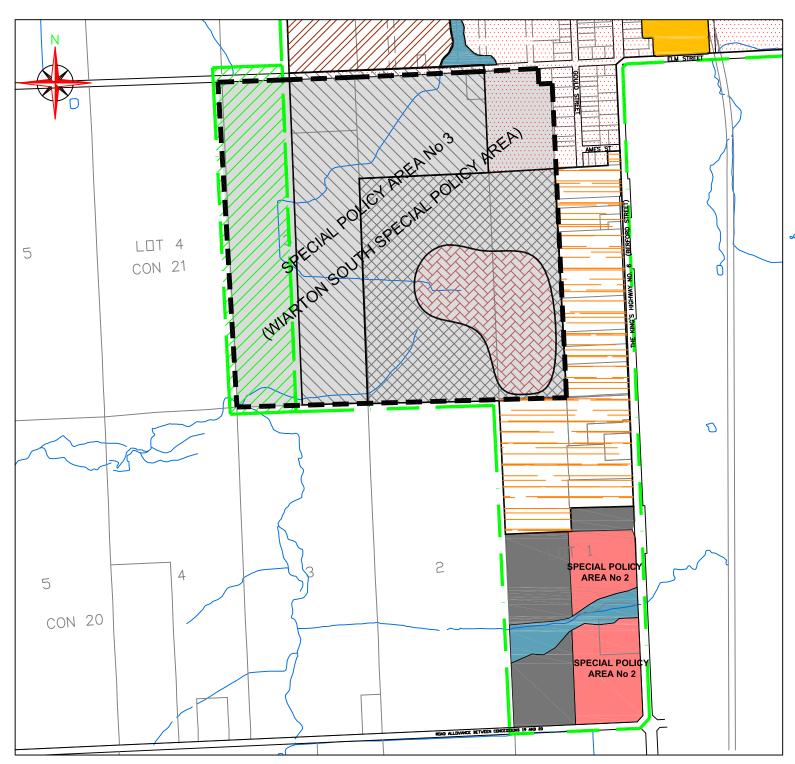
- roads and provide connections to adjacent lands, where appropriate.
- ix) A Master Development Agreement will be entered into between the municipality and the developer to ensure that all applicable development related matters are addressed to the satisfaction of the Town, including staging, zoning, servicing and financing.
- 5) Prior to any new development occurring, the municipality shall initiate the undertaking of an **Environmental Assessment** to consider municipal servicing issues related to the provision of sewer, water and stormwater management for those lands within the settlement area between Elm Street and the southern boundary of the settlement area. The following guidelines will be followed;
 - i) The extent of any necessary expansion and upgrades of the municipal water and sewage disposal servicing capacity, watermains, trunk sewer lines and other associated servicing infrastructure extending to the lands south of Elm Street within the Wiarton Settlement Area, will be determined under the Environmental Assessment. This will include any such servicing requirements for existing and future development in the surrounding area, including existing residential areas and the Highway Commercial and Industrial lands along Highway #6.
 - ii) Sufficient sewer and water capacity is available for Phase One of the new residential community to proceed prior to the completion of the Environmental Assessment. This initial stage of development may include a maximum of 150 residential units, a recreation and administration centre, building construction, manufacturing and maintenance uses with associated buildings and open storage, assisted living accommodations, and a maximum of 1,000 square metres of commercial floor area. All development shall be subject to available servicing capacity.
 - iii) Any stormwater management system will be encouraged to employ a passive management system that is integrated with an open space network.
 - iv) A stormwater management plan for Phase One will be required, and must be prepared in a manner which takes into consideration adjacent lands in anticipation of an overall neighbourhood stormwater management system, which may be subject to future modifications under the Environmental Assessment."
 - v) The costs of the Environmental Assessment, once completed, will be shared among the benefitting property owners involved.

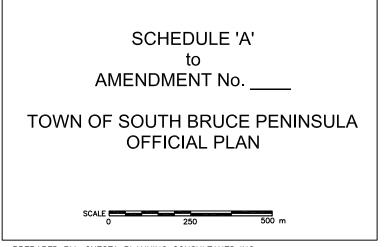
Section 11.3.3.4 is hereby replaced by the following:

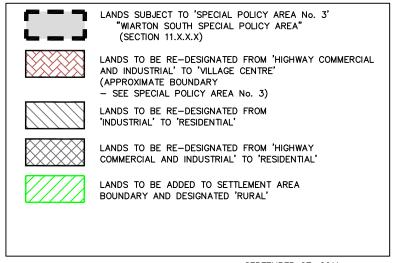
11.3.3.4. General Highway Commercial and Industrial Policies

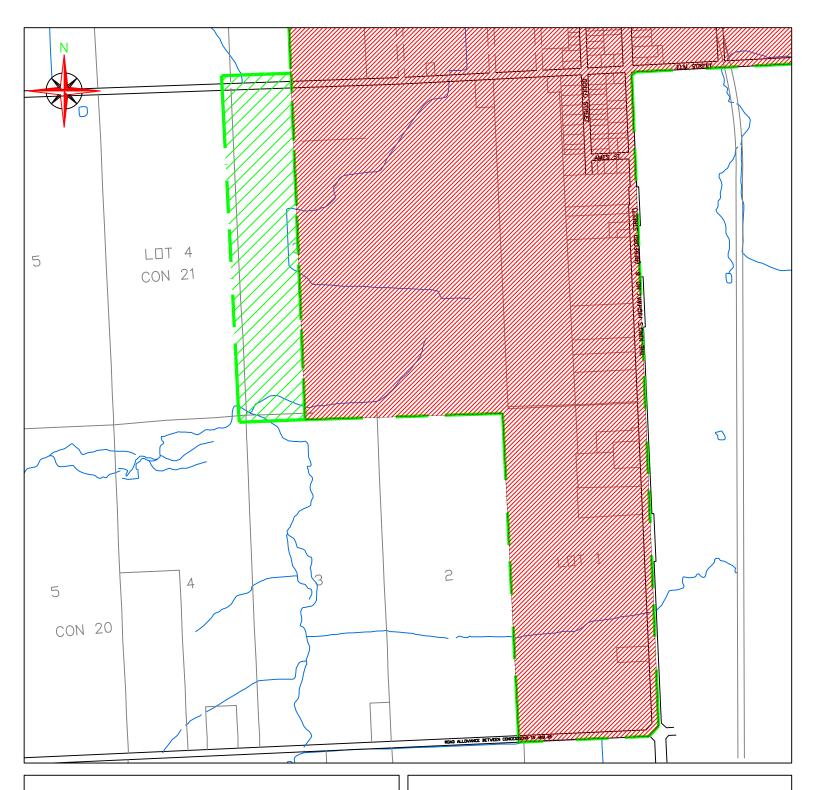
- a) Council shall encourage the majority of new Highway Commercial and Industrial development to locate between the Ames Street intersection with Highway #6 and the southern boundary of the settlement area.
- b) The area provides the principal entrance to the community and in order to ensure that the Highway Commercial and Industrial lands develop as part of an attractive entrance to the community, it shall be a policy of the Town that the following site development standards be satisfactorily addressed by all Highway Commercial and Industrial development proposals:
 - i) landscaping shall be provided between any Highway Commercial and Industrial use and the adjacent highway, except for designated entrances and exits;
 - all outdoor storage for uses other than automotive and recreational vehicle dealerships should be located to the rear or side of the main building on the lot and shall be fenced or suitably screened from adjacent uses. Uses containing outdoor storage areas are encouraged to locate on interior streets, not fronting onto the highway;
 - signs shall be limited in number and designed to be functional and avoid visual clutter and distraction. No billboards are permitted and free-standing signs are discouraged;
 - iv) underground wiring for hydro, telephone, and other transmission lines shall be promoted; and,
 - v) vehicular parking for employees or the public, shall be restricted to the side or rear of the principal building and screened from surrounding uses and views from the street.
- c) To allow for the safe and efficient movement of traffic, strip development shall be prohibited. Highway Commercial and Industrial uses should be grouped for access and servicing advantages. Efforts shall be made to reduce access points by combining exits and entrances or by creating service roads where possible.
- d) Adequate off-street customer parking facilities shall be provided and shall be located to the rear and side of the principal building fronting on Highway #6 (Berford Street). Parking between the principal building and the highway shall generally be prohibited. Development proposing customer parking in the front yard must demonstrate that no other feasible option exists for accommodating the needed parking.
- e) Where necessary, off-street parking, drive-ways and/or loading areas adjacent to residential uses shall be suitably screened or buffered through the use of fences, berms or other appropriate landscape treatment.

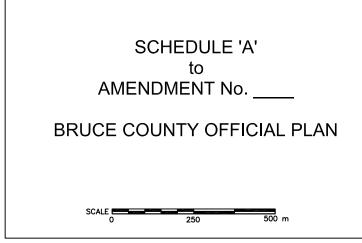
- f) All parking areas shall be appropriately illuminated to ensure the safety of pedestrian and vehicular access. Dark sky lighting shall be required.
- g) Effects of Highway Commercial and Industrial development on adjacent uses shall be minimized by:
 - i) providing distance separation and/or the construction and maintenance of buffer strips and/or screening between such uses;
 - ii) the arrangement of lighting facilities and commercial signs to minimize impact on surrounding uses; and,
 - iii) ensuring that off-street parking facilities do not adversely affect surrounding uses.
- h) The establishment of a fully serviced "Business Park" for Highway Commercial and Industrial development shall ensure an efficient and coherent pattern of development and appropriate municipal servicing. The lot arrangement and road pattern shall be designed to ensure access to an internal road system with no individual road access onto an arterial or collector road.
- i) The minimum lot size shall be dependent on the nature of the use, the topography and drainage.
- j) Where feasible, similar uses should be encouraged to be grouped together to avoid land use conflicts. For example, uses which serve the travelling public should be separated from those which require large amounts of land.

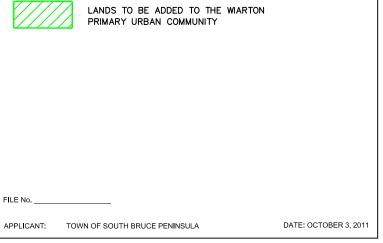






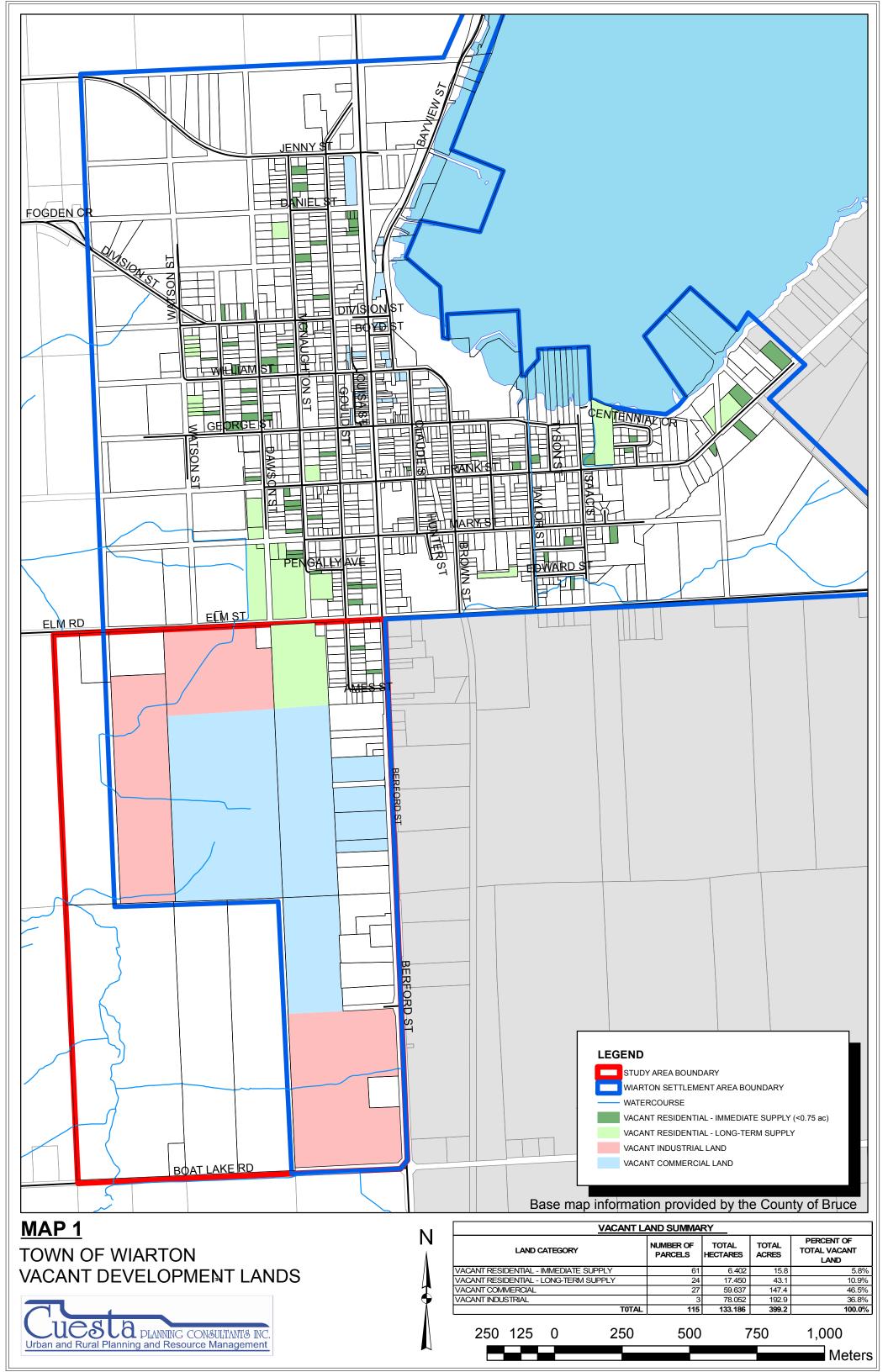






APPENDIX 1

VACANT LAND SUMMARY MAP



APPENDIX 2

UNCOMMITTED RESERVE CAPACITY ANALYSIS WIARTON WATER TREATMENT AND DISTRIBUTION SYSTEM

Report on Uncommitted Remaining Capacity Town of South Bruce Peninsula – Table 1

Genivar Consultants LP - April, 2009

Uncommitted Reserve Capacity Analysis

Wiarton Water Treatment and Distribution System

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1.	Maximum day water demand for 2005, 2006 and 2007:	
	2005 - 2.935 m ³ /d (September) 2006 - 2,580 m ³ /d (July) 2007 - 2,845 m ³ /d (July)	
	Use 2,935 m ³ as highest value in 3 years.	
2.	Average Day Water Demand for 2005, 2006 and 2007:	
	2005 - 1,534.5 m ³ /d 2006 - 1,495.4 m ³ /d 2007 - 1,555.6 m ³ /d	
	Average of three years is 1,528.5 m ³ /d	
3.	Number of existing water connections:	
	Wiarton - 932 Ames Survey - 48 Oxenden - 167 Gateway - 10	
	Total: 1,157 connections.	
4.	Determine maximum day flow per connection:	
	$2,935 \text{ m}^3/\text{d} \div 1,157 \text{ connections} = 2.54 \text{ m}^3/\text{day}$	
5.	Determine average day flow per connection:	
	$1,528.5 \text{ m}^3/\text{d} / 1,157 \text{ connections} = 1.32 \text{ m}^3/\text{d}$	
6.	Determine remaining, uncommited capacity:	
	 a) Wiarton water plant rated capacity = b) Subtract actual maximum day = c) Preliminary net remaining capacity = d) Subtract full allotment of maximum day flow for Oxenden water system = e) Subtract full allotment of maximum day flow for Gateway water system = f) Net remaining capacity = 	5,400 m ³ /d 2,935 m ³ /d 2,465 m ³ /d 502 m ³ /d 37 m ³ /d 1,926 m ³ /d
7.	Determine number of additional connections	
	$1,926 \text{m}^3/\text{d} \div 2.54 \text{m}^3/\text{d} = 758$ connections. However, add back existing Oxenden (167) (10) connections as covered by maximum day flow allotment (502 $ \text{m}^3/\text{d}$ and 37 $ \text{m}^3/\text{d}$ water system, respectively, as above. Total of 935 remaining connections.) and Gateway) for Oxenden

Subtract Existing, Committed but Unconnected Connections

8.

		 Dawson Street/John Street Extension - 16 new sewer and water connections; Elm Street Extension - 15 new sewer and water connections; South Servicing (Hwy 6 & Part Lot 1 Concession 20) - 50 new sewer and water connections; Approved Subdivisions - 94 new sewer and water connections; Vacant lots on existing services - 96
		Total - 301 potential, committed but unconnected water connections
	9.	Net Remaining Uncommitted Reserve Capacity
		935 connections - 301 committed, but unconnected water connections = 634 Connections
The state of the s		

APPENDIX 3

UNCOMMITTED RESERVE CAPACITY EVALUATION WIARTON SEWAGE SYSTEM

Report on Uncommitted Remaining Capacity Town of South Bruce Peninsula – Table 2

Genivar Consultants LP - April, 2009

Table 2 Uncommitted Reserve Capacity Evaluation Wiarton Sewage System

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Historic day sewage flows:

2005 - 1,860 m³/d 2006 - 2,022 m³/d 2007 - 1,662 m³/d

Average value 1,848 m³/d

2. Number of wastewater connections:

Wiarton - 932 Ames Survey - 33

Total: 965 connections

3. Average flow per connection:

1,848 m³/d ÷ 965 connections = 1.92 m³/d/connection (Note: this value not used in Item 6 below)

- Average day sewage flow rated capacity of lagoon treatment system = 2,500 m³/d
- Determine remaining capacity:

a) Existing capacity - 2,500 m³/d b) Subtract existing average day flow - 1,848 m³/d c) Net remaining capacity - 652 m³/d

6. Determine number of remaining connections:

Referring to Table 1, it is recommended that the average sewage flow per new connection in the future, whether based on new sewers or infill lots, etc., use the average water demand from Table 1 of 1.32 m³/d/connection (see Item 5 on Table 1).

This is because:

- i) New sewers built with modern PVC sewer materials and with tight controls regarding foundation drains, sump pump connections, etc., will significantly reduce the extraneous flow per connection for new connections.
- ii) New connections on existing sewers will add only the normal, domestic sewage flow as the extraneous flow input is already established by the existing sewer system.

Therefore, based on remaining capacity of 652 m³/d, the number of remaining connections is:

 $652 \text{ m}^3/\text{d} \div 1.32 \text{ m}^3/\text{d} = 494 \text{ connections}$

- 7. Subtract existing, committed but unconnected connections.
 - Frank Street Extension 30 new sewer connections;
 - Watson Street Extension 30 new sewer and water connections;
 - Dawson Street/John Street Extension 16 new sewer and water connections;
 - Elm Street Extension 15 new sewer and water connections;
 - South Servicing (Hwy 6 & Part Lot 1 Concession 20) 50 new sewer and water connections;
 - Approved Subdivisions 94 new sewer and water connections;
 - Vacant lots on existing services 96

Total - 331 committed, but unconnected sewage connections. 8. Net Remaining, Uncommitted Reserve Capacity 494 - 331 = 163 remaining connections G:\2008\100\108093\TABLE 2.DOC

APPENDIX 4

PRELIMINARY REVIEW SUMMARY STORMWATER MANAGEMENT STUDY WIARTON SOUTH PLANNING AREA

Town of South Bruce Peninsula

Genivar Consultants LP - May 4, 2009



PRELIMINARY REVIEW SUMMARY BRIEF STORMWATER MANAGEMENT STUDY WIARTON SOUTH PLANNING AREA TOWN OF SOUTH BRUCE PENINSULA

May 4, 2009 OS-09-062-11-OS

Area A: (Northeast section) - 17.2 Ha

Outlet is northeasterly through Township of Georgian Bluffs to the existing Storm Water Management Pond (SWMP) (Grey-Sauble Conservation Authority ownership) that in turn, outlets to the Elm Street/Taylor Street roadway ditches.

Options in order to increase capacity to accommodate run-off from proposed development:

- 1. Enlarge existing system
 - Culvert under Highway 6
 - Outlet ditch to pond
 - Culvert under Rail Trail
 - Enlarge storm pond
- 2. On-site Storm Water Retention Pond
 - Maintain existing easterly outlet
 - Development construct/maintain on-site ponds
- 3. Westerly Diversion to Area B
 - Maintain existing easterly outlet
 - Construct new outlet (new municipal street) to west (piped)
- Southerly Diversion to Area C
 - Maintain existing easterly outlet
 - Construct new outlet (new municipal street(s) to south (piped))
- 5. Westerly/Southerly Diversion to Areas B and C
 - Maintain existing outlet easterly
 - Construct new outlet (new municipal street(s) to west and south (piped))

Area B: (Northwest Section) - 48.5 Ha

Outlet is northwesterly under Elm Street, then westerly as a municipal drain under North Acres Road, Clavering Creek to Boat Lake.

Options to increase capacity to accommodate run-off from proposed development:

1. On-site Storm Water Management Ponds within development parcels.

- 2. Construct one (1) Storm Water Management Pond (south side of Elm Street).
- 3. Construct two (2) Storm Water Management Ponds; one on south side of Elm Street and second southwesterly area.
- 4. Southerly Diversion to Area C.
 - Construct one (1) Storm Water Management Pond south side of Elm Street (similar as per Option 2).
 - Construct storm sewer (new municipal street) to divert south area to outlet to Area C.

It is understood that these Storm Water Management Ponds would be sized to accommodate diverted run-off from Area A, should such option(s) be selected.

Area C: South Section - 96.7 Ha

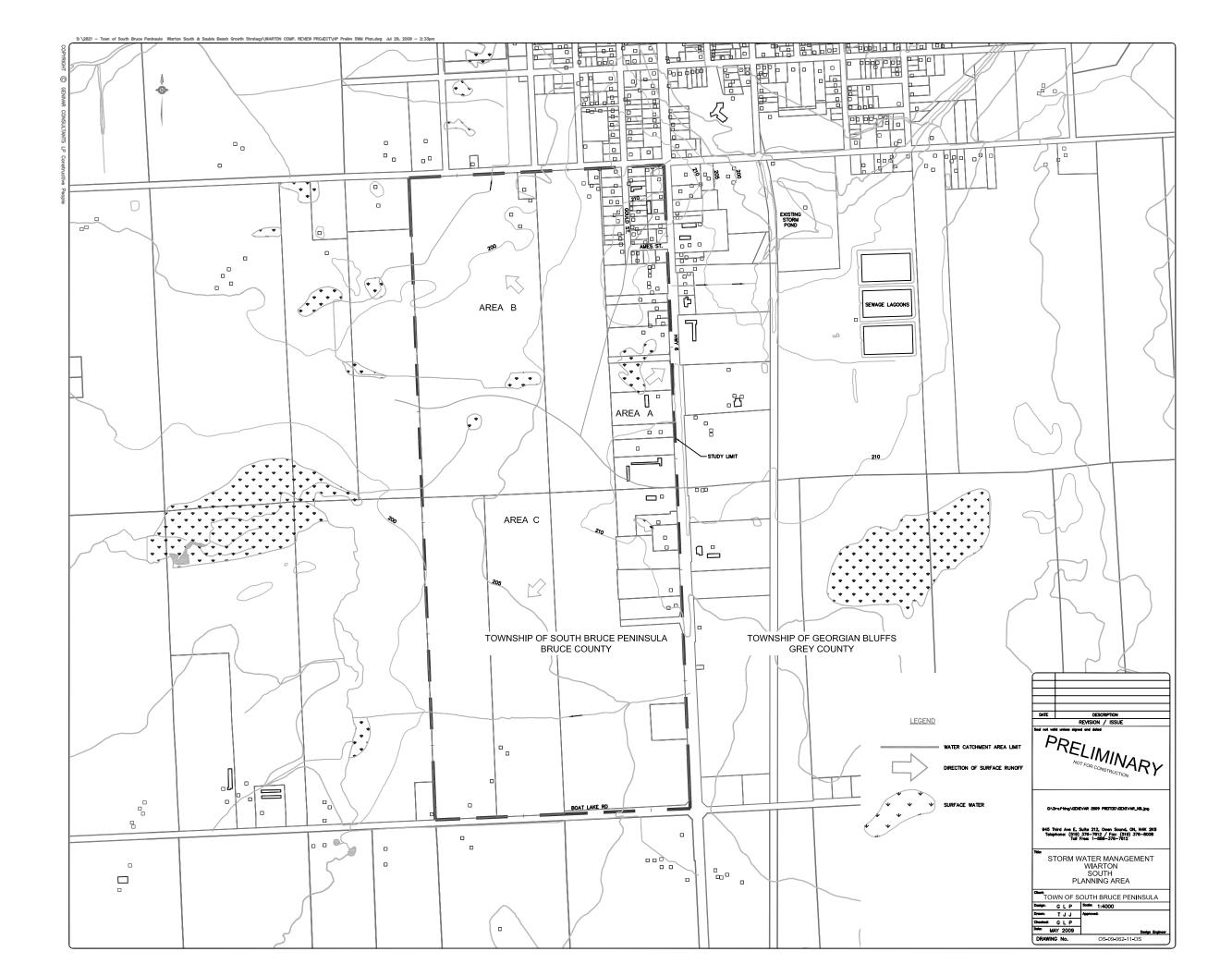
Outlet is westerly to the Clavering Creek, then north under Elm Street to Boat Lake.

Options to increase capacity to accommodate run-off from proposed development:

- 1. Construct one (1) large Storm Water Management Pond prior to outlet at southwest corner of development area.
- 2. On-site Storm Water Management Ponds with development parcels.
- 3. Construct more than one (1) Storm Water Management Pond within area and one prior to outlet off development area.

It is understood that the Storm Water Management Pond(s) would be sized to accommodate diverted runoff from Area A and B, should such option(s) be selected.

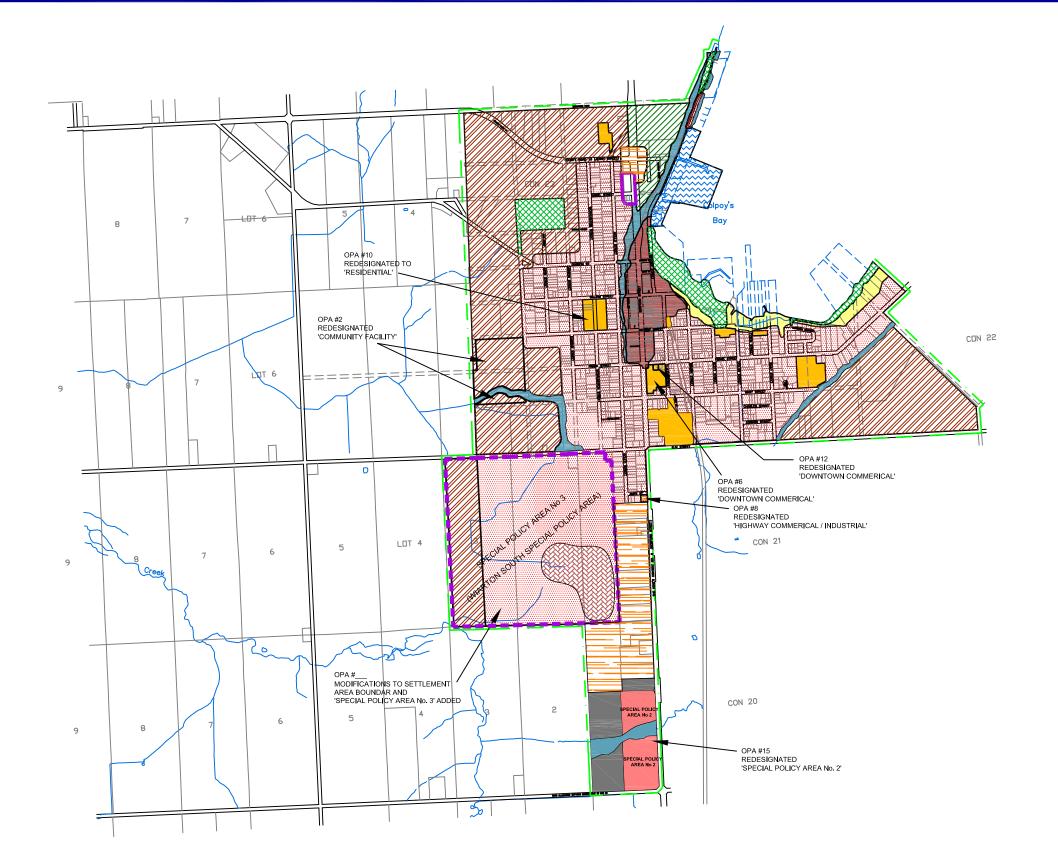




APPENDIX 5

WIARTON LAND USE SCHEDULE 'B' MODIFICATIONS TOWN OF SOUTH BRUCE PENINSULA OFFICIAL PLAN





LEGEND



WIARTON
Schedule 'B'
LAND USE
OFFICIAL PLAN
FOR THE TOWN OF
SOUTH BRUCE PENINSULA

Adopted by South Bruce Peninsula on November 26th, 2001 by By-law No. 82-2001. Approved as modified by Bruce County Council on February 6th, 2003 by By-law No. 3994. Approved by Ontario Municipal Board on August 24th, 2004.

Chris LaForest
Director of Planning, Chris LaForest

OFFICE CONSOLIDATION COPY - September 2004

 OPA NO.
 DATE SCHEDULE REVISED

 OPA NO. 2
 September 20, 2005

 OPA NO. 6
 March 30, 2007

 OPA NO.10
 February, 2007

 OPA NO.8
 November, 2007

 OPA NO.12
 December, 2007

 OPA NO.15
 March, 2008





Town of South Bruce Peninsula Planning Report

Application: File No.:

SBP LOPA SBP OPA 30

Date:

February 18, 2014



FROM:

Jakob Van Dorp, Planner for the Town of South Bruce Peninsula

County of Bruce Planning & Economic Development Department

SUBJECT:

Development in Wiarton South, SBP OPA 30, EA/Major Servicing Strategy, and Official

Plan Update.

PURPOSE OF REPORT:

Council has requested that staff discuss the standard planning process and Environmental Assessment requirements as they relate to potential development in the 'Wiarton South' area, as well as the present situation of infilling capacity in Wiarton.

Council has deferred consideration of South Bruce Peninsula Official Plan Amendment 30 in order to consider this report from staff.

RECOMMENDATION:

THAT SBP OPA 30 is premature in the absence of a joint EA / Major Servicing Strategy and Secondary Plan for the Wiarton South Area and should be withdrawn.

THAT a joint Class EA / Major Servicing Strategy and Secondary Plan for the Wiarton South Area be conducted by Municipal and County staff in 2014.

THAT staff from the Municipality and County be authorized to prepare a Request for Proposals for the EA / Major Servicing Strategy for Council's review.

THAT staff from the Municipality and County be authorized to initiate an update to the Town of South Bruce Peninsula Official Plan.

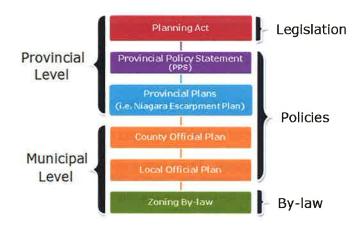
BACKGROUND

1. The Land Use Planning System

Ontario has a policy-led planning system. Within the framework of the Planning Act, a variety of "tools" are available for municipalities to use in planning and regulating the development of land.

The basic tools are the Planning Act, Provincial Policy Statement (PPS), Official Plans, and the Zoning By-law, which implements the policies.

With these tools are in place, proposals to develop land must either conform to the policies and by-laws or be brought forward as an application to amend them.



Applications for amendment are based on merit and justification. A proponent starts with an "idea" or proposal for developing land. In the ideal situation, the idea is discussed with municipal staff and planning departments before an application is filed. The Planning Act encourages this "pre-consultation" and even provides the ability for municipalities to pass a by-law to require it. This phase is invaluable; it has the potential to save time and money and can make the process go more smoothly for everyone. During the pre-consultation meeting, the proposal is explained and basically evaluated to identify how it relates to the

policies that guide development, and whether it meets these policies or requires studies to be fully evaluated or to justify changing the policies to allow the development.

In the next step, the proposal is prepared based on what was learned in the pre-consultation meeting. This would be in the form of an application, and any supporting studies required, fees etc. When the application is received, staff can determine if everything required has been submitted. If not, staff may request more information from the developer. Section 24(3) of The Planning Act specifically permits studies and plans for public works to be completed which don't conform to an Official Plan (for example, to consider infrastructure planning for residential areas that are designated residential) prior to approval of a plan amendment. This allows Councils to have the confidence that development proposed through amendments can 'work' prior to setting a policy direction for their community that supports it.

When all information is submitted, the proposal is circulated to staff, Council and the public for review through a process that has requirements for timelines and public meeting(s). If the proposal has merit and supports the policies, Council approves the application by amending the policies and/or by-law. Proposals can sometimes change throughout the process as additional information becomes available; if Council considers the changes to be minor, the amendment can be approved without having to go back to the public to present the changes.

2. Development in the Wiarton South area

Wiarton South has the largest area of undeveloped land within a settlement area in the Town of South Bruce Peninsula and has an important role to play in the future development of the community, municipality, and region. Previous reports have provided Council with the history of the area; by quick summary:

- Annexed by the Town as raw un-serviced land from Amabel Township in early 1990s to provide control of development at the edge of the then Town of Wiarton
- Generally designated Industrial (back lands) and Highway Commercial (road frontages) during the development of the Wiarton Community Plan, and noted as 'Phase 2' and 'Phase 3' priority for servicing
- Servicing came to attention of Council during proposed OPP station construction near Boat Lake Road in 2007
- Town commissioned a Comprehensive review in 2008 to assess supply and demand for residential lands and employment lands over the next 20 years.

When the council of the day commissioned the comprehensive review it was of the understanding that basic existing infrastructure was in place, sufficient capacity was available, and the servicing of the lands would be a relatively simple 'plumbing' exercise. Council included in the 'Special Policy Area' for the Plan Amendment a commitment to extend services to the OPP station within 3 to 5 years.

Council requested that their comprehensive review consultant work with the developers to prepare Official Plan Amendments. The subsequent amendment proposed re-designation of lands from Industrial and Highway Commercial to Residential and also proposed a new "Village Core" designation with a range of industrial, commercial, and residential uses. Staff expressed concerns with the lack of information supporting the proposal. There was a strong desire on the part of Council and the developer to proceed, and applications to amend the Town's Official Plan and County Official Plan to add lands to the urban boundary were filed by the Town (as the 'lead' on the application and study proposing to convert employment lands to other uses).

Public meetings were held in 2011 for the County and local Official Plan Amendments. The Town's Planning Advisory Committee deferred a decision on the Local Plan Amendment application until the Ministry of Municipal Affairs and Housing (MMAH) had provided comments and compatibility with the nearby propane storage facility had been addressed. The County's Agriculture, Tourism, and Planning Committee deferred a decision on the County Plan amendment in the absence of water, sewer, and storm water management servicing information required by the Provincial Policy Statement and Bruce

County Official Plan. MMAH comments reinforced the need to confirm that the proposed area can be serviced. MMAH advised that TSSA hazard distances are not 'no development zones' but that Municipalities are required to notify propane operators when planning applications are received within the operation's hazard distance.

Meanwhile, the full scope of problems with the Town's existing infrastructure was becoming apparent. Proposed retail developments along road frontage encountered problems with onsite storm water management (existing drains under Highway 6 are at capacity), and remain undeveloped in spite of considerable investment in intersection improvements.

3. Present Situation of Infilling / Infrastructure in the Town

There has been substantial discussion about the proposal to have some form of a policy commitment within the amendment to would permit up to 150 units in a mix of commercial and residential units in advance of the environmental assessment. Town and County Staff have advised that this is inappropriate, and have reviewed the information about available capacity in the Town's system. The application was forwarded from the Planning Advisory to Council for consideration on the basis of theoretical capacity for 150 units.

Part of the reason for this discussion is the Town's Official Plan, which sets out servicing policies in Section 11.4.6 (attached) and notes the town shall prepare a municipal servicing plan that which strives to provide water and sewage disposal services which support environmental, urban intensification, and growth management policies of this plan in a manner which is efficient and cost effective. The Plan also recognizes that adequate reserve capacity in the Town's water/sewage works must be available to accommodate proposed development. Limitations in the capacity or operating performance of the water/sewage works shall be recognized as a constraint to the timing of new development.

The Official Plan also identifies a hierarchy in terms of priorities for infrastructure with three phase areas:

Phase 1 generally consists of existing serviced areas. The plan requires that there be adequate capacity for phase one well into the future, as well as capacity for infilling and intensification in the Phase 1 area.

Phase 2 generally consists of partially serviced lands. The plan communicates the intention that these lands be fully serviced prior to any large blocks of vacant land being developed.

Phase 3 lands are areas designated for development or future development but which do not yet have hard municipal services or which hare not suitable for development given various physical or natural constraints.

The subject lands are a mix of Phase 2 and Phase 3 lands. Provisions of Phase 1 (adequate capacity into the future, including opportunities for intensification) are applicable. Planning and Public Works Staff reviewed available information regarding the Town's capacity and summarize it as follows:

LAGOON CAPACITY: (Henderson Paddon (now WSP) report 1089093 (2009)

- 1. The Town's sewage lagoons have a treatment capacity of 2,500 cubic metres (m³)/day.
- 2. Based on 2005-2007 average flows of 1,848 m³/day there is still 652 m³/day of capacity.
- 3. Average flows divided by 965 connections means each house generated 1.92 m³ per day.
- 4. New connections are anticipated to generate less flows due to less rainwater getting into new pipes. New connections are estimated to equal average daily water use (1.32 m³/day) which yields a total of **494 connections**

The report assigns connections as follows:

Official Plan Phase	Location	number of hookups assigned	Infill potential (lots or units in addition to existing lot fabric)
2	Frank Street (East)	30	~20 lots/units
3	Watson Street	30	~11 lots/units**installed 2009
3	Dawson/John (north)	16	None noted; 6 large parcels owned by Town.
3	Elm St Extension (west)	15	~10 lots/units
2-3	Wiarton South (100 ac lots adjacent to HWY 6)	50	~29 lots/units
1-2	Existing Subdivisions	94*	41T-93001 (next to centennial) 17 lots; active application to increase by 26 units 41T-91011 (Pengelly St area) is 44 lots Appears that Centennial Crescent was also included in the count.
1	Vacant Lots on Existing Services	96	Unknown; recent developments include - 4 townhouses on single lots - soccer field / high school lots (up to 50 units)
N/A	*Correction	-21	Subdivision Count includes Centennial crescent (counted under existing / vacant)
TOTAL:		310	Not Counted: >19 approved res + 1 commercial
Theoretical Surplus (494-Total)		180	28 proposed res + 2 commercial

These units are based on theoretical lagoon capacity.

The table notes that there are at least 20 new infill lots/units approved since the lagoon capacity report was written and 30 units currently in the review process for *Planning Act* amendments. Staff were unable to confirm whether the townhouse developments approved at the former Wiarton High School and soccer field (~50 townhouses on 2 lots) are included in the calculations for 'vacant lots on existing services.'

As indicated in the right column of the above table, the calculations provide some infilling potential in areas that are proposed for water and sewer expansion, but have not made provisions for additional infilling opportunities on existing serviced lots such as semi-detached houses, townhouse clusters, and new infill lots, all of which have been approved in the last 5 years and for which there is increasing demand.

Actual Capacity in the sewage disposal system

Public works staff reports that during storm events flows to Pumping Station 1 (at the base of Taylor Street) can be in excess of 18 000 m³/day. This flow is approximately **7 times the treatment capacity** of the lagoon. The pumping station cannot handle the volume, leading to backups in the sewer lines leading to the pumping station, sometimes with impacts on users.

The Town is working to resolve this issue by reducing storm water infiltration into the sewer system. Works planned for 2014 include replacement of clay sanitary sewer lines along Claude St and Brown Street and installation of storm sewer system. Additional issues include an unknown quantity of individual roof drains which are connected directly into the sanitary system. Resolution of the issue may take some time.

When infiltration is ultimately resolved or managed it may enable Pumping Station 1 to handle the volume generated by existing connections. Staff has identified additional improvements that would reduce flows to pump station one and resolve landowner issues, but which would not themselves address infiltration into the system.

Water Servicing Capacity

Water servicing capacity is reported to be sufficient for at least 600 uncommitted new connections (not including infill noted above and water currently being trucked to Oliphant subdivisions). This capacity should be sufficient for the 20 year planning horizon under any normal growth model.

Master Servicing Strategy

At this time the system cannot accept **any** significant additional sewage discharge. Some pre-approved developments have been placed on hold; on others the approval process is stalled.

The concept servicing layout for water and sewer service expansions in Wiarton was outlined in 2005, and allocated 50 units to the 'Wiarton South' area with a basic strategy for water and sewer for that scale of development and rough costs for these services. Any development in the Wiarton South area needs to be serviced with a new sewer line from Elm Street to Pumping Station 2 (at Elm and Taylor Streets). Any substantial development requires a pumping station at Elm Road just west of the existing built-up area. Storm water management was not within the scope of that study.

Staff recommends that a Master Servicing Strategy be initiated for the Wiarton South area in 2014. This strategy can appropriately engage all stakeholders (including landowners outside of this specific proposal) to address development potential of their lands, water, sewer, and storm water management, a concept road network, and cost sharing to reduce financial risks to council and the public. Physical conditions and compatible uses should determine the basic development 'grid.' This strategy would support the Official Plan's policy objective noted above, Plan recommendations for a master drainage plan, and the issues that have hindered highway commercial development proposals in the Wiarton South area.

The Environmental Assessment Act divides projects into a number of categories or "Schedules." Generally, expansions to existing infrastructure and new pump stations are Schedule A, A+, and B projects. The Master Servicing Strategy process is recognized under the Environmental Assessment Act and yields a list of projects and their 'schedules.' The Master Servicing Strategy meets the requirements of the Act for A/ A+ and B projects. Expansion of the Sewage Lagoon would be a Schedule 'C' project which requires additional steps under the EA Act.

The Town included funds for an "Environmental Assessment" in the 2012 budget however were unable to tender for this Assessment. There have been some discussions with respect to means of cost recovery for the EA and for development in the area. The Master Servicing Strategy described above accomplishes the purpose intended by Council in its budget allocation for the 'Environmental Assessment.' This type of Strategy was recently employed by the City of Owen Sound for the east lands within their jurisdiction (table of contents attached as a basic 'terms of reference'). The Wiarton South area is smaller in scale and therefore may be less complex to develop and administer.

Official Plan Update:

The Town's Official Plan was approved in 2004 and intended to guide the Town until 2021. It is time to review it to identify changes that are needed to ensure that it continues to serve its intended purpose. Council has budgeted for this process and Staff are proposing to conduct the work this year. In terms of general scope staff are recommending that the update consist of:

- 1. Review of urban area policies (generally applicable to Wiarton / Sauble Beach serviced areas)
- 2. Neighbourhood-based planning exercise for the Wiarton South area (with public meetings etc held in conjunction with the aforementioned Master Servicing Strategy) to identify preferred areas for various land uses based on servicing and neighbourhood compatibility.
- Consideration of Removal of Local Official Plan coverage for the rural areas to reduce duplication of
 policy coverage with the County's Official Plan and the corresponding need for additional plan
 amendments and a lengthier development review process.

Staff recommends that this work can be undertaken within the \$20,000 that the Town has budgeted for this purpose.

Summary and Conclusion:

SBP OPA 30 and BCOPA 157 were initiated by the previous Council of the Town in response to a development concept that started as an idea to convert some industrial lands for residential uses. A comprehensive review identified some oversupply of industrial lands and a limited demand for additional residential lands, suggesting that there may be merit to re-designation on this basis. It appeared that infrastructure extensions would be relatively simple.

Circumstances have changed. The amendment as flavoured by a proposed adult lifestyle community proposed policy changes (village centre, urban boundary expansion) that cannot be evaluated based on the level of information provided. Compatibility issues with adjacent land uses arose during the review process.

Council expressed further concerns regarding capacity issues and potential for the proposed amendments to establish policies that may not be in the Town's interest. Town Council requested that staff review the amendment and provide a followup report including any required changes. In December 2013 Staff returned to Council with a revised draft amendment intended to address Council's concerns, with recommendation remaining that the amendment is still premature.

Staff are providing this report as an addendum to reports provided to the Planning Advisory Committee and Council in 2011, 2012, and 2013, which are <u>available online</u> at www.brucecounty.on.ca under Quick Links – Planning Applications under the South Bruce Peninsula tab – SBP-OPA 30-11.58. Recommendations from the Town's Public Works and Planning staff attached to this report outline a path forward for development in the Wiarton South area. The recommended withdrawal of SBP OPA 30 and initiation of a Master Servicing Strategy and neighbourhood plan within the proposed Official Plan update allows staff the latitude to move forward with a process to engage the multiple stakeholders in Wiarton South and evaluate land uses for the area in light of the overall vision for Wiarton and the Town of South Bruce Peninsula.

RECOMMENDATION:

THAT SBP OPA 30 is premature in the absence of a joint EA / Major Servicing Strategy and Secondary Plan for the Wiarton South Area and should be withdrawn.

THAT a joint Class EA / Major Servicing Strategy and Secondary Plan for the Wiarton South Area be conducted by Municipal and County staff in 2014.

THAT staff from the Municipality and County be authorized to prepare a Request for Proposals for the EA / Major Servicing Strategy for Council's review.

THAT staff from the Municipality and County be authorized to initiate an update to the Town of South Bruce Peninsula Official Plan.

Respectfully Submitted,

Jakob Van Dorp Area Planner, Town of South Bruce Peninsula County of Bruce Planning and Economic Development Department

List Of Appendices:

A - Official Plan Policies

B- Map Of Potential Expansion Of Water And Sewer Servicing For The Former Town Of Wiarton (From Henderson Paddon (Now Wsp) Report 104172)

Draft Official Plan Amendment

C – Revised Official Plan Schedule



11.3 LAND USE POLICIES

11.3.1 Residential

This Plan attempts to provide for a population of approximately 2,800 by the year 2011. To accommodate this growth, approximately 190 new housing units are required between the years 1991 and 2011.

Single detached homes are the predominant housing type in Wiarton and will continue to be so during the life of this Plan. However, there is a need to offer residents a greater range of housing types in terms of variety and affordability.

11.3.1.1 Goal

a) Promote a mixed and affordable supply of housing to meet the current and future needs of all segments of the Community.

11.3.1.2 Actions

- a) Encourage a reasonable supply of building lots and blocks for future residential development.
- b) Encourage a wide range of housing types and designs.
- c) Promote a range of single detached residential lot sizes.
- d) Encourage the design of new residential areas for safe pedestrian travel.
- e) Promote new industrial and commercial development to decrease residential taxes.
- f) Attempt to maintain at least 25% of all residential housing opportunities affordable for low and moderate income.
- g) Improve housing opportunities for Community members with special needs₁ including low income people, seniors and supportive housing for the physically and developmentally handicapped.
- h) Encourage new residential development to be consistent and compatible with surrounding heritage resources.

11.3.1.3 Permitted Uses

Lands designated "Residential" shall be predominately used for low and medium density residential uses.

Other uses compatible with residential neighbourhoods may also be permitted such as parks, public uses, places of worship, public and private schools, bed and breakfasts, home occupations, group homes, garden suites, day nurseries, country inns, and local commercial use, subject to policies contained in this Plan.

11.3.1.4 General Policies for All Residential Lands

The following policies shall apply to all Residential lands within Wiarton.

11.3.1.4.1 Availability of Affordable Housing

In 1992, the upper limit for an affordable house in Wiarton was approximately \$128,000 to buy and \$730 to rent. These figures are updated on a yearly basis by the Ministry of Housing.

a) Council shall encourage an adequate supply of affordable housing.

- iv) ensure the maintenance of the external appearance of the residence and control exterior signs;
- v) provide appropriate parking standards for such uses; and,
- vi) limit traffic impact.
- b) Home Occupations may be subject to Site Plan Control under Section 12 5.13 of this Plan.

11.3.1.10 Group Home Policies

The term Group Home is used to describe a wide range of residential care facilities. Group Homes may be permitted within the Residential designation subject to the requirements of the Comprehensive Zoning By-law.

- a) The Comprehensive Zoning By-law may provide regulations which recognize group homes offering housing to persons such as seniors, developmentally or physically handicapped individuals and/or mentally ill individuals as a permitted use in all residential zones provided the following criteria are satisfied:
 - i) the housing is within a single housekeeping unit;
 - ii) the unit houses five or less individuals, not including live-in supervisory staff or receiving family; and,
 - iii) that no physical alterations be made to change the function of the structure as a single detached residential dwelling unit;
- b) The Comprehensive Zoning By-law may provide regulations which permit group homes offering housing to six (6) or more persons such as seniors, developmentally or physically handicapped individuals and/or mentally ill individuals within a special residential zone, provided the following criteria are satisfied:
 - that the facility is licensed, regulated, financed and/or approved by a government regulatory body;
 - ii) that the sponsoring body demonstrates that a need exists for the facility within the community;
 - iii) that necessary supportive services are readily available for the residents;
 - iv) that the building, in form and exterior amenities, is in keeping with the surrounding residential neighbourhood;
 - v) that no other group home is located within close proximity to the proposed site; and,
 - vi) that the building meets all health, fire safety and building code standards.
- c) The Comprehensive Zoning By-law may provide regulations which permit halfway houses offering housing for persons such as ex-offenders, young offenders, or individuals undergoing substance abuse rehabilitation within a special residential zone, provided the following criteria are satisfied.
 - the housing is within a single housekeeping unit;
 - ii) the unit houses 10 or less individuals, not including live-in supervisory staff or receiving family;

- vi) that the Country Inn is located on or near an arterial road and has minimal traffic impact, including safe vehicle and pedestrian access, and increased traffic generation within residential neighbourhoods;
- vii) any other regulations deemed appropriate by the Town
- Country Inns shall meet all licensing, health, safety and building code standards for motels/hotels.
- d) Dining facilities associated with a Country Inn shall be located in the principal building of the Country Inn.
- e) Country Inns shall be subject to Site Plan Control under Section 11.5.13 of this Plan.

11.3.1.13.1 Implementation

a) A Country Inn may be permitted on the property described as Lots 31 & 32, Plan 229, West side of Berford Street, subject to the requirements of the Comprehensive Zoning By-law.

11.3.1.14 Local Commercial

Local Commercial uses, which serve the daily needs of residential neighbourhoods are permitted within the Residential designation.

11.3.1.14.1 Permitted Uses

Local Commercial uses shall include convenience and personal service facilities which serve the daily needs of residential neighbourhoods.

11.3.1.14.2 Local Commercial Policies

Local Commercial uses are permitted within the Residential designation by an amendment to the Comprehensive Zoning By-law, subject to the following criteria:

- a) Development will be of scale and type that will be compatible with the existing character of the area and serve the needs of the residents of the surrounding neighbourhood.
- b) Development shall not affect the economic viability of other commercial areas.
- c) Development shall be located and designed to minimize traffic conflicts and where possible, shall be encouraged to locate at street intersections.
- Landscaping shall be provided between Local Commercial uses and abutting residential uses.
- e) Adequate off-street parking shall be provided.
- f) External advertisements and signs shall be designed to maintain the appearance of the area.
- g) One residential dwelling unit for the owner or operator of the commercial use may be permitted, provided it is in the form of an apartment above or behind the local commercial use.

11.3.1.15 Special Policy Area #1

Special Policy Area #1 covers a portion of undeveloped residential land located at the northern entrance, west of Berford Street. This property has certain vista qualities which are considered to be of local importance. Accordingly, the residential development of this property must be carried out in such a way that ensures these vista qualities remain intact.

The Special Policy Area #1 designation is an overlay designation. The majority of the lands which it covers are within the Residential designation, however, there is a small strip of land along Berford Street designated Environmental Protection. All policies of the Residential and Environmental Protection designations shall apply to this property.

Notwithstanding the policies of the Residential and Environmental designation, the following shall apply to the development of the lands within the Special Policy Area #1 designation:

- the maximum net density for medium density residential development shall be 20 units per hectare (8 units per acre);
- ii) all residential development shall have a maximum height of 10 metres (33 feet),
- iii) all residential development shall be subject to site plan control, which in addition to standard criteria, shall also include a landscape plan which strives towards the maximum maintenance of the natural vegetative cover and zero disruption of the vegetation cover on lands designated Environmental Protection;
- iv) all site plan control criteria shall be confirmed in a Site Plan Agreement which shall be registered on title; and,
- v) vehicle access to the property shall be obtained from the extension of Daniel Street.

11.3.2 Commercial

The social and economic well being of Wiarton is dependent upon a diverse and balanced commercial base, focussed on the downtown commercial core.

Within Wiarton commercial activities have been placed within two (2) separate commercial land use designations: Downtown Commercial and Marine Commercial.

11.3.2.1 Goals

- a) Promote a diverse and balanced commercial base which serves the needs of area residents and visitors.
- b) Maintain and enhance the downtown as the economic focus of the Community.

11.3.2.2 Actions

- a) Actively promote the downtown commercial core as the focus for retail and service activity within the Town and region.
- b) Encourage a compact, pedestrian oriented downtown commercial core.
- c) Attempt to relieve traffic congestion within the downtown.
- d) Award public recognition for efforts which promote the historic theme of the downtown.

- e) Permit commercial development outside the downtown core only if it cannot be located within the downtown or will not have a negative impact on the viability of the downtown.
- f) Promote a wide range of marine commercial uses that are compatible with the maintenance of the ecological balance of the waterfront and surrounding park lands.
- g) Promote the enhancement of the pedestrian, visual and structural linkages between the downtown and the waterfront.

11.3.2.3 Downtown Commercial

Wiarton's downtown commercial core contains the majority of retail and service activities. A majority of businesses in this area are concentrated along a three block section of Berford Street, between Frank Street and Division Street.

11.3.2.3.1 Permitted Uses

On lands designated 'Downtown Commercial" a wide variety of retail, office, service, administrative, cultural, community facility, medical and entertainment uses shall be permitted. Service uses shall include hotels, restaurants, personal service establishments and financial institutions.

Residential uses shall be permitted within the Downtown Commercial designation provided they are in the form of apartments above or behind the principal commercial use of the building.

Commercial uses oriented to vehicular traffic such as automobile dealerships, new service centres, truck depots and motels shall not be permitted within the Downtown Commercial designation. Existing uses oriented to vehicular traffic shall be encouraged to relocate to lands within the Highway Commercial & Industrial designation.

11.3.2.3.2 Downtown Commercial Policies

- Council shall provide for commercial and accessory residential intensification within the lands designated Downtown Commercial as a means of creating a compact downtown commercial core.
- b) Development and redevelopment within the Downtown Commercial designation shall have a minimum building height of two (2) stories and a maximum height of four (4) stories.
- c) Development and redevelopment within the Downtown Commercial designation shall be compatible with surrounding heritage resources and shall be assessed based on Section 11.4.2.3, Heritage Policies of this Plan.
- d) Council, in conjunction with the owners and/or operators of businesses within the Downtown Commercial designation, shall improve the streetscape of the downtown by undertaking improvements such as the lighting of public areas and walkways, the provision of street furniture and rest areas, the identification of pedestrian crossings, the provision of the planting of trees and the regulation of signage.
- e) Business and property owners within the Downtown Commercial designation shall be encouraged to implement the Downtown Heritage Facade Design Guidelines found in Section 11.4.2.6 of this Plan.
- f) Council shall require all development and redevelopment within the downtown commercial core, defined as buildings fronting on Berford Street between George

11.3.2.5 General Policies For All Commercial Lands

The following policies apply to all commercial lands.

- a) In addition to all other policies contained within this Plan, development within the Commercial designation shall specific regard for the following policies:
 - i) Section 11.4.2.3, Heritage Policies;
 - ii) Section 11.4.4.3, Environmental Review Policies:
 - iii) Section 11.4.6.3, Water Supply & Sewage Disposal Policies;
 - iv) Section 11.4.6.4, Stormwater Management Policies;
 - v) Section 11.4.8.3, Niagara Escarpment Policies;
 - vi) Section 11.4.9.4, General Road Network Policies;
 - vii) Section 11.4.9.7, Pedestrian and Bicycle Traffic Policies;
 - viii) Section 11.4.9.8, Traffic Impact Assessment Policy;
 - ix) Section 11.5.13, Site Plan Control; and,
 - x) Section 11.5.22, Settlement, Servicing and Phasing.
- b) All Commercial development proposals shall have regard for Section 11.4.9.11, Uniform Municipal Signage Policies of this Plan.
- c) Legal non-conforming uses within the Commercial designation shall be subject to Section 11.5.7, Legal Non-Conforming Uses of this Plan.
- d) Legal non-complying uses within the Commercial designation shall be subject to Section 11.5.8, Legal Non-Complying Uses of this Plan.
- e) The creation of Commercial lots shall be subject to Section 11.5.14, Plans of Subdivision and, Section 11.5.15, Consent to Sever Land of this Plan.

11.3.3 Highway Commercial and Industrial

Providing opportunities for the establishment of highway commercial and environmentally clean industry is important to the long term economic health of the Community.

There are two areas within Wiarton designated Highway Commercial & Industrial. The smallest area is located at the north end at the junction of Berford Street (Highway #6) and Jenny Street. The most prominent area is located at the southern end, along Highway #6.

11.3.3.1 Goal

a) Promote the establishment of highway commercial businesses and environmentally clean industry in order to diversify the economic base and employment opportunities within Wiarton.

11.3.3.2 Actions

- a) Promote highway commercial/industrial areas as attractive entrances into Wiarton.
- b) Encourage the relocation of highway commercial uses and industry located within the downtown and residential areas to more appropriate lands.
- c) Pursue innovative and creative approaches to encouraging environmentally clean industry to locate within Wiarton.
- d) Promote the establishment of a municipally owned or sponsored business park.
- e) Promote a balanced municipal tax base (commercial/industrial representing roughly 35 per cent of total assessment) through the promotion of industrial and commercial development so as to decrease the tax burden on existing and future residents.

11.3.3.3 Permitted Uses

In areas designated Highway Commercial & Industrial, the various uses permitted shall complement the economic function of the downtown commercial core and not have a negative impact on the economic viability of the downtown. The predominant Highway Commercial use of land shall be for those commercial uses which are dependent upon a high degree of access and visibility to vehicular traffic such as motels, eating establishments forming part of a motel, motor vehicle service stations and gas bars, automotive and recreational vehicle sales, service and rental establishments, agricultural and industrial equipment sales and service establishments, contractor yards, and fuel storage depots.

Limited retail commercial establishments such as major furniture and appliance sales, warehouse outlets, building supply outlets, fitness centres, grocery store or other similar retail uses, located in a single use building, in excess of 370 square metres (3,980 square feet) and having large parking and/or outdoor storage or display requirements not consistent with the compact nature of the downtown commercial core may also be permitted within the Highway Commercial designation. Shopping Centres, strip malls and associated retail uses shall be prohibited.

The predominant Industrial use of land shall be for the manufacturing, fabrication, processing and assembling of goods and materials, warehousing, storage, builder's yards, transportation and communication facilities, and public utilities.

In addition, complementary uses such as research and development facilities, education and training centres, computer, electronic or data processing establishments, scientific, technological or communication establishments, veterinary clinic and/or kennel, printing plants, and community facilities shall also be permitted.

11.3.3.4 General Highway Commercial & Industrial Policies

- a) Council shall encourage the majority of new Highway Commercial and Industrial development to locate in the south end.
- b) In the absence of municipal sewer and water systems, highway commercial and industrial uses which do not require or create large volumes of water and can be serviced by septic tanks and private well systems shall be permitted. Appropriate highway commercial and industrial uses shall be determined on an individual basis and shall be assessed by the Ministry of the Environment and Energy, or their agent, based upon the type and volume of waste produced, the size of the proposed lot and the nature of the soils.
- c) If development takes place on private services, the developer shall be required to enter into an agreement covering the equitable distribution of the costs of eventually extending municipal services to the development. As new development occurs on private services, each site must be pre-engineered for future connection to municipal water and sewage systems.
- d) In order to ensure that the Highway Commercial and Industrial lands develop as attractive entrances to the community, it shall be a policy of the Town that the following site development standards be satisfactorily addressed by all Highway Commercial and Industrial development proposals:
 - i) landscaping shall be provided between any Highway Commercial and Industrial use or parking areas and the adjacent highway, except for designated entrances and exits;

- ii) all outdoor storage for uses other than automotive and recreational vehicle dealerships should be located to the rear or side of the main building on the lot and shall be fenced or suitably screened from adjacent uses;
- signs shall be limited in number and designed to be functional and avoid visual clutter and distraction, and where possible should be consolidated on shared sign structures;
- iv) underground wiring for hydro, telephone, and other transmission lines shall be promoted; and,
- vehicular parking for employees shall be restricted to the side or rear of the principal building and screened from surrounding uses and views from the street.
- e) To allow for the safe and efficient movement of traffic, strip development shall be prohibited.
 - Highway Commercial and Industrial uses should be grouped for access and servicing advantages. Efforts shall be made to reduce access points by combining exits and entrances or by creating service roads where possible.
 - f) Adequate off-street customer parking facilities shall be provided and shall be located to the rear and side of the principal building fronting on Highway #6 (Berford Street). Development proposing customer parking in the front yard must demonstrate that no other feasible option exists for accommodating the needed parking.
- g) Where necessary, off-street parking, drive-ways and/or loading areas adjacent to residential uses shall be suitably screened or buffered through the use of fences, berms or other appropriate landscape treatment.
- h) All parking areas shall be appropriately illuminated to ensure the safety of pedestrian and vehicular access.
- i) Effects of Highway Commercial and Industrial development on adjacent uses shall be minimized by:
 - i) providing distance separation and/or the construction and maintenance of buffer strips and/or screening between such uses;
 - ii) the arrangement of lighting facilities and commercial signs to minimize impact on surrounding uses; and,
 - iii) ensuring that off-street parking facilities do not adversely affect surrounding uses.
- j) The establishment of a fully serviced "Business Park" for Highway Commercial and Industrial development shall ensure an efficient and coherent pattern of development and appropriate municipal servicing. The lot arrangement and road pattern shall be designed to ensure access to an internal road system with no individual road access onto an arterial or collector road.
- k) The minimum lot size shall be dependent on the nature of the use, the topography and drainage, and the method of sewage treatment and disposal.
- Where feasible, similar uses should be encouraged to be grouped together to avoid land use conflicts. For example, uses which serve the travelling public should be separated from those which require large amounts of land.

In considering the phasing of improvements, priority will be given to those projects that will most substantially increase the safety, stability and aesthetic quality of the community. The public consultation may be utilized as a basis for the phasing of improvements and rehabilitation projects.

It is the intention of this policy that Community Improvement priorities be subject to review as a result of changes in economic, social or environmental considerations, and the availability of funding. Each new term of Council may conduct a review of the Community Improvement Plan, however additional review may be appropriate if there are changes in the conditions that established the Plan.

11.4.6 Municipal Services

A fundamental function of the Town of Wiarton is the provision of services to its residents. The ever increasing number of services being demanded and the escalating costs of providing these services are issues the Town must address.

11.4.6.1 Goal

a) Provide a full range of affordable, municipal services to meet the social, environmental and economic needs of the Community.

11.4.6.2 Actions

- a) Ensure the efficient use of municipal sewer and water services.
- b) Provide sufficient sewage treatment and water reserve capacity and adequate collection and distributions facilities for future growth.
- c) Where financially feasible, provide municipal sewer and water services to developed areas within the Town prior to extending them outside of the Town.
- d) Consider a wide range of options for paying for municipal services such as taxes, user-fees, front-ending, privatization, inter-municipal agreements and prioritizing service delivery.
- e) Pursue a cooperative and comprehensive cost sharing approach to the provision of intermunicipal services.
- f) Establish a municipal master drainage plan.

11.4.6.3 Water Supply & Sewage Disposal Policies

The Town of Wiarton has water supply capacity for approximately 5,000 individuals, or reserve capacity for an additional 1,700 individuals.

The sewage disposal system is presently used to capacity and services approximately 3,100 people. The 3,100 figure includes an estimate for commercial and institutional users. The lack of reserve sewage disposal capacity is the result of infiltration and extraneous flows from stormwater.

The fact that stormwater flows into the sanitary sewage system has, in the past, produced events where the average daily flows have significantly exceeded the design capacity for the sewage works.

- a) It shall be a policy of the Town that all new development and redevelopment shall proceed only where full municipal water supply and municipal sewage disposal services, to such standards as may be required.
- b) Notwithstanding the above policy, the Town may permit limited infill development within the Highway Commercial and Industrial designation on private services, subject to the requirements of, and approval by, the Ministry of the Environment and Energy or its agent. In the long term, however, it is the intent of this Plan that municipal water and

sewer services will be extended to service such areas. In this regard, Development Agreements which provide for an equitable distribution of the costs of future servicing will be a prerequisite to development. As new development occurs on private services, each site must be pre-engineered for future connection to municipal water and sewage systems.

Any new development initially developed on individual sewage disposal and water supply systems must demonstrate that the waste flow is of low volumes and can be supported by private sewage disposal and water supply systems to the satisfaction of the Ministry of the Environment and Energy or their agent.

- c) The Town shall initiate a program to extend its water/sewage works to areas within the Town which are on private services, except where physical conditions would make costs prohibitive. Municipal services shall be extended in accordance with the Phasing Plan set forth in Section 11.5.22.
- d) The Town shall prepare a municipal serving plan which strives to provide water supply and sewage disposal services which support the environmental, urban intensification and growth management policies of this Plan in a manner which is efficient and cost effective.
- e) Adequate reserve capacity in the Town's water/sewage works must be demonstrated to be available to accommodate proposed development. Limitations in the capacity or operating performance of the water/sewage works shall be recognized as a constraint to the timing of new development.
- f) The Town shall require the staging of development in order to allow for the orderly and cost effective provision of municipal services in accordance with Section 11.5.22, Settlement, Servicing and Phasing of this Plan.
- g) The Town shall pass by-laws and enter into agreements, including financial arrangement, with property owners for the installation of municipal services.
- h) The Town shall require development and redevelopment projects which demonstrate that surface water originating from the site is not entering the sanitary sewer system.
- i) The Town shall only provide sewer and water services to lands outside of the Town=s Corporate Limits, when the service capacity is clearly surplus and when it is assured that the long term commitment to Town residents can be met.

11.4.6.4 Stormwater Management Policies

- a) It is a policy of the Town to require "at-source best management practices and techniques" to maintain stormwater quality and quantity. This shall assist in controlling flooding, ponding, erosion and sedimentation and enhance the water quality and fishery habitat of Colpoy Bay.
- b) It shall be a policy of the Town to undertake the development of a Municipal Master Drainage Plan, in cooperation with the Grey Sauble Conservation Authority, the Ministry of Energy and Environment and the Ministry of Natural Resources, in order to control the quantity and quality of surface water.
- c) It is a policy of the Town that once a Master Drainage Plan is approved, development proposals shall be required to include a drainage plan which manages drainage in accordance with the Master Drainage Plan.
- d) It is a policy of the Town that if drainage is planned through an adjacent municipality, then the adjacent municipality shall be consulted with respect to the Master Drainage Plan.

- e) Development shall incorporate stormwater management practices to control runoff up to the Regulatory Flood level.
- f) Until such time as a Master Drainage Plan is approved, development proposals shall be required to submit a drainage management report which meets the quality and quantity requirements of the Town of Wiarton, Grey Sauble Conservation Authority, the Ministry of Energy and the Environment, the Ministry of Natural Resources and/or the Ministry of Transportation.
- g) Where appropriate, all new development shall incorporate the "Major-Minor" system concept, as required by the Grey Sauble Conservation Authority, and:
 - i) The stormwater management system shall be designed to control runoff from the site to pre-development levels, and where necessary shall require detention or temporary storage facilities to control discharge rates. Where feasible detention must be provided on site.
 - ii) The Minor system shall accommodate runoff from more frequent storms up to the design capacity of an existing receiving system and, where necessary, shall require retention or storage facilities. New collection systems shall be designed in accordance with the Town's Municipal Servicing Standards.
- h) It is a policy of the Town that natural drainage systems used in the design of new subdivisions and major watercourses be left, as much as possible, in their natural state, including existing vegetative buffers. Channelization shall be discouraged. Detention and retention facilities may be permitted in open space areas to ensure controlled runoff into receiving streams.
- i) Any modification to an existing natural watercourse shall preserve floodplain storage capacity and shall require approval from the Grey Sauble Conservation Authority.
- j) The Town shall assume ownership and/or maintenance responsibilities for new stormwater management facilities/structures.

11.4.7 Waterfront

The natural beauty of Wiarton's waterfront is one of the most important assets of the Town. Not only has the waterfront shaped the historic development of the Town, but it provides tremendous opportunities for future economic and social opportunities within the Community.

11.4.7.1 Goal

a) Promote the waterfront as Wiarton's primary recreation and tourism resource.

11.4.7.2 Actions

- a) Increase the profile of the waterfront as a multi-use area, catering to the recreation needs of area residents and visitors.
- Ensure the long term public ownership of the Bluewater Park as an important recreation and tourism resource.
- c) Lease or rent structures such as the train station and coal sheds for commercial ventures like a farmers market, restaurant, tourist information centre, museum, diving services and tour boats, in order to enhance the role of the waterfront as a tourist attraction.
- d) Promote the expansion of the marina area through such things as a new breakwall, boat ramp, moorings, diving facilities and swimming area, in conjunction with the Ministry of Natural Resources.

a) It is the policy of the Town that all public works shall be carried out in accordance with the policies of this Community Plan.

11.5.22 Settlement, Servicing and Phasing

This Plan is based on the philosophy that economic growth and sustainable development should be encouraged, and that both need to be planned and implemented in a manner that is both environmentally and economically sound. Given this philosophy, the Town shall use the following principles for guiding development:

a) The Town shall permit new development in appropriate areas in accordance with a phased approach as indicated on Schedule "B", Phasing Plan to ensure for the orderly and cost effective provision of hard services.

The Town's Phasing Plan represents the ideal strategy given the servicing capabilities of the Town at the time of adoption of this Plan. Should circumstances change that require major revisions of Schedule "B", an amendment to this Plan shall be required. However, minor changes to Schedule "B" shall not require an amendment to this Plan, provided its intent and purpose is maintained.

b) The following three phases have been developed based on the servicing criteria of this Plan:

PHASE ONE AREA

The Phase One area has top priority for municipal service allocation. This area represents the area of Town which is currently provided with municipal water and sewer, and can reasonably be provided with continued service in the future.

Prior to development of any areas outside of Phase One Area, the Town shall be satisfied that adequate capacity shall be available to Area One well into the future. Additionally, the Town shall be assured that enough capacity exists to permit infilling and intensification within Phase One Area.

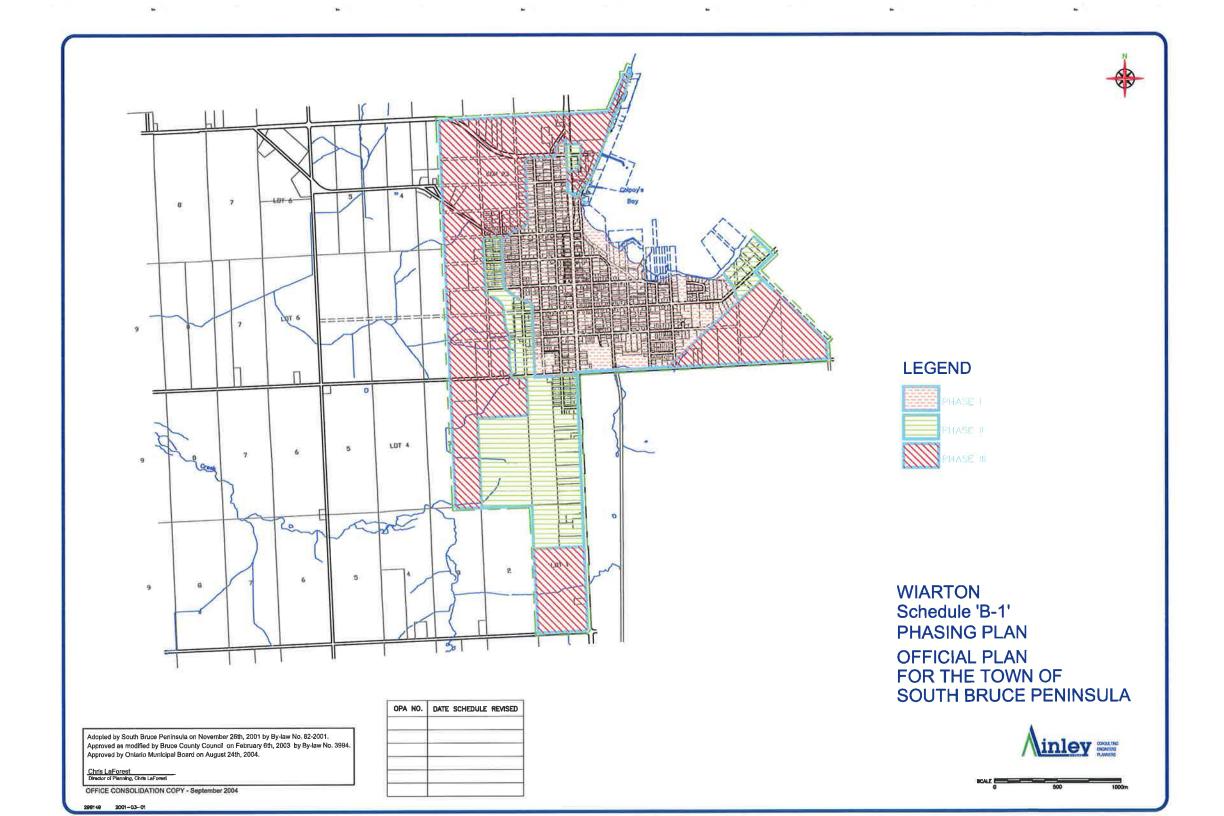
PHASE TWO AREA

Phase Two Area encompasses those lands that are currently partially serviced with either Town water or Town sewer. In order to prevent environmental problems that are often associated with partial servicing, it is the intention of the Town that lands located in Phase Two Area be fully serviced prior to any large blocks of vacant land being developed.

PHASE THREE AREA

The Phase Three Area represents the areas designated for development or future development, but which are not yet serviced by hard municipal services, or which are not suitable for development given various physical or natural constraints. It is intended that municipal services shall not be extended to the Phase Three Area until Phase One and Two Areas have been adequately serviced at full urban densities.

- c) It is the policy of the Town to require the installation of appropriate services to new developments and that such servicing is the responsibility of the developer.
- d) In order to ensure that new developments are properly serviced, the Town shall make available to developers a Design Standards By-law. This manual shall be used in conjunction with this Plan and shall specify the design criteria for the following matters:



11.5 IMPLEMENTATION

11.5.1 Purpose of the Implementation Section

The purpose of this section is to explain how the policies of the Town of Wiarton Community Plan shall be put in place. The Implementation Section lists all the regulatory measures that the Town has at its disposal to manage growth and development.

This Section also acts as a guide to those who wish to participate in the planning process or who propose developments within the Town. To this extent, efforts have been made to clearly explain the various planning tools available to the Town, when they may be used, and the type of issues they can address.

11.5.2 How to Amend the Plan

Circumstances may arise where an individual proposes a development which does not conform to the policies of the Community Plan. In order to permit such a development, the individual must submit an application to amend the Community Plan. The Town should give fair consideration to all Community Plan Amendments and notify the general public and government agencies and ministries of the nature of the proposed amendment, in accordance with the requirements of the Planning Act.

- a) The submission of a Community Plan Amendment to the Town shall be accompanied by a detailed site plan of the proposed development and a report which addresses the following questions:
 - i) Does the Amendment comply with the Vision for the Town of Wiarton?
 - ii) Does the Amendment further the Goals and Actions of the Plan?
 - iii) If the Amendment does not further the Goals and Actions, have circumstances changed to make the Goals and Actions invalid in relation to the proposal development?
 - iv) Is the Amendment in keeping with Provincial and County policy?
 - v) Is there a demonstrated need for the proposed development?
 - vi) Can the lands affected be adequately serviced to accommodate the proposed development? What improvements shall be required to properly service the land?
 - vii) What impacts will the proposed development have on surrounding land uses, traffic movements, servicing, built heritage and natural environment. How can these impacts be eliminated or minimized?

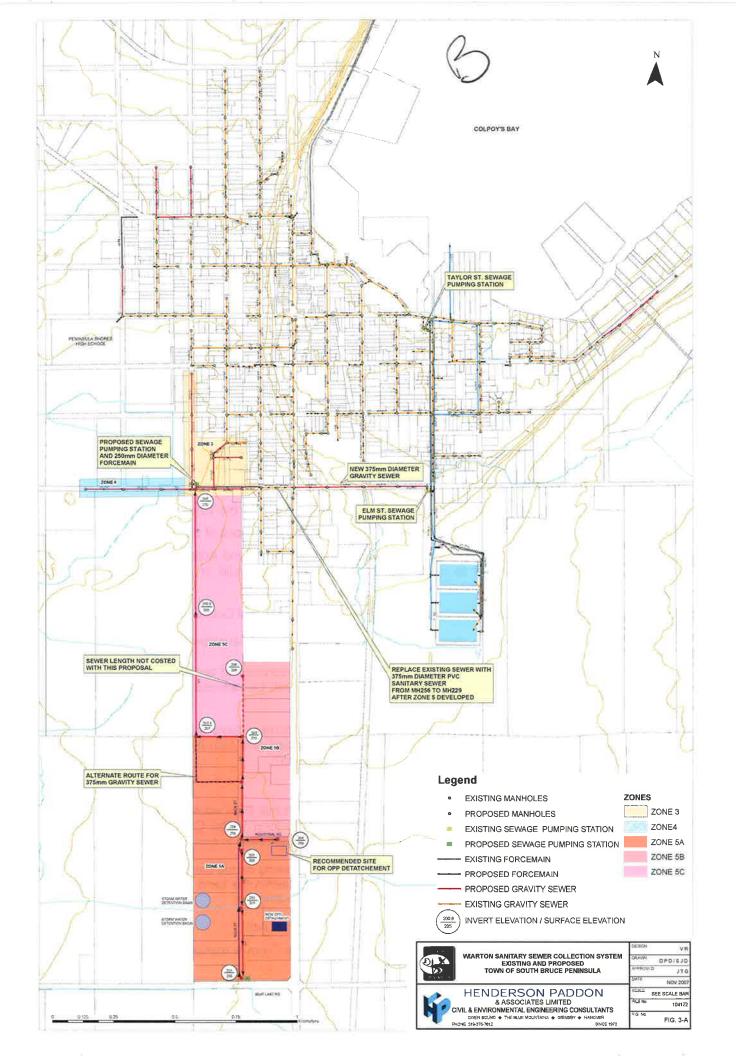
11.5.3 Existing Uses Which Do Not Conform to the Plan

There may be existing land uses within the Town which this Plan would not now permit in their present location. Existing land uses which do not conform to the Community Plan, and are considered incompatible with the surrounding uses, should cease to exist in the long run.

a) It is the policy of the Town that any land use, existing on the date of the adoption of this Plan, not recognized as a permitted use within the Land Use Designation in which it is located, should cease to exist in the long run.

11.5.4 Legislation Pursuant to the Planning Act and Municipal Act

The Planning and Municipal Acts make available to the Town a number of tools which can be used to implement the Goals and Actions of this Plan.





THE CORPORATION OF THE TOWN OF SOUTH BRUCE PENINSULA

BY-LAW NO. XX-2014

Being a By-Law to adopt Amendment No. 30 to the Town of South Bruce Peninsula Official Plan by The Town of South Bruce Peninsula for lands described as Lots 1, 2, and 3 Concession 21 (Amabel and Wiarton).

WHEREAS The Corporation of the Town of South Bruce Peninsula is empowered to amend its Official Plan as required;

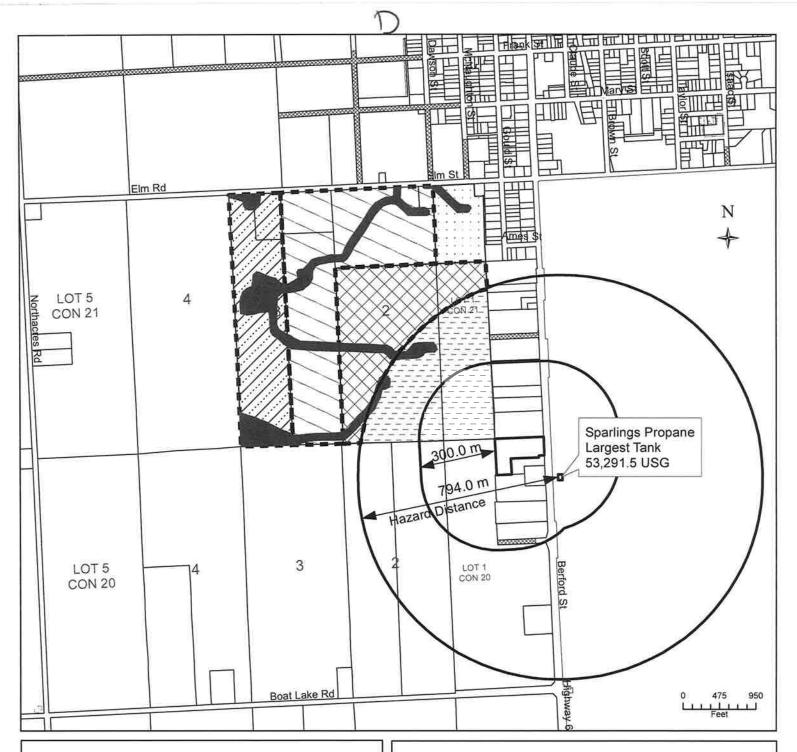
AND WHEREAS the process for considering such an Amendment was in accordance with Section 17 and 21 of the Planning Act, R.S.O. 1990 c.P.13.

AND WHEREAS the Amendment to the Official Plan is deemed to be appropriate and in the public interest:

NOW THEREFORE the Council of the Corporation of the Town of South Bruce Peninsula enacts as follows:

- 1. That Amendment No. 30 to the Town of South Bruce Peninsula Local Official Plan, a copy of which is attached to and forms part of this By-Law, is hereby adopted.
- 2. That the Clerk is hereby directed to forward the adopted Amendment together with the necessary supporting documentation to the County of Bruce for final approval.
- 3. This By-Law shall come into force and take effect pursuant to the provisions and regulations of the Planning Act, R.S.O. 1990, c.P.13.

READ A FIRST AND SECOND TIME THIS _	DAY OF,
READ A THIRD TIME AND FINALLY PAS	SED AND SEALED THIS DAY O
John Close, Mayor	Angela Cathrae, Clerk



SCHEDULE 'A'

to Amendment N0. 30

TOWN OF SOUTH BRUCE PENINSULA OFFICIAL PLAN

Lot 1 to 3 Concession 21
Town of South Bruce Penisula
(Wiarton)
COUNTY OF BRUCE



LANDS DESIGNATED HIGHWAY COMMERCIAL



LANDS DESIGNATED RESIDENTIAL



LANDS TO BE REDESIGNATED FROM HIGHWAY COMMERCIAL TO RESIDENTIAL



■ LANDS TO BE REDESIGNATED FROM
■ INDUSTRIAL TO RESIDENTIAL



LANDS TO BE ADDED TO SETTLEMENT AREA BOUNDARY AND DESIGNATED RURAL



LANDS TO BE REDESIGNATED TO ENVIROMENTAL HAZARD

FILE: SBPOP 30 BCOPA 157

APPLICANT: SOUTH BRUCE PENINSULA

DATE: November, 2013

Vacant land inventory: Are basic tools being overlooked?

Darren Shock / June 10, 2013 / www.millierdickinsonblais.com

Tags: Community, growth, innovation, vacant land inventory

Related Posts

- How to create an innovation ecosystem
- Review: "Focusing on What Matters"
- The Higher ED Blog: How to Market Your City? Build Relationships Part Two
- Maps: The new global startup cities
- Stories of Economic Progress Sponsored The Atlantic

How much vacant industrial or employment land does your municipality have? Simple question, but it's surprising how difficult it can be to answer. It's not as though it's an uncommon question. Investors and existing businesses might ask you, as they look at whether or not they can find space for new construction, expansion, or relocation. Communities themselves may ask it as they start to look at whether they have the resources to accommodate the growth they want. There always seems to be an anecdotal answer. Something like: 'Well, there's about 200 acres, mostly in the South end...'

But ask yourself – can the question really be answered for your community? Is there broad understanding of what the vacant opportunities are, where the underutilized areas are, what the rates are, and how much of it is available/marketable/serviced? What if keeping a business in the community depended on it? Further, how can a community plan for employment growth without having an idea of how much land is available to accommodate that anticipated growth?

These are all questions that we should have answers to. To get there though, starts with a more comprehensive inventory of vacant land in the community. I know – flashy, right? Poring over maps, analyzing building permit data, driving around to carefully examine employment areas...but it's this first step that lays the foundation for much more. Often though, I wonder if it's being overlooked in the pursuit of higher profile activities.

Definitions of developed, vacant, and underutilized land, as well as its ability to meet market trends and requirements, often vary widely among stakeholders concerned with land development. Yes, there's 100 vacant acres left, but is that two 50 acre parcels? Five 20 acre parcels? 100 one acre parcels? Can any vacant lands be assembled? Is the owner marketing them? How flexible is the zoning? Do they have characteristics that make them unusable or less marketable? Are there opportunities for infill development on underutilized lands?

This underlies the critical fact that the exercise should be a collaborative one; with efforts and insight coming from economic development, planning, and the development community. The insight of the economic development agency and development community on factors like market conditions plays a key role in establishing the inventory, especially when determining vacancy and usability – one person's underutilized lot may be another's storage yard. Planners offer the insight needed to balance the exercise with knowledge of likely levels of growth, interests from competing land uses, and objectives for infrastructure investment and municipal fiscal sustainability.

There are a few high profile tools available to showcase vacant land inventories and opportunities. Ronnie Sanders talked about GIS applications in economic development earlier this <u>year</u>, and the push to develop new and innovative approaches to using GIS in cities, regions, and states/provinces across North America to aid economic development. Many of these tools are not only functional, but they have contributed widely to the belief that these areas are "shovel-ready". Tools like <u>Google Map Maker</u> mean that even communities without corporate GIS departments can begin to spatially-represent their vacant lands to external and internal investors.

However, we shouldn't forget the first step in many of these approaches. It's not the trendiest of economic development tools or initiatives (see marketing initiatives, trade missions, new websites), nor does it result in new jobs, new tax revenues, or media accolades. Quite the contrary – it's probably one of the more traditional tools of economic development. However, without this basic type of information available and a sense of the amount of growth it can sustainably accommodate, can we really assume that a community is ready to take on the trendier, more innovative stuff?

OFFICIAL PLAN OF THE TOWN OF SOUTH BRUCE PENINSULA FEBRUARY 2001

Oct 29, 2003 – Adopted by Municipal Council Feb 27, 2004 – Passed by County Council with extensive revisions Oct 8, 2004 – Approved by OMB

For Office Use Only

Consolidated – September 2004

25 July 2008

30 December 2008

5 May 2009

03 November 2009

31 May, 2010

Oct 2010

31Oct2012

- b) The Town shall discourage the fragmentation of lands adjacent to Town that may have a negative impact on the development of existing lands within the Town, or the expansion of Town boundaries.
- c) The Town shall only provide hard and soft services to lands outside of the Town's Corporate Limits, when the service capacity is clearly surplus and when it is assured that the long term servicing commitment to Town residents can be met. The provision of services to residents outside of the Town may be based on a user pay system.
- d) In order to ensure appropriate services to residents living within the greater Wiarton area, the Town may enter into agreements that it finds advisable, relating to the sharing of community services. Such agreements may deal with roads servicing, recreation, fire protection, garbage disposal and recycling.
- e) The Town shall pursue municipal amalgamation with adjacent municipalities, as the most preferred option for municipal organization and service delivery.

11.5.20 Finance

This Plan makes reference to a number of Community initiatives under the responsibility of the Town. However, the Town should provide and improve services in a fiscally responsible manner.

It must be understood that the Community Plan has a life expectancy of 15 to 20 years and that all of the projects and priorities referred to in the Plan cannot be initiated or implemented as soon as the Plan is adopted.

It is the intention of the Town, therefore, to only carry out those expenditures and public works that are affordable, given the Town's financial abilities.

- a) The Town shall not grant approval to any development unless it is in a financial position to provide the services required by such development.
- b) The Town shall promote the establishment of a diverse and stable economic base both in terms of job opportunities and tax revenue.
- c) The Town may undertake a Development Charges Study to determine the cost of providing services to new developments, and may implement a Development Charges By-law enabling the recovery of the costs of servicing new development.
- d) The Town shall use the following guidelines in making financial decisions:
 - capital expenditures shall be guided by a Five Year Capital Forecast, reviewed annually;
 - ii) outstanding debenture debt shall be limited to a percentage of taxable assessment and assessment eligible for grants-in-lieu of taxes this percentage figure shall be reviewed annually in light of changing circumstances and responsibilities; and,
 - iii) capital expenditures from current funds may be limited to a predetermined mill rate for each year.

11.5.21 Public Works and the Community Plan

This Plan represents the culmination of lengthy public participation and review process and was adopted to reflect the aspirations and needs of the Community. In this regard, it is the intention of the Town that all actions taken by the Town shall be guided by the polices of the Plan.

a) It is the policy of the Town that all public works shall be carried out in accordance with the policies of this Community Plan.

11.5.22 Settlement, Servicing and Phasing

This Plan is based on the philosophy that economic growth and sustainable development should be encouraged, and that both need to be planned and implemented in a manner that is both environmentally and economically sound. Given this philosophy, the Town shall use the following principles for guiding development:

a) The Town shall permit new development in appropriate areas in accordance with a phased approach as indicated on Schedule "B", Phasing Plan to ensure for the orderly and cost effective provision of hard services.

The Town's Phasing Plan represents the ideal strategy given the servicing capabilities of the Town at the time of adoption of this Plan. Should circumstances change that require major revisions of Schedule "B", an amendment to this Plan shall be required. However, minor changes to Schedule "B" shall not require an amendment to this Plan, provided its intent and purpose is maintained.

b) The following three phases have been developed based on the servicing criteria of this Plan:

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The Phase One area has top priority for municipal service allocation. This area represents the area of Town which is currently provided with municipal water and sewer, and can reasonably be provided with continued service in the future.

Prior to development of any areas outside of Phase One Area, the Town shall be satisfied that adequate capacity shall be available to Area One well into the future. Additionally, the Town shall be assured that enough capacity exists to permit infilling and intensification within Phase One Area.

PHASE TWO AREA

Phase Two Area encompasses those lands that are currently partially serviced with either Town water or Town sewer. In order to prevent environmental problems that are often associated with partial servicing, it is the intention of the Town that lands located in Phase Two Area be fully serviced prior to any large blocks of vacant land being developed.

PHASE THREE AREA

The Phase Three Area represents the areas designated for development or future development, but which are not yet serviced by hard municipal services, or which are not suitable for development given various physical or natural constraints. It is intended that municipal services shall not be extended to the Phase Three Area until Phase One and Two Areas have been adequately serviced at full urban densities.

- c) It is the policy of the Town to require the installation of appropriate services to new developments and that such servicing is the responsibility of the developer.
- d) In order to ensure that new developments are properly serviced, the Town shall make available to developers a Design Standards By-law. This manual shall be used in conjunction with this Plan and shall specify the design criteria for the following matters:

- i) sanitary sewers, including all necessary manholes, and service connections to each lot;
- ii) watermains, hydrants, valves, valve chambers, and connecting services to each lot:
- iii) road width, surfacing, elevations etc...;
- iv) stormwater drainage works and overland surface water flow, diversion of weeping tile or roof drainage from the sanitary system;
- v) concrete sidewalks;
- vi) seeding or sodding of boulevards between curb line to property line driveway entrances;
- vii) footpaths; and,
- viii) electrical distribution, street lighting and street signs.

Ministry of Tourism, Culture and Sport

Culture Services Unit
Programs and Services Branch
401 Bay Street, Suite 1700
Toronto ON M7A 0A7
Tel: 416 314 5424
Fax: 416 212 1802

Ministère du Tourisme, de la Culture et du Sport

Unité des services culturels Direction des programmes et des services 401, rue Bay, Bureau 1700 Toronto ON M7A 0A7

Tél: 416 314 5424 Téléc: 416 212 1802



November 21, 2014 (EMAIL ONLY)

Tom Gray
Town of South Bruce Peninsula
PO Box 310, 315 George Street
Wiarton, ON NOH 2T0
E: tsbppwmanager@bmts.com

MTCS file #: 0002148

Proponent: Town of South Bruce Peninsula
Subject: Notice of Study Commencement
Wiarton Master Servicing Plan

Location: Town of South Bruce Peninsula / County of Bruce

Dear Tom Gray:

Thank you for providing the Ministry of Tourism, Culture and Sport (MTCS) with the Notice of Commencement for this project. MTCS's interest in this EA project relates to its mandate of protecting, conserving and preserving Ontario's culture heritage, which includes:

- Archaeological resources, including land-based and marine resources;
- Built heritage resources, including bridges and monuments; and,
- Cultural heritage landscapes.

Under the EA process, the proponent is required to determine a project's potential impact on cultural heritage resources.

Archaeological Resources

Your EA project may impact archaeological resources and you may screen the project with the MTCS <u>Criteria for Evaluating Archaeological Potential</u> to determine if an archaeological assessment is needed. MTCS archaeological site data is available at <u>archaeologicalsites@ontario.ca</u>. A municipal archaeological review procedure using an archaeological management plan may also be used to determine archaeological potential where one exists. If your EA project area exhibits archaeological potential, then an archaeological assessment by an Ontario Heritage Act (OHA) licensed archaeologist, who is responsible for submitting the report directly to MTCS for review, will be required.

Recognizing that this is a Master Servicing Plan, developing a preliminary inventory of known archaeological resources and areas of archaeological potential within the study area that will inform the evaluation of alternatives in subsequent project-driven EAs recommended by the Master Servicing Plan may be an alternative to archaeological assessment.

Built Heritage and Cultural Heritage Landscapes

The attached MTCS checklist *Screening for Impacts to Built Heritage and Cultural Heritage Landscapes* helps determine whether your EA project may impact cultural heritage resources. Municipal Clerks can provide information on property registered or designated under the *Ontario Heritage Act*. If your EA project has the potential to impact heritage resources, a Heritage Impact Assessment (HIA) prepared by a qualified consultant will be required. Our Ministry's *Info Sheet #5: Heritage Impact Assessments and*

<u>Conservation Plans</u> outlines the scope of HIAs. Please send HIAs to MTCS for review, and make them available to local organizations or individuals who have expressed interest in heritage.

Recognizing that this is a Master Servicing Plan, developing a preliminary inventory of known and potential built heritage resources and cultural heritage landscapes within the study area that will inform the evaluation of alternatives in subsequent project-driven EAs recommended by the Master Servicing Plan may be an alternative to heritage impact assessment.

Environmental Assessment Reporting

All technical heritage studies and their recommendations are to be addressed and incorporated into EA projects. Please advise MTCS whether an archaeological assessment and/or a heritage impact assessment will be completed for your EA project, and provide them to MTCS before issuing a Notice of Completion. If your screening has identified no known or potential cultural heritage resources, or no impacts to these resources, please include the completed checklists and supporting documentation in the EA report or file. MTCS is in no way liable if the information in the completed checklists is found to be inaccurate or incomplete.

Thank-you for circulating MTCS on this project: please continue to do so through the EA process, and contact me for any questions or clarification.

Sincerely,

Chris Mahood, MCIP, RPP Heritage Planner <u>chris.mahood@ontario.ca</u> 416-314-5424

Copied to: John Slocombe, GM BluePlan Engineering (john.slocombe@gmblueplan.ca)

Please notify MTCS if archaeological resources are impacted by EA project work. All activities impacting archaeological resources must cease immediately, and a licensed archaeologist is required to carry out a determination of their nature and significance.

If human remains are encountered, all activities must cease immediately and the local police as well as the Cemeteries Regulation Unit of the Ministry of Consumer Services must be contacted. In situations where human remains are associated with archaeological resources, MTCS should also be notified to ensure that the site is not subject to unlicensed alterations which would be a contravention of the Ontario Heritage Act.

Screening for Impacts to Built Heritage and Cultural Heritage Landscapes

This checklist is intended to help proponents determine whether their project could affect known or potential cultural heritage resources. The completed checklist should be returned to the appropriate Heritage Planner or Heritage Advisor at the Ministry of Tourism and Culture.

Step 1	I – Scr	eening for	Recognized Cultural Heritage Value
YES	NO	Unknown	
			 Is the subject property designated or adjacent* to a property designated under the Ontario Heritage Act?
			 Is the subject property listed on the municipal heritage register or a provincial register/list? (e.g. Ontario Heritage Bridge List)
			3. Is the subject property within or adjacent to a Heritage Conservation District?
			4. Does the subject property have an Ontario Heritage Trust easement or is it adjacent to such a property?
			5. Is there a provincial or federal plaque on or near the subject property?
			6. Is the subject property a National Historic Site?
			7. Is the subject property recognized or valued by an Aboriginal community?
Step 2	2 – Scr	eening Po	tential Resources
			Built heritage resources
YES	NO	Unknown	 Does the subject property or an adjacent property contain any buildings or structures over forty years old[†] that are:
			 Residential structures (e.g. house, apartment building, shanty or trap line shelter)
			Farm buildings (e.g. barns, outbuildings, silos, windmills)
			 Industrial, commercial or institutional buildings (e.g. a factory, school, etc.)
			 Engineering works (e.g. bridges, water or communications towers, roads, water/sewer systems, dams, earthworks, etc.)
			 Monuments or Landmark Features (e.g. cairns, statues, obelisks, fountains, reflecting pools, retaining walls, boundary or claim markers, etc.)
			2. Is the subject property or an adjacent property associated with a known architect or builder?
			3. Is the subject property or an adjacent property associated with a person or event of historic interest?
			4. When the municipal heritage planner was contacted regarding potential cultural heritage value of the subject property, did they express interest or concern?
YES	NO	Unknown	Cultural heritage landscapes
			5. Does the subject property contain landscape features such as:
			 Burial sites and/or cemeteries
			Parks or gardens
			 Quarries, mining, industrial or farming operations
			Canals
			 Prominent natural features that could have special value to people (such as waterfalls, rocky outcrops, large specimen trees, caves, etc.)
			 Evidence of other human-made alterations to the natural landscape (such as trails, boundary or way-finding markers, mounds, earthworks, cultivation, non-native species, etc.)
			6. Is the subject property within a Canadian Heritage River watershed?
			7. Is the subject property near the Rideau Canal Corridor UNESCO World Heritage Site?
_			8. Is there any evidence from documentary sources (e.g., local histories, a local recognition program, research studies, previous heritage impact assessment reports, etc.) or local knowledge or Aboriginal oral history, associating the subject property/ area with historic events, activities or persons?

Note:

If the answer is "yes" to any question in Step 1, proceed to Step 3.

The following resources can assist in answering questions in Step 1:

Municipal Clerk or Planning Department – Information on properties designated under the Ontario Heritage Act (individual properties or Heritage Conservation Districts) and properties listed on a Municipal Heritage register.

Ontario Heritage Trust – Contact the OHT directly regarding easement properties. A list of OHT plaques can be found on the website: Ontario Heritage Trust

Parks Canada – A list of National Historic Sites can be found on the website: Parks Canada

Ministry of Tourism and Culture – The Ontario Heritage Properties Database includes close to 8000 identified heritage properties. Note while this database is a valuable resource, it has not been updated since 2005, and therefore is not comprehensive or exhaustive. Ontario Heritage Properties Database

Local or Provincial archives

Local heritage organizations, such as the municipal heritage committee, historical society, local branch of the Architectural Conservancy of Ontario, etc.

Consideration should also be given to obtaining oral evidence of CHRs. For example, in many Aboriginal communities, an important means of maintaining knowledge of cultural heritage resources is through oral tradition.

If the answer is "yes" to any question in Step 2, an evaluation of cultural heritage value is required. If cultural heritage resources are identified, proceed to Step 3.

If the answer to any question in Step 1 or to questions 2-4, 6-8 in Step 2, is "unknown", further research is required.

If the answer is "yes" to any of the questions in Step 3, a heritage impact assessment is required.

If uncertainty exists at any point, the services of a qualified person should be retained to assist in completing this checklist. All cultural heritage evaluation reports and heritage impact assessment reports <u>must</u> be prepared by a qualified person. Qualified persons means individuals (professional engineers, architects, archaeologists, etc.) having relevant, recent experience in the identification and conservation of cultural heritage resources. Appropriate evaluation involves gathering and recording information about the property sufficient to understand and substantiate its heritage value; determining cultural heritage value or interest based on the advice of qualified persons and with appropriate community input. If the property meets the criteria in Ontario Regulation 9/06 under the Ontario Heritage Act, it is a cultural heritage resource.

[†]The 40 year old threshold is an indicator of potential when conducting a preliminary survey for identification of cultural heritage resources. While the presence of a built feature that is 40 or more years old does not automatically signify cultural heritage value, it does make it more likely that the property could have cultural heritage value or interest. Similarly, if all the built features on a property are less than 40 years old, this does not automatically mean the property has no cultural heritage value. Note that age is not a criterion for designation under the *Ontario Heritage Act*.

Step 3 – Screening for Potential Impacts					
YES	NO	Will the proposed undertaking/project involve or result in any of the following potential impacts to the subject property or an adjacent* property?			
		Destruction, removal or relocation of any, or part of any, heritage attribute or feature.			
		Alteration (which means a change in any manner and includes restoration, renovation, repair or disturbance).			
		Shadows created that alter the appearance of a heritage attribute or change the exposure or visibility of a natural feature or plantings, such as a garden.			
		Isolation of a heritage attribute from its surrounding environment, context or a significant relationship.			
		Direct or indirect obstruction of significant views or vistas from, within, or to a built or natural heritage feature.			
		A change in land use such as rezoning a battlefield from open space to residential use, allowing new development or site alteration to fill in the formerly open spaces.			
		Soil disturbance such as a change in grade, or an alteration of the drainage pattern, or excavation, etc.			

^{*} For the purposes of evaluating potential impacts of development and site alteration "adjacent" means: contiguous properties as well as properties that are separated from a heritage property by narrow strip of land used as a public or private road, highway, street, lane, trail, right-of way, walkway, green space, park, and/or easement or as otherwise defined in the municipal official plan.



Ministry of Tourism and Culture

Programs & Services Branch 401 Bay Street, Suite 1700 Toronto ON M7A 0A7

Criteria for Evaluating Archaeological Potential A Checklist for the Non-Specialist

"Archaeological potential" is a term used to describe the likelihood that a property contains archaeological resources. This checklist is intended to assist non-specialists screening for the archaeological potential of a property where site alteration is proposed.

Note: for projects seeking a Renewable Energy Approval under Ontario Regulation 359/09, the Ministry of Tourism and Culture has developed a separate checklist to address the requirements of that regulation.

Culture has developed a separate checklist to address the requirements of that regulation.			
Project Name			
Project Location			
Proponent Name			
Proponent Contact Information			
Topolicii contact illiciillatori			
Known Archaeological Sites	Yes	Unknown	No
Known archaeological sites within 300 m of property			
Physical Features	Yes	Unknown	No
Body of water within 300 m of property If yes, what kind of water?			
a) Primary water source (lake, river, large creek, etc.)			
b) Secondary water source (stream, spring, marsh, swamp, etc.)			
c) Past water source (beach ridge, river bed, relic creek, ancient shoreline, etc.)			
Topographical features on property (knolls, drumlins, eskers, or plateaus)			
4. Pockets of sandy soil (50 m² or larger) in a clay or rocky area on property			
 Distinctive land formations on property (mounds, caverns, waterfalls, peninsulas, etc.) 			
Cultural Features	Yes	Unknown	No
Known burial site or cemetery on or adjacent to the property (cemetery is registered with the Cemeteries Regulation Unit)			
Food or scarce resource harvest areas on property (traditional fishing locations, agricultural/berry extraction areas, etc.)			
Indications of early Euro-Canadian settlement within 300 m of property (monuments, cemeteries, structures, etc.)			
 Early historic transportation routes within 100 m of property (historic road, trail, portage, rail corridor, etc.) 			
Property-specific Information	Yes	Unknown	No
 Property is designated and/or listed under the Ontario Heritage Act (municipal register and lands described in Reg. 875 of the Ontario Heritage Act) 			
11. Local knowledge of archaeological potential of property (from aboriginal communities, heritage organisations, municipal heritage committees, etc.)			
12. Recent deep ground disturbance [†] (post-1960, widespread and deep land alterations)			

0478E (2011/07) Page 1 of 2

[†] Archaeological potential can be determined not to be present for either the entire property or a part(s) of it when the area under consideration has been subject to widespread and deep land alterations that have severely damaged the integrity of any archaeological resources. Deep disturbance may include quarrying or major underground infrastructure development. Activities such as agricultural cultivation, gardening, minor grading and landscaping are not necessarily considered deep disturbance. Alterations can be considered to be extensive or widespread when they have affected a large area, usually defined as the majority of a property.

Scoring the results:	
If Yes to any of 1, 2a, 2b, 2c, 6, 10, or 11	→ high archaeological potential – assessment is required
If Yes to two or more of 3, 4, 5, 7, 8, or 9	→ high archaeological potential – assessment is required
If Yes to 12 or No to all of 1 - 10	→ low archaeological potential – assessment is not required
If 3 or more Unknown	→ an archaeological assessment is required (see note below)

[†] **Note**: If information requested in this checklist is unknown, a consultant archaeologist licensed under the *Ontario Heritage Act* should be retained to carry out at least a Stage 1 archaeological assessment to further explore the archaeological potential of the property and to prepare a report on the results of that assessment. The Ministry of Tourism and Culture reviews all such reports prepared by consultant archaeologists against the ministry's Standards and Guidelines for Consultant Archaeologists. Once the ministry is satisfied that, based on the available information, the report has been prepared in accordance with those guidelines, the ministry issues an acceptance letter to the consultant archaeologist and places the report into its registry where it is available for public inspection.

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Summary Report PIC #1





Town of South Bruce Peninsula

November, 2014

Prepared by:





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1. Background and Introduction

The Town of South Bruce Peninsula has initiated a Water, Wastewater and Stormwater Master Servicing Plan (MSP) for Wiarton to identify a preferred strategy to support existing servicing needs and projected growth. This strategy will accommodate anticipated demands as identified through the Town's Official Plan. This long term plan will address current service levels, policy, practices and procedures as well as identify gaps and opportunities to improve efficiency and effectiveness at present and in the future.

The study area for the Wiarton Master Servicing Plan is defined as the Town's limits and will encompass the entire existing urban area and future service areas as per the Town's Official Plan.

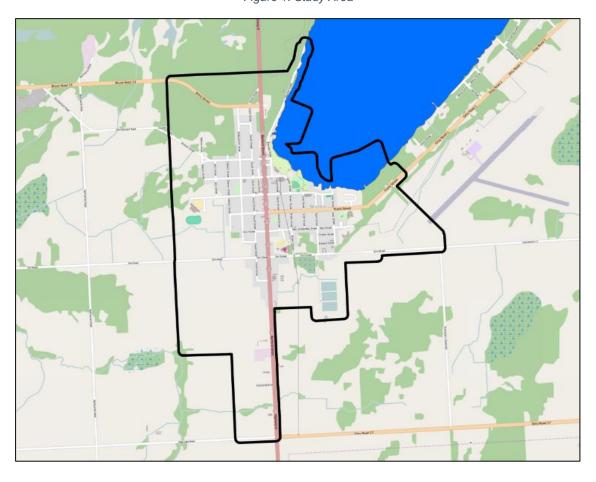


Figure 1. Study Area





The Master Plan Study follows the Municipal Class Environmental Assessment planning principles including public consultation and systematic evaluation of alternatives of the Municipal Engineers Association Approach #2, which will fulfill the requirements of Schedule A, A+, and B projects, and become the basis for future investigations for Schedule C projects.

A key part of the public consultation component is the Public Information Centre (PIC), which serves as a forum for information exchange between the public/stakeholders and the project team. Two Public Information Centres (PIC's) are planned during the course of this study.

The *Public Information Centre #1 Summary Report* focuses on PIC #1 and represents one element of the overall Master Plan documentation. The report documents the following:

- Information presented at PIC #1
- Summary of attendance
- All comments received and responses provided
- Summarized table of all comments received and responses provided in order to track correspondence in a transparent and traceable manner

1.1. Class EA Context

The Master Plan Study follows the approved master planning process as outlined in Section A.2.7, Appendix 4 of the Municipal Engineers Association (MEA) Municipal Class Environmental Assessment (October 2000 as amended in 2011) document. The study is following Approach #2, which involves the preparation of a Master Plan document at the conclusion of Phases 1 and 2 of the Municipal Class EA process where the level of investigation, consultation and documentation are sufficient to fulfill the requirements of schedule B projects. The Master Plan will provide the basis required for future investigations for specific Schedule C projects identified. Public consultation is a vital component of the Class Environmental Assessment (EA) process and ensures transparency through encouraging stakeholder and public involvement.

The study work plan provides for two rounds of Public Information Centres (PICs). The first round of Public Information Centres (PIC #1) was held on October 30th, 2014; with the intent to introduce the project, provide study background and the opportunities and constraints for the study.





EXHIBIT A.2 MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS NOTE: This flow chart is to be read in conjunction with Part A of the Municipal Class EA PHASE 1 PHASE 2 PHASE 3 PHASE 4 PHASE 5 PROBLEM OR OPPORTUNITY •• ALTERNATIVE SOLUTIONS • • | IMPLEMENTATION DENTIFY ALTERNATIVE OLUTIONS TO PROBLEM OR OPPORTUNITY OR OPPORTUNITY ENVIRONMENTAL STUDY REPORT (ESR) PLACED ON PUBLIC RECORD SELECT SCHEDULE (APPENDIX I) SCHEDULE A/A* INVENTORY NATURAL, SOCIAL, ECONOMIC ENVIRONMENT MONITOR FOR ENVIRONMENTAL PROVISIONS AND COMMITMENTS DESIGNS: IDENTIFY EVALUATE ALTERNATIVE SOLUTIONS: IDENTIFY A SELECT PREFERRED DESIGN SCHEDULE B SELECT PREFERRED SOLUTION SCHEDULE C 1 INDICATES MANDATORY EVENTS REVIEW AND CONFIRM CHOICE OF SCHEDULE INDICATES PROBABLE EVENTS PRELIMINARY FINALIZATIO OF PREFERRED DESIGN MUNICIPAL **ENGINEERS** ASSOCIATION PARTH ORDER (See Section A.2.8)

Figure 2. Municipal Class EA Planning and Design Process

2. Public Information Centre #1

2.1. Purpose

Public Information Centre #1 was held on October 30th, 2014 and was intended to:

- Introduce the study to the public
- Describe the Master Planning process
- Identify the problem and opportunity
- Present baseline information such as growth projections, existing systems, land use and environmental features
- Outline preliminary servicing issues
- Receive public input and answer any questions





2.2. Notifications

Stakeholders and the public were informed of PIC #1 by newspaper advertisements, by mail and Town of South Bruce Peninsula website.

2.2.1 Newspaper and Online Advertisement

The Notice of Public Information Centre #1 was published in the following local newspapers:

- Owen Sound Sun Times on Friday October 24th 2014 and Saturday October 25th 2014
- The Wiarton Echo on Tuesday October 28th 2014

The notice was also posted on the Town of South Bruce Peninsula website:

http://www.southbrucepeninsula.com/en/townhall/resources/Public_Notices/2014/Wiarton_MSP_advertisement_Study_commencement_and_PIC1.pdf

2.2.2 Mail Out

The Notice of Public Information Centre PIC #1 was dated on October 24th, 2014 and mailed to local government, review agencies and other stakeholders.

2.3 PIC 1 Dates, Times, and Locations

PIC #1 was held at a location within Wiarton. Table 1 identifies the date, time, and location for PIC #1.

Table 1. PIC 1 Dates, Times, and Locations

Municipality	Date	Time	Location
Wiarton	Thursday, October 30, 2014	4:30 - 6:30 p.m.	Wiarton Arena (Upstairs) 526 Taylor Street Wiarton, ON

Representatives from the Town of South Bruce Peninsula and its Consultant, GM BluePlan Engineering Limited, were present at the PIC to provide information and answer questions.

2.4 PIC #1 Display Panels

The information presented at PIC #1 included:

- Purpose of the Study
- Class EA Master Planning Process
- Study Area, Problem / Opportunity Statement
- Growth / Planning Areas





- Existing Systems
- Land Use & Environmental Features
- Preliminary Servicing Issues
- Preliminary Servicing Concepts and Ideas
- How to Get Involved

2.5 PIC #1 Attendance

A total of 2 people attended PIC #1, counting only those who signed in.

2.6 Comments and Responses

Attendees were encouraged to provide comments related to the Master Servicing Plan study in writing. Comments were received via comment sheets, emails, and letters. A summary of the comments received is shown in the section below.





Table 2. Summary of Comments Received

	No.	Correspondent	Туре	Comment	Date Received	Status/Response
PIC #1	1	Jack Van Dorp Planner County of Bruce Planning and Economic Development	Paper Copy & Email	Provided a summary review of the land requirements for anticipated growth within the Wiarton Settlement area of the land requirements for anticipated growth within the Wiarton Settlement area. Commented about the issues associated with lack of a stormwater outlet for the lands immediately adjacent to Highway 6 (given jurisdictional issues) it may be worth considering retaining industrial and highway commercial land designations within areas that can drain to the west to accommodate growth in the event that jurisdictional issues cannot be resolved. Provided the following email attachments: Town of South Bruce Peninsula Planning Report. File No.: SBP OPA 30. Nov, 2011. Growth Management Report, Wiarton South Settlement Area: Comprehensive Review of the Land Use Designations in the Town of Wiarton. Oct, 2011 Provided the following hard copies during PIC #1: Town of South Bruce Peninsula Planning Report. File No.: SBP OPA 30. Feb, 2014. Vacant land inventory: Are basic tools being overlooked? June, 2013. Official Plan of the Town of South Bruce Peninsula. Feb, 2001. Pages 173-175.	October 31, 2014	Comment filed.





2	Allan and Kay Hunter	Comments Sheet	Stormwater infiltration of sanitary sewers and subsequent basement flooding Direct discharge of raw sewage due to incapacity of pumps Improvement of system prior to development Infrastructure upgrade costs and who pays for it (developers, not rate payers) Acceptance of development proposal; expects Town & County to do due diligence	October 30, 2014	Comment filed.
3	Chris Mahood Heritage Planner Ministry of Tourism, Culture and Sport	Email	Criteria for Evaluating Archaeological Potential Screening for Impacts to Built Heritage and Cultural Heritage Landscapes Comments on the Archaeological Resources, Built Heritage and Cultural Heritage Landscapes, and Environmental Assessment Reporting	November 21, 2014	Comment filed.



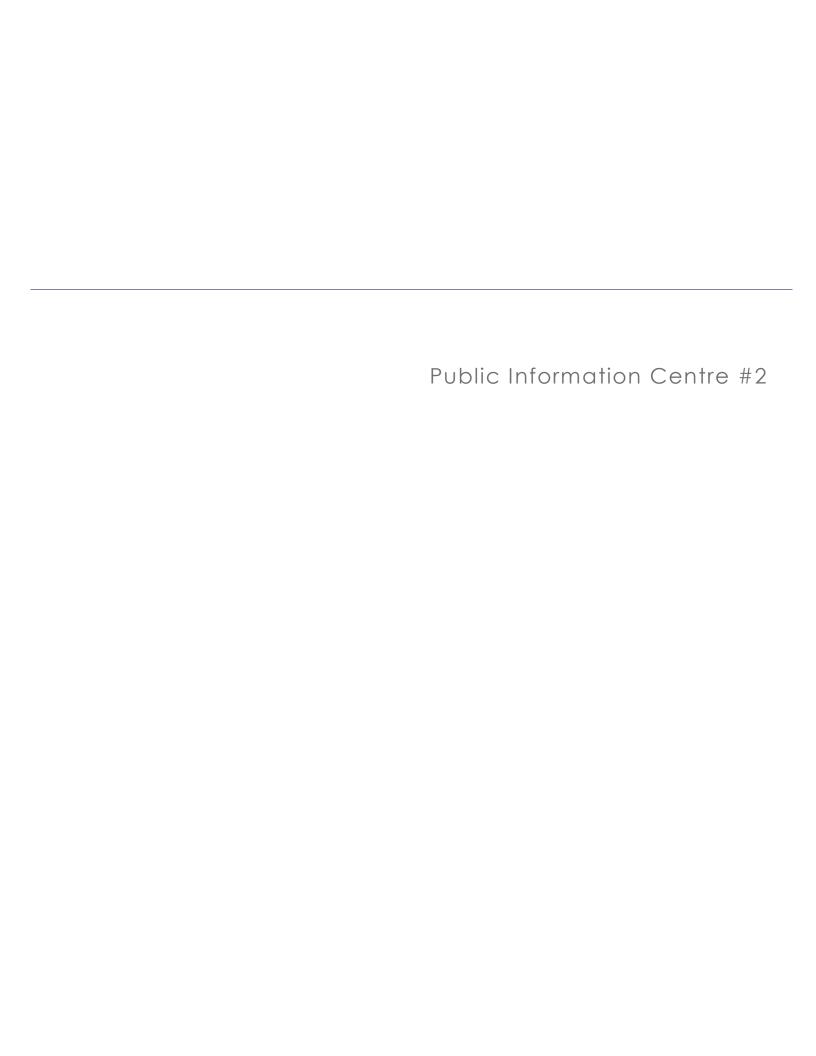


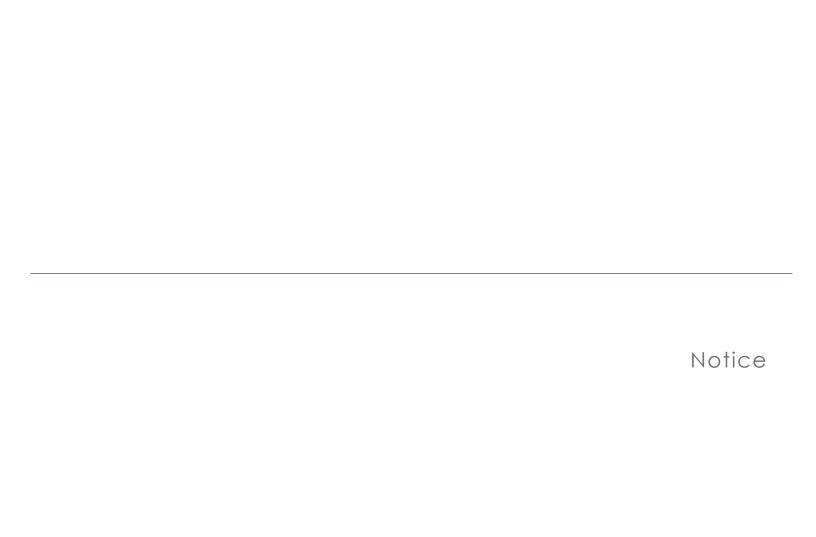
3. Next Steps

Following the second round of public consultation, the project team will:

- Consider input received from PIC #1 and respond to comments when required
- Identify adequacy of existing infrastructure to meet existing and future growth
- Develop and evaluate alternative servicing strategies
- Identify a preliminary preferred servicing strategy
- Prepare for PIC #2 presentation of the preferred servicing strategy
- Advertise the Notice of PIC #2
- Collect additional comments and input









Town of South Bruce Peninsula

PO Box 310, 315 George St. Wiarton ON N0H 2T0

Tel: (519) 534-1400 Fax: (519) 534-4862 Toll Free (in 519 area only): 1-877-534-1400

July 17, 2015

Our File: 214128 / 214128-1

Re: Notice of Public Information Centre (PIC) #2 - Wiarton Master Servicing Plan for Water, Wastewater and Stormwater Services and Notice of Commencement and PIC#1 - Gould Street Sanitary Sewer Upgrade Class EA

Dear Sir or Madam,

The Town of South Bruce Peninsula is undertaking a Water, Wastewater and Stormwater Master Servicing Plan (MSP) for Wiarton to identify a preferred strategy to support existing servicing needs and projected growth. At the same time, the Town has recently initiated a Municipal Class Environmental Assessment (EA) for the Gould Street Sanitary Sewer Upgrade. This Class EA will inform the preferred wastewater servicing strategy for the MSP.

The Town is hosting joint Public Information Centres (PIC) that will introduce the Gould Street Sanitary Sewer Upgrade Class EA (PIC#1) and provide an update on the progress of the Master Servicing Plan (PIC#2), including the evaluation of alternative solutions and the preliminary preferred servicing strategy. The study areas are defined as the Town's limits and encompass the entire existing urban area and future service areas as per the Town's Official Plan.

Problem Statement - Gould Street Sanitary Sewer Upgrade Class EA

The Town has identified an existing 300 mm diameter sanitary sewer on private lands between Gould Street and Berford Street, north of Frank Street that is in very poor condition and needs to be addressed. In addressing the condition of the existing sewer, there is also an opportunity to address capacity limitations in other parts of the sanitary system, namely at the Taylor Street Sewage Pumping Station (SPS#1).

Objective - Master Servicing Plan

The objective of the ongoing MSP is to develop a comprehensive servicing and implementation strategy for providing water, wastewater and stormwater services to existing and new growth areas in the Town of Wiarton to 2029.

The Class EA Process

Both studies are being undertaken as municipal Class EA Studies in accordance with the requirements of the Municipal Engineers Association Municipal Class EA process (October 2000, as amended in 2007 and 2011). The Class EA process includes public and review agency consultation, evaluation of alternatives, an assessment of the potential environmental effects of the proposed improvements and

identification of reasonable measures to mitigate any adverse impacts that may result. The MSP is following the approved master planning process outlined in Section A.2.7 (Approach #2 in Appendix 4).

Public Consultation

The Town of South Bruce Peninsula wishes to ensure that anyone with an interest in this study has the opportunity to be involved and to provide input. Representatives from the Town and its consultants will be present at the PIC to answer questions and discuss the next steps of the studies. With the exception of personal information, all comments received will become part of the public record.

The Joint PIC is scheduled to take place on Wednesday, July 29, 2015 at the Wiarton Arena (Upstairs) - 526 Taylor Street, Wiarton from 4:30 p.m. to 6:30 p.m.

You are invited to attend the PIC to ask questions, meet the project team and provide input to the study. If you have any questions or comments or wish to obtain more information, please contact:

Mr. Tom Gray, C.E.T.
Manager of Public Works
Town of South Bruce Peninsula
315 George St, PO Box 310
Wiarton, ON N0H 2T0

Tel: 519-534-1400 ext 131

Email: tsbppwmanager@bmts.com

Mr. John Slocombe, P.Eng.

Project Manager
GM BluePlan

1260 2nd Avenue East, Unit 1 Owen Sound, ON N4K 2J3

Tel: 519-376-1805

Email: john.slocombe@gmblueplan.ca

As part of the study's consultation program you are currently included in the Study Contact List. If you wish to be removed or would like to suggest an alternative representative please contact the undersigned.

Thank you,

James Jorgensen, C.WEM, CEnv, MIAM

Infrastructure Planning, Partner

GM BluePlan Engineering 289 527 0570

Jth. Jargenan

james.jorgensen@gmblueplan.ca



Notice of Joint Public Information Centres (PIC)

PIC#2 - Wiarton Master Servicing Plan for Water, Wastewater and Stormwater Services Notice of Commencement and PIC #1 - Gould Street Sanitary Sewer Upgrade Class EA

Background

The Town of South Bruce Peninsula is undertaking a Water, Wastewater and Stormwater Master Servicing Plan (MSP) for Wiarton to identify a preferred strategy to support existing servicing needs and projected growth. At the same time, the Town has recently initiated a Municipal Class Environmental Assessment (EA) for the Gould Street Sanitary Sewer Upgrade. This Class EA will inform the preferred wastewater servicing strategy for the MSP.

The Town is hosting joint Public Information Centres (PIC) that will introduce the Gould Street Sanitary Sewer Upgrade Class EA (PIC#1) and provide an update on the progress of the Master Servicing Plan (PIC#2), including the evaluation of alternative solutions and the preliminary preferred servicing strategy. The study areas are defined as the Town's limits and encompass the entire existing urban area and future service areas as per the Town's Official Plan.

Problem Statement - Gould St Sanitary Sewer Upgrade Class EA

The Town has identified an existing 300 mm diameter sanitary sewer on private lands between Gould Street and Berford Street, north of Frank Street that is in very poor condition and needs to be addressed. In addressing the condition of the existing sewer, there is also an opportunity to address capacity limitations in other parts of the sanitary system, namely at the Taylor Street Sewage Pumping Station (SPS#1).

Objective - Master Servicing Plan

The objective of the MSP is to develop a comprehensive servicing and implementation strategy for providing water, wastewater and stormwater services to existing and new growth areas in the Town of Wiarton to the year 2029.



The Class EA Process

Both studies are being undertaken as municipal Class EA Studies in accordance with the requirements of the Municipal Engineers Association Municipal Class EA process (October 2000, as amended in 2007 and 2011). The Class EA process includes public and review agency consultation, evaluation of alternatives, an assessment of the potential environmental effects of the proposed improvements and identification of reasonable measures to mitigate any adverse impacts that may result. The MSP is following the approved master planning process outlined in Section A.2.7 (Approach #2 in Appendix 4).

Public Consultation

The Town of South Bruce Peninsula wishes to ensure that anyone with an interest in this study has the opportunity to be involved and to provide input. Representatives from the Town and its consultants will be present at the PIC to answer questions and discuss the next steps of the studies. With the exception of personal information, all comments received will become part of the public record.

The Joint PIC is scheduled to take place on **Wednesday**, **July 29**, **2015** at the **Wiarton Arena** (**Upstairs**) - **526 Taylor Street**, **Wiarton** from **4:30 p.m.** to **6:30 p.m.**

If you have any questions or comments or wish to obtain more information, please contact:

Mr. Tom Gray, C.E.T.

Manager of Public Works

Town of South Bruce Peninsula

315 George St, PO Box 310

Wiarton, ON N0H 2T0

Tel: 519-534-1400 ext 131

Email: tsbppwmanager@bmts.com

Mr. John Slocombe, P.Eng.

Project Manager

GM BluePlan Engineering

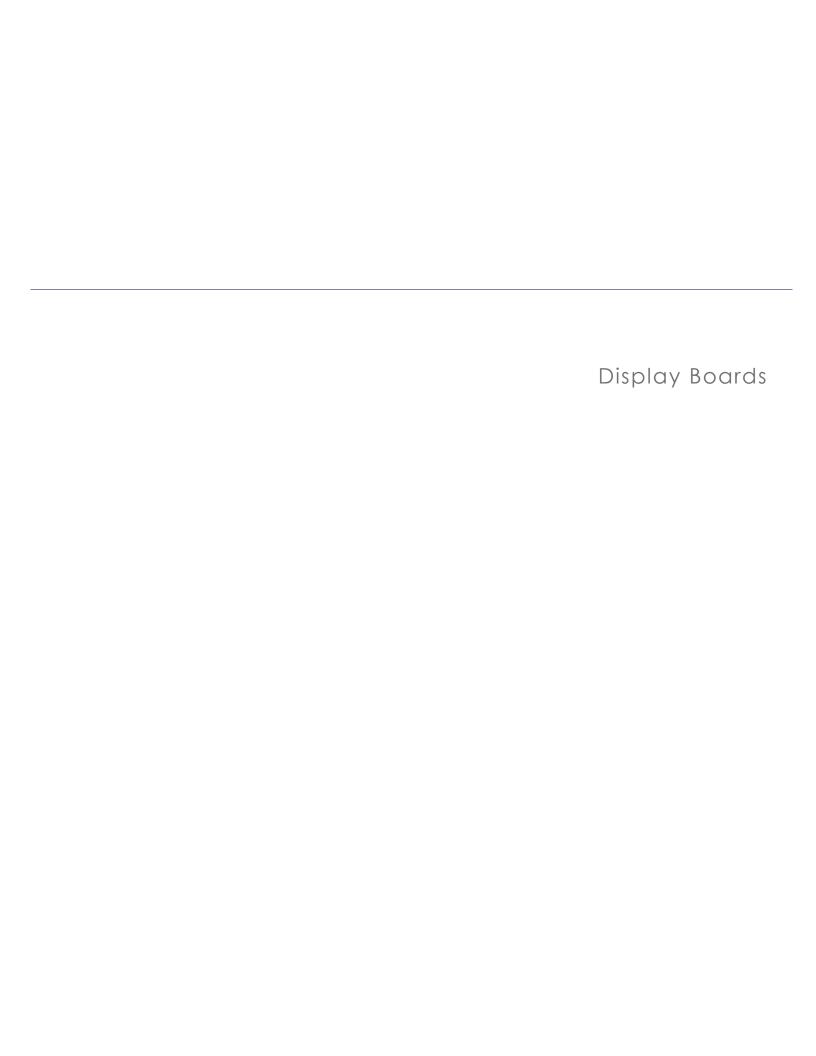
1260 2nd Avenue East, Unit 1

Owen Sound, ON N4K 2J3

Tel: 519-376-1805

Email: john.slocombe@gmblueplan.ca

This Notice was first issued on the 17th of July, 2015



WIARTON Joint Public Information Centres (PIC)

Master Servicing Plan for Water, Wastewater and Stormwater Services

Public Information Centre No. 2

Gould Street Sanitary Sewer Upgrade Class Environmental Assessment Study

Public Information Centre No. 1

July 29, 2015 Wiarton Arena 526 Taylor Street, Wiarton 4:30 – 6:30 pm





Why Are We Here?

Purpose of the Study

- The Town of South Bruce Peninsula is undertaking a Wiarton Master Servicing Plan (MSP) to identify a preferred water, wastewater and stormwater servicing strategy to support existing servicing needs and projected growth
- The MSP will provide the business case for the need, timing and cost of servicing and infrastructure
- The Town has also initiated a Municipal Class EA study for the Gould Street Sanitary Sewer Upgrade; this will inform the preferred wastewater servicing strategy for the MSP

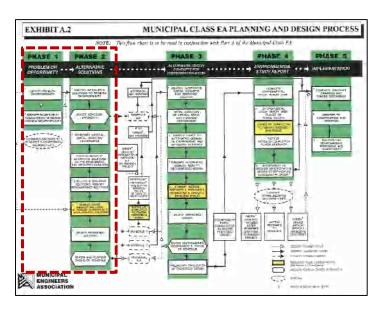






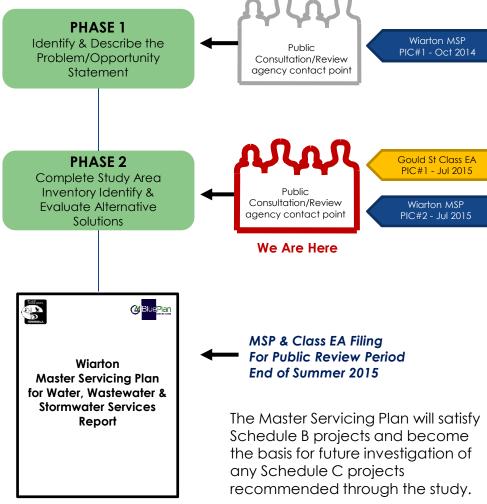


Municipal Class EA Process and Consultation



The study follows the Master Plan process as outlined in Section A.2.7 of the Municipal Engineers Association (MEA) Municipal Class Environmental Assessment (Oct 2000, as amended in 2007 and 2011).

The scope of the study involves completion of Phases 1 and 2 of the MEA Municipal Class EA process.



WIARTON – MASTER SERVICING PLAN & GOULD STREET SANITARY SEWER UPGRADE CLASS EA STUDI



PIC #1 – Gould Street Sanitary Sewer Upgrade PIC #2 – Water, Wastewater, and Stormwater Master Servicing Plan July 29, 2015



Master Servicing Plan

Problem / Opportunity Statement

New development is being considered and planned in the Wiarton service area. To define how developments are to be serviced, a comprehensive Master Servicing Plan for water, wastewater, and stormwater services was initiated.

There is a need to confirm the current capacity of existing water, wastewater and stormwater systems.

To meet existing servicing and future growth needs the existing system may require upgrades and new servicing extended out to growth areas. The Master Plan will ensure orderly development of these services.

Gould Street Class EA

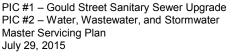
Problem / Opportunity Statement

An existing 300 mm diameter sanitary sewer on private lands between Gould Street and Berford Street, just north of Frank Street is in very poor condition and needs to be addressed.

In addressing this problem, there is also an opportunity to address capacity limitations in other parts of the sanitary system, namely at the Taylor Street Pumping Station (SPS#1).

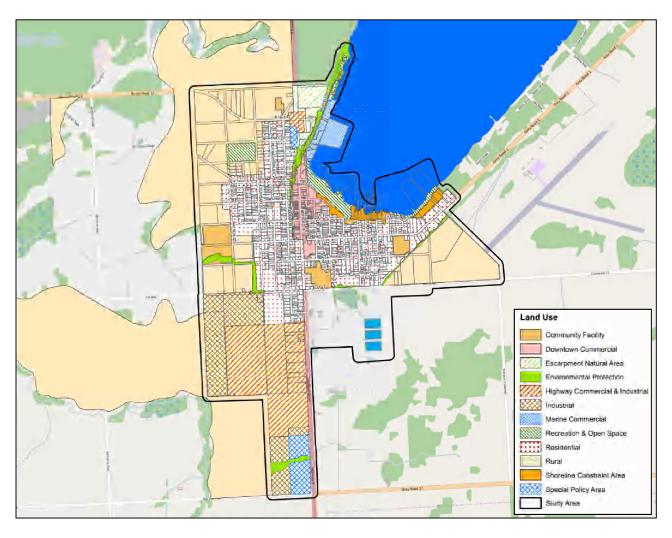








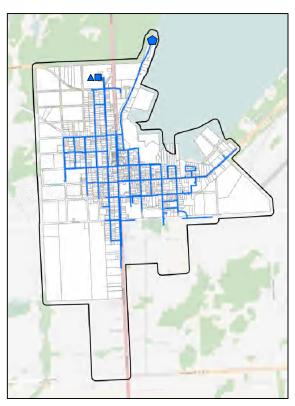
Land Use & Environmental Features

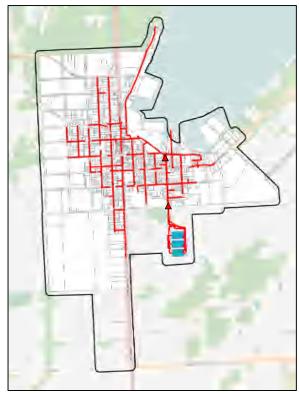


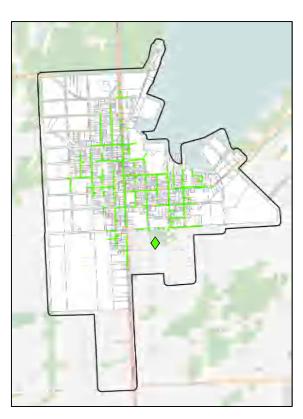




Existing Systems







WATER

WASTEWATER

STORMWATER

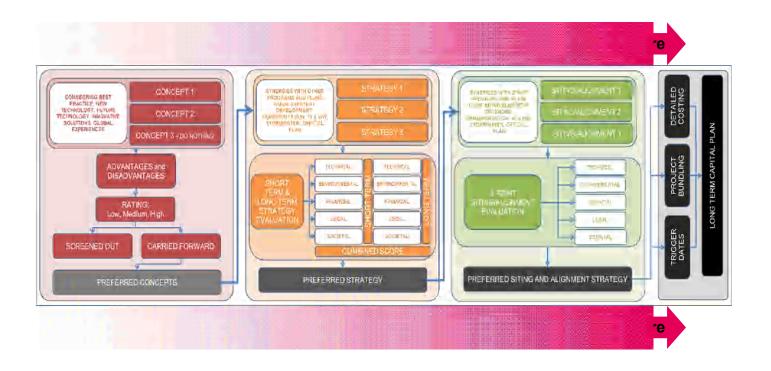




PIC #1 – Gould Street Sanitary Sewer Upgrade PIC #2 – Water, Wastewater, and Stormwater Master Servicing Plan July 29, 2015



Servicing Option Evaluation Methodology



All options are evaluated at the concept level. Concepts carried forward are used to build feasible strategies which are evaluated and scored against five criteria, considering both short term and long term factors. One preferred strategy is selected for further refinement and evaluation of sites and alignments before the final capital program is developed. The final program includes costs, schedule and provides an implementation plan.



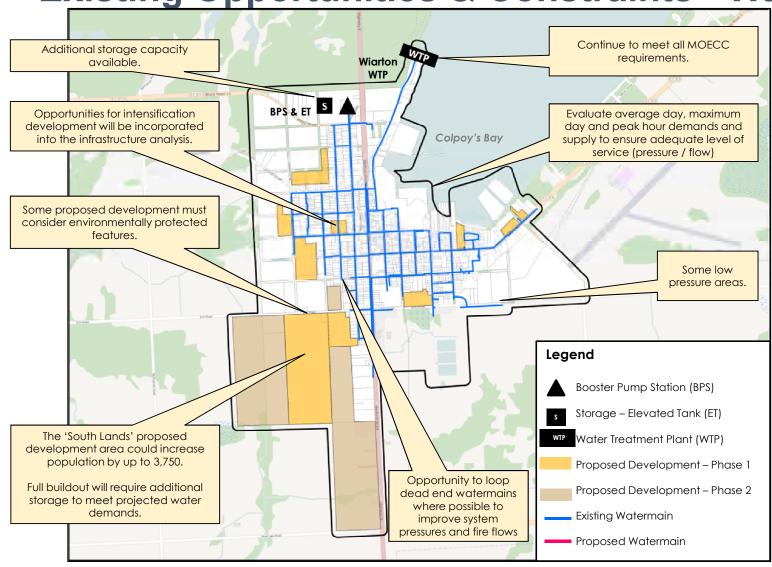


WATER





Existing Opportunities & Constraints - Water



WIARTON – MASTER SERVICING PLAN & GOULD STREET SANITARY SEWER UPGRADE CLASS EA STUDIE



PIC #1 – Gould Street Sanitary Sewer Upgrade PIC #2 – Water, Wastewater, and Stormwater Master Servicing Plan July 29, 2015



Alternative Water Concepts & Strategies

Concepts

- No capital cost or disruptions due to construction.
- Does not address required levels of service for existing needs and future growth.

CONCEPT 1 Do Nothing



Reduces extent of upgrades required

Could minimize the need for linear

High capital and construction costs

infrastructure upgrades.

for new storage facility.

Does not achieve Town's planning projections.

CONCEPT 2 Limit Community Growth



- Helps optimize use of existing storage, BPS and WTP.
- Do not address storage deficiencies at build-out conditions on their own.

CONCEPT 3A Watermain Upgrades



CONCEPT 3B Additional Storage



- Would help optimize system
- High capital and construction costs if new PS and zone valving is required.

CONCEPT 4A



- Not considered a solution on its own and is heavily dependent on public and private participation.
- Maximizes use of existing infrastructure.

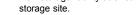
CONCEPT 4B Water Conservation / Water Loss



Strategies

Strategy 1 (3B + 4B)

Trunk watermain upgrades to South Lands & loop southwest dead ends



- Strategy 2a (3A + 3B + 4B) New storage facility at existing Trunk watermain upgrades to
- South Lands & loop southwest dead ends.



Strategy 2b (3A + 3B + 4B)

- New storage facility at South Lands site & decommission existing storage facility.
- Trunk watermain upgrades to South Lands & loop southwest dead ends.



Strategy 3 (3A + 3B + 4B)

- New storage facility at South Lands site.
- Trunk watermain upgrades to South Lands & loop southwest dead ends.



Strategy 4 (3A + 3B + 4A)

- New storage facility at South Lands site.
- Loop southwest dead ends.
- Expand upper pressure zone: upgrade exiting BPS, new floating storage for upper zone, existing tank for lower zone and twin trunk watermain from Division St to BPS.

X

Strategy 5 (3B + 4A + 4B)

- Loop southwest dead ends.
- Expand upper pressure zone: pump upgrades at WTP, decommission existing BPS and ET. PRV connection to lower

* Water Conservation common to all strategies.

Most Preferred

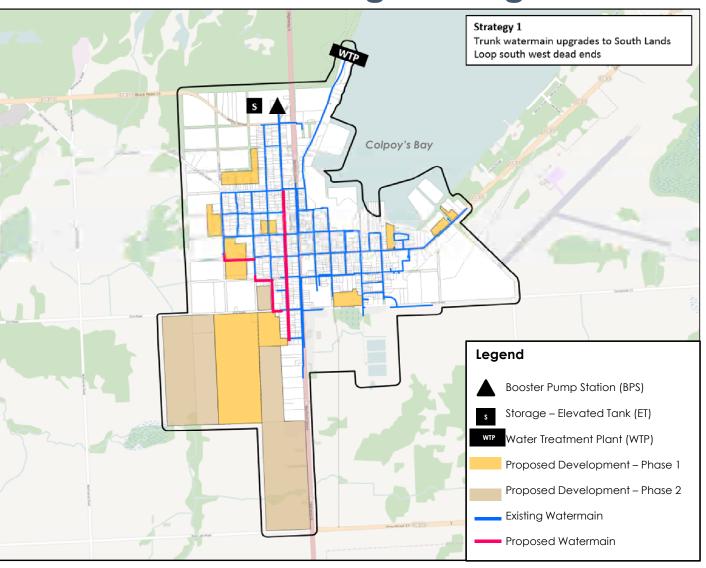
Least Preferred

WIARTON - MASTER SERVICING PLAN GOULD STREET SANITARY SEWE UPGRADE CLASS EA STUD



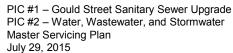
PIC #1 - Gould Street Sanitary Sewer Upgrade PIC #2 - Water, Wastewater, and Stormwater Master Servicing Plan July 29, 2015



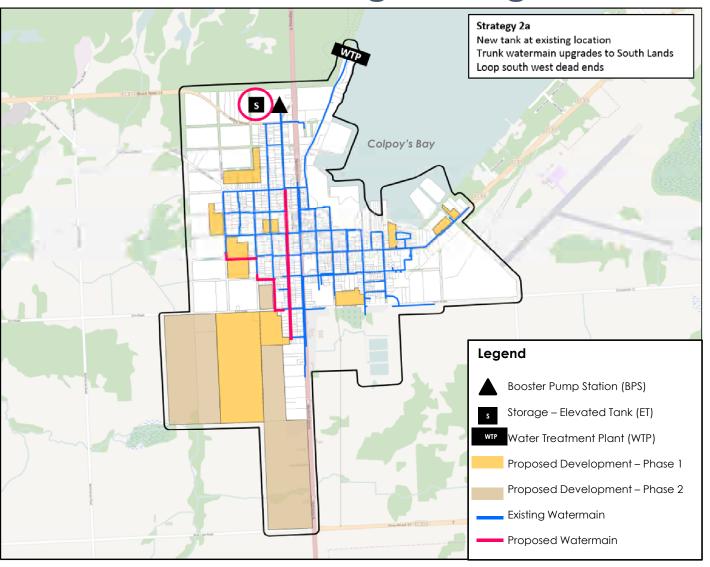






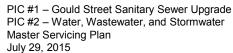




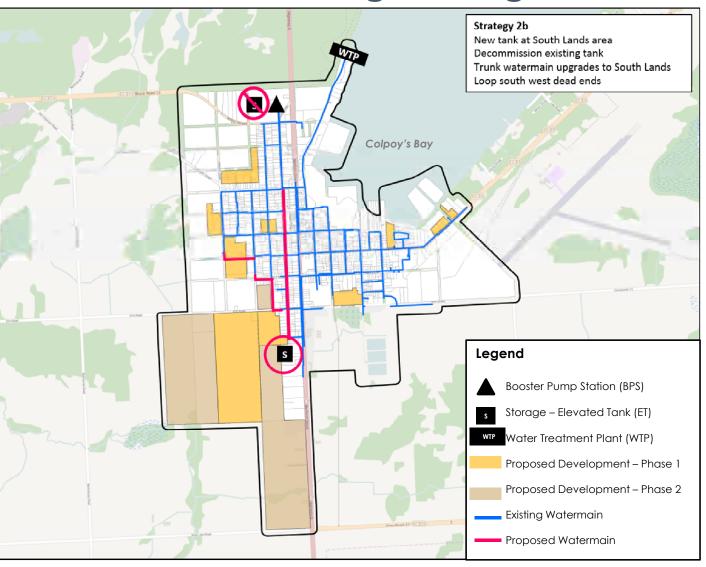










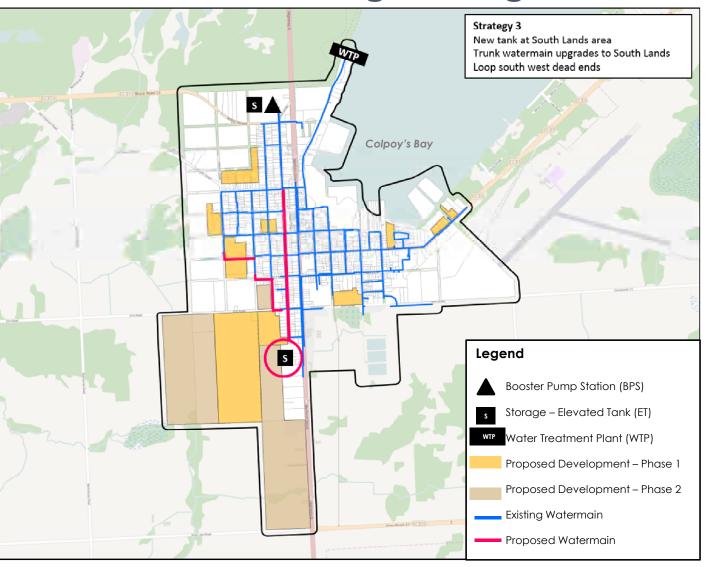










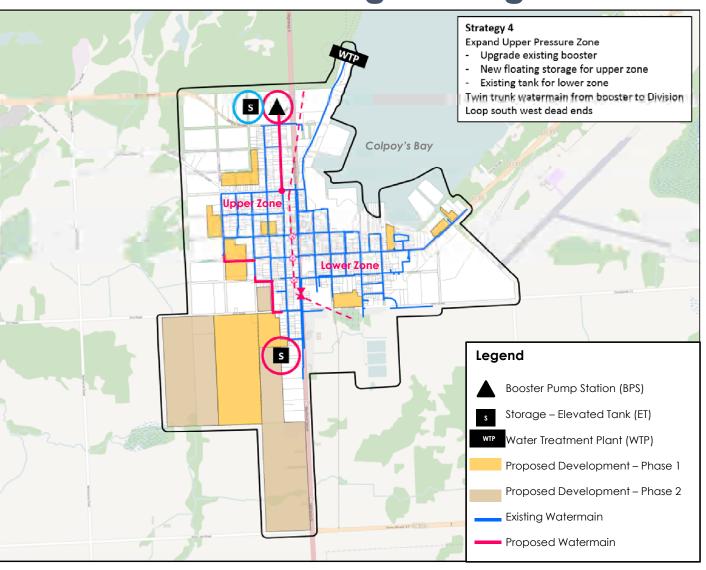










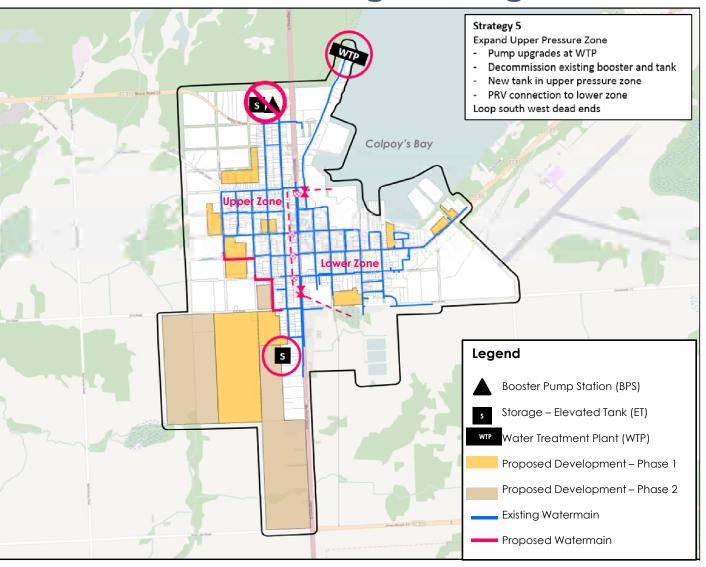






PIC #1 – Gould Street Sanitary Sewer Upgrade PIC #2 – Water, Wastewater, and Stormwater Master Servicing Plan July 29, 2015





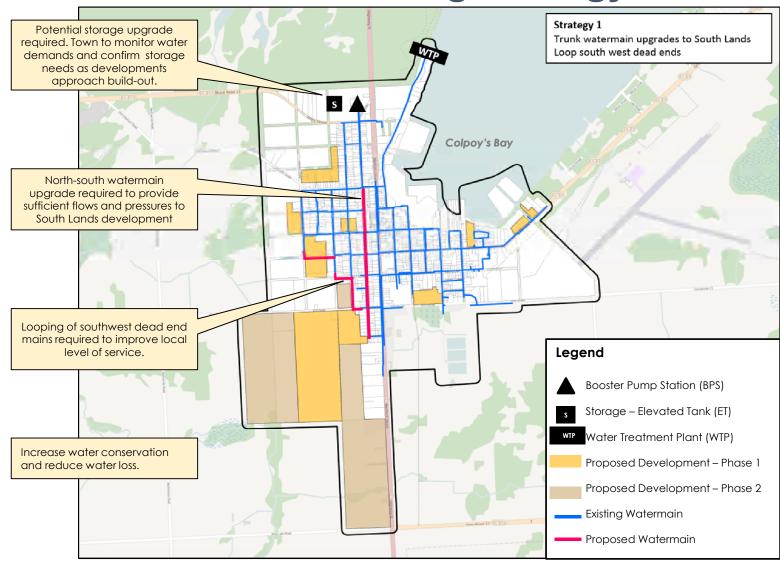






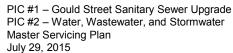


Preferred Servicing Strategy - Water









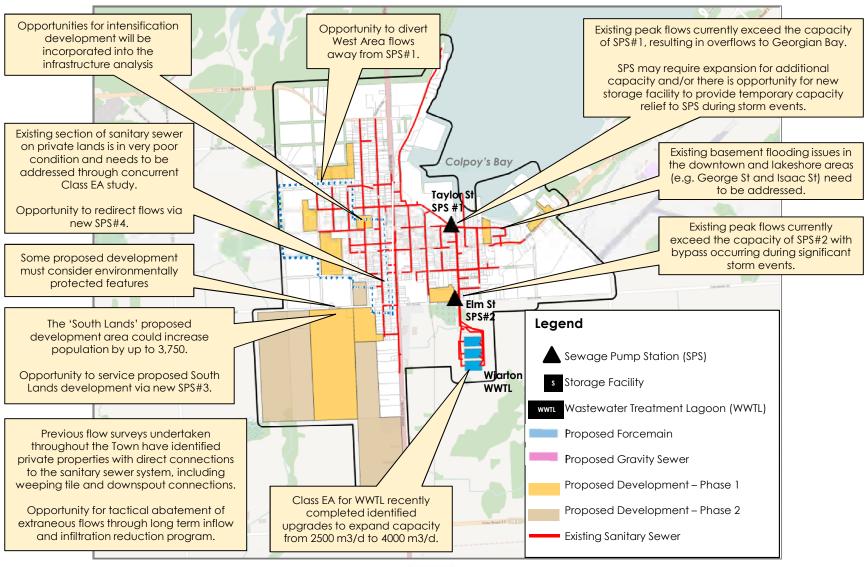


WASTEWATER





Existing Opportunities & Constraints - Wastewater



WIARTON – MASTER SERVICING PLAN & GOULD STREET SANITARY SEWER UPGRADE CLASS EA STUDIE





Alternative Wastewater Concepts & Strategies

Concepts

- No capital cost or disruptions due to construction.
- Does not address required levels of service for existing and future growth.
- Does not achieve Town's planning projections.

CONCEPT 1 / CONCEPT 2 Do Nothing /

Limit Community Growth





Capacity



- Helps manage peak flows in system.
- Minimizes need to upgrade conveyance and WWTL capacity.
- New asset incurs capital and O&M.

CONCEPT 4

New High Flow Storage



- Could address issues at SPS#1.
- On-site (septic) treatment requires ongoing O&M.
- Does not maximize use of existing infrastructure (SPS or WWTL).

CONCEPT 6

New Modified Treatment



Reduction



Most Preferred

Least Preferred

Upgrades within existing road right of way, no need for new easements.

- Extensive upgrades increase potential for socio-economic impacts.
- Does not address issues at SPS#1

CONCEPT 3

Increase Conveyance



- Provides relief to system, eliminating need for additional storage at SPS#1.
- Opportunity to divert flows via gravity or pumping.
- Opportunity to leverage planned infrastructure to service South Lands.

Away from SPS#1



- Tactical abatement of extraneous flows could significantly improve LOS.
- Maximizes use of existing infrastructure
- Pre- and post- monitoring & public education programs required.

CONCEPT 7



Strategies

Strategy 1 (Concepts 4 & 7)

- New off-line storage facility at SPS#1 to store excess flows, addressing issues at SPS #1 and reducing overflows.
- Implement Long Term I&I Reduction Program.



Strategy 2 (Concepts 5 & 7)

- Divert West Area Flows away from SPS#1 (via pumping / gravity).
- Implement Long Term I&I Reduction Program.



Alternative 1a

- Divert West Area flows via Pumping to SPS#2 from New SPS#4 (Frank St).
- Southlands to SPS#2 via New SPS#3.



Alternative 1b

- Divert West Area flows via Pumping to SPS#2 from New SPS#4 (Frank St).
- Southlands to New SPS#4 via New SPS#3.



Alternative 1c

- Divert West Area flows via Pumping to New SPS#3 from SPS#4 (Gould St).
- Southlands to SPS#2 via New SPS#3.



Alternative 1d

- Divert West Area flows via Pumping to New SPS#3 from New SPS#4 (Frank St).
- Southlands to SPS#2 via New SPS#3.



Alternative 1e

- Divert West Area flows to Elm Street Gravity Sewer via Pumping from New SPS#4.
- Southlands and West Area to SPS#2 via New SPS#3.



Alternative 2a

- Divert West Area flows southeast via Gravity on Frank St and Taylor St to SPS#2.
- Southlands to SPS#2 via New SPS#3.



Alternative 2b

- Divert West Area flows southwest via Gravity on Frank St and Dawson St to SPS#3.
- Southlands and West Area to SPS#2 via New SPS#3



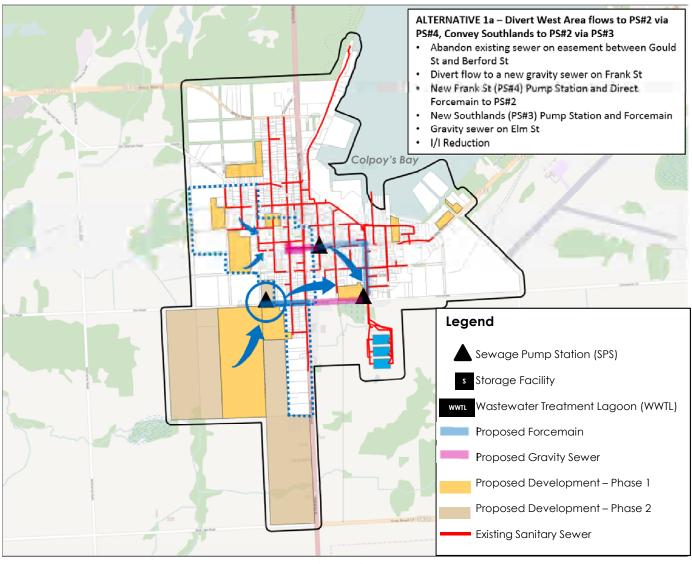
* Inflow & Infiltration Reduction common to all alternatives.



PIC #1 - Gould Street Sanitary Sewer Upgrade PIC #2 - Water, Wastewater, and Stormwater Master Servicing Plan July 29, 2015



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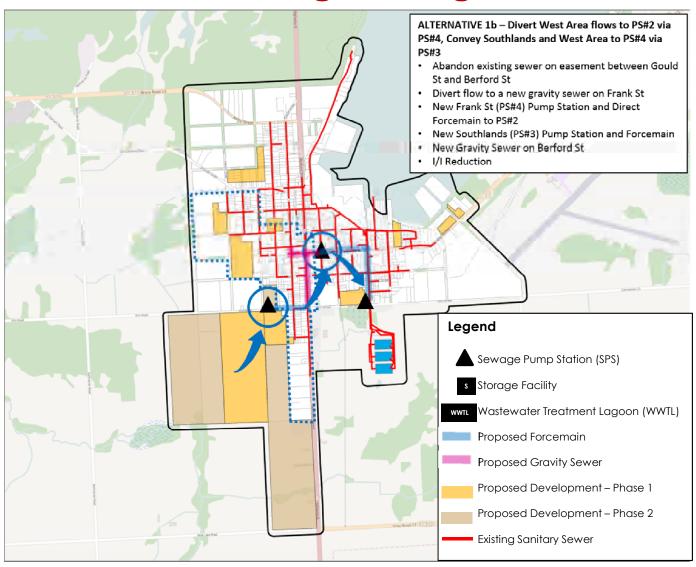






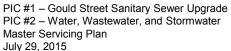




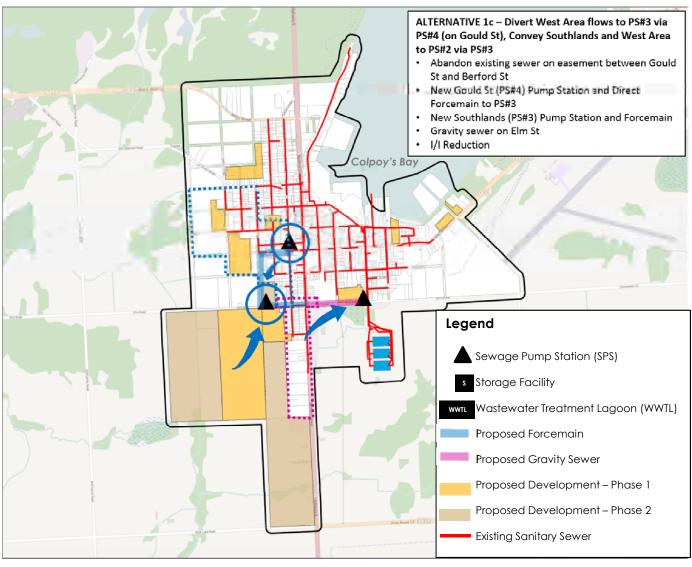








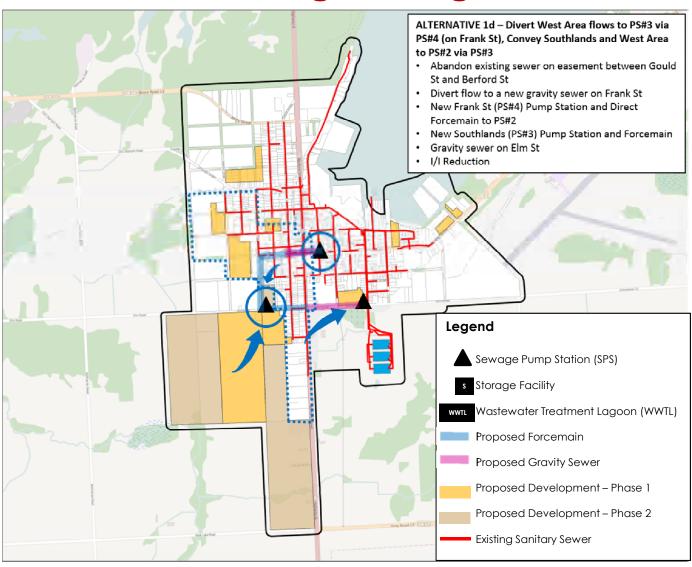








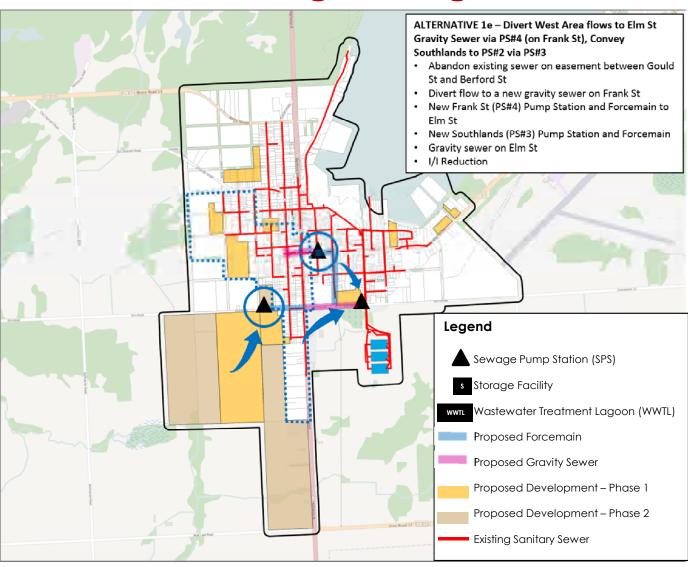








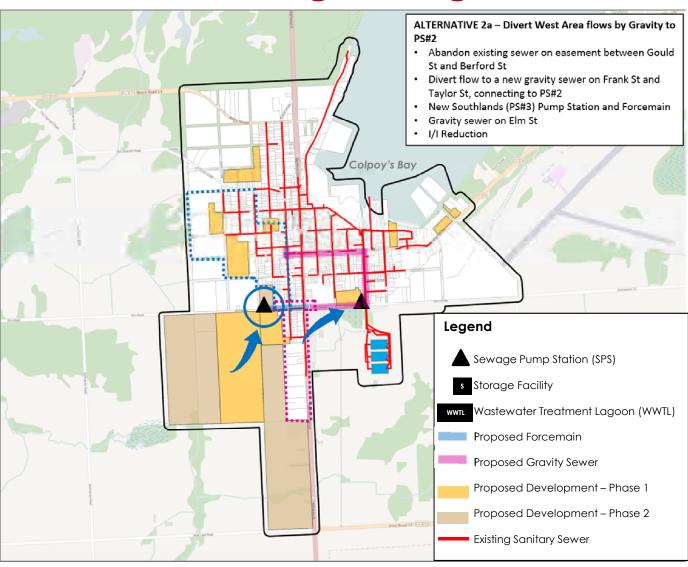






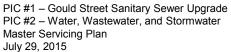




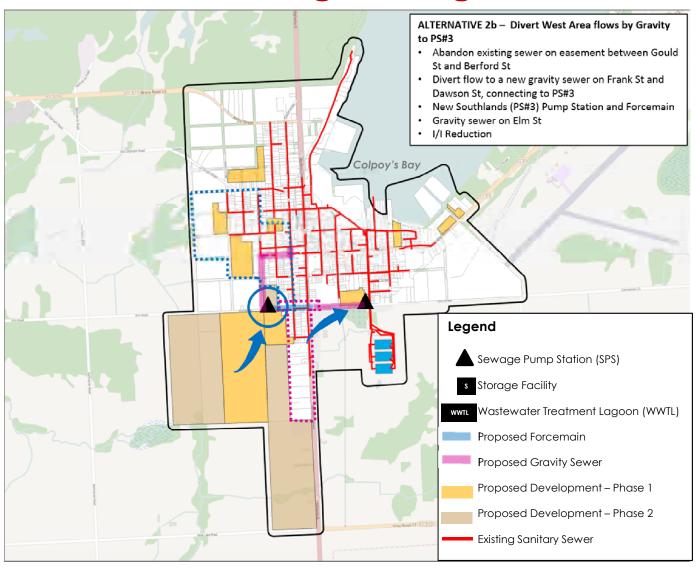












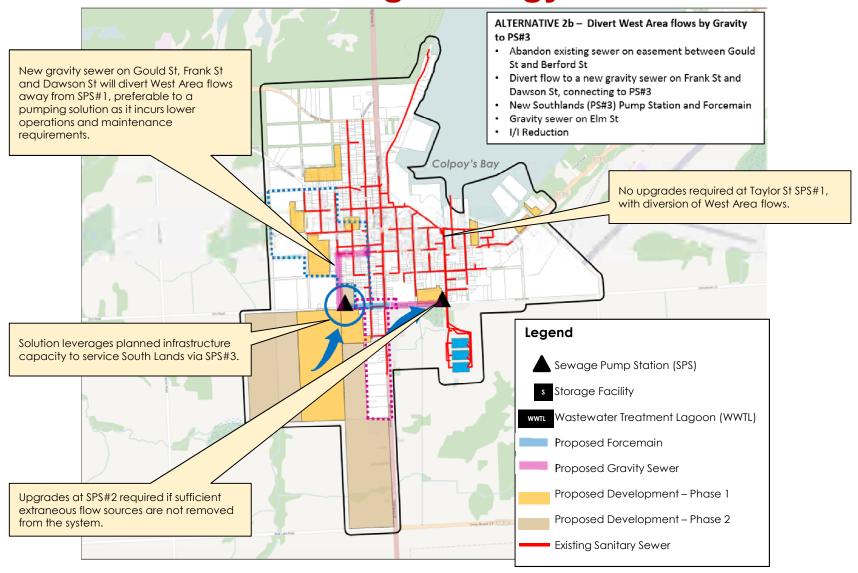








Preferred Servicing Strategy – Wastewater



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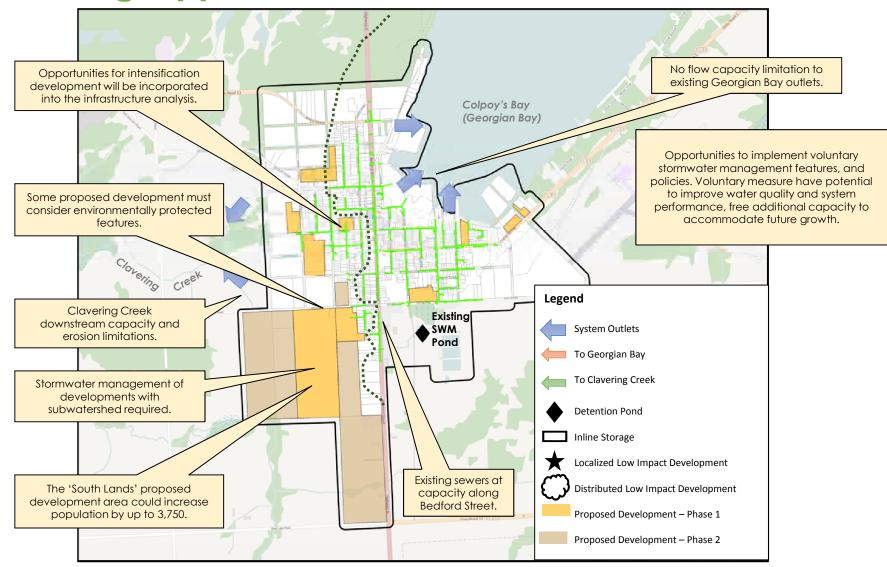


STORMWATER





Existing Opportunities & Constraints - Stormwater



WIARTON – MASTER SERVICING PLAN & GOULD STREET SANITARY SEWER UPGRADE CLASS EA STUDI





Alternative Stormwater Concepts & Strategies

Concepts

- No capital cost or disruptions due to construction.
- Does not address required levels of service for existing and future growth.
- Does not achieve Town's planning projections.

CONCEPT 1 / CONCEPT 2 Do Nothing /

Limit Community Growth



- Utilize local detention facilities to manage peak runoff rates to existing
- Requires land acquisition and/or loss of developable land.

CONCEPT 3B

Traditional Management (Localized Detention)



- Policies and management principles to assist in the management of stormwater runoff.
- No new facilities or conveyance upgrades required.

CONCEPT 4A Policy and Management



facilities and non-structural modification to existing sites to manage peak runoff rates.

CONCEPT 4B



Most Preferred

Least Preferred

Well understood, straightforward to implement and manage.

- Provides flood protection and addresses nuisance flooding.
- Does not address increased runoff and water quality issues.

CONCEPT 3A

Traditional Management (Increased Conveyance)



- Implement new infrastructure / upgrades to convey peak runoff to end of pipe facility.
- Facilities to manage peak runoff rates to existing levels before discharge to receiving system (creek / bay).

CONCEPT 3C

Traditional Management (Increased Conveyance & End of Pipe Detention



Combination of decentralized LID

Low Impact Development



Strategies (Georgian Bav)

Strategy 1 (Concepts 1 & 4B)

- Do Nothing (applicable to some areas).
- Implement Low Impact Development (Policy and Management) measures.

Strategy 2 (Concepts 5 & 7)

- Low Impact Development (Development Specific Onsite).
- Voluntary onsite management incentive program for existing properties.

trategies (Clavering Creek)

Alternative 1a

- Individual Detention Facilities.
- Utilizes onsite detention ponds for peak flow control & water quality management.



Alternative 1b

- Localized End of Pipe Detention Facilities.
- Utilizes multiple small centralized detention ponds and peak flow control and water quality managemen



Alternative 1c

- End of Pipe Detention & Erosion Enhancements.
- Utilizes a single centralized detention pond for peak flow control and water quality managemen



Alternative 2

- Inline Detention.
- Utilizes localized detention (subsurface storage) for peak flow control management before discharging.



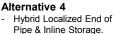
Alternative 3a

- High LID Distributed.
- No public facilities; control achieved through onsite LID.



Alternative 3b

Moderate LID incorporated within Right of Way to provide peak flow control and water quality management.



Utilizes localized detention (subsurface storage) and a single centralized detention pond.



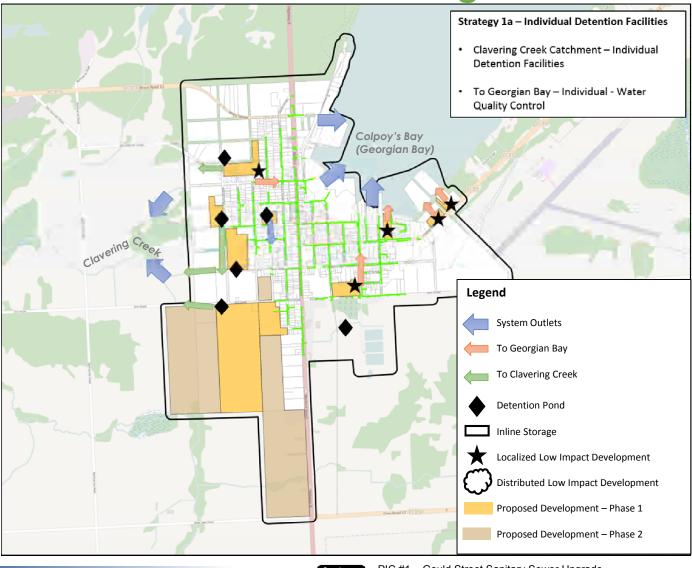
* Inflow & Infiltration Reduction common to all alternatives.





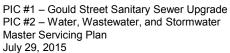


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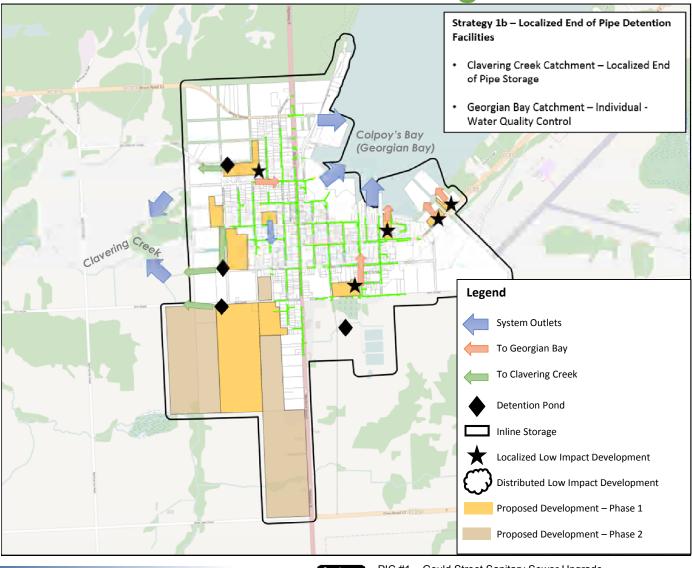






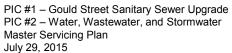




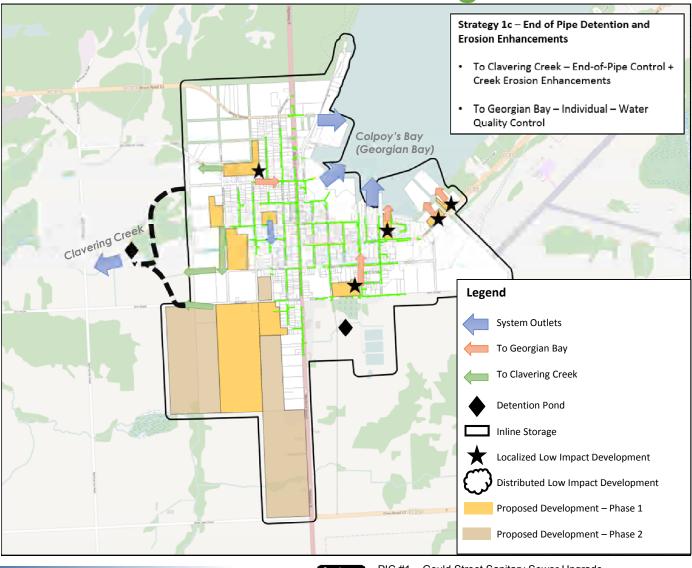








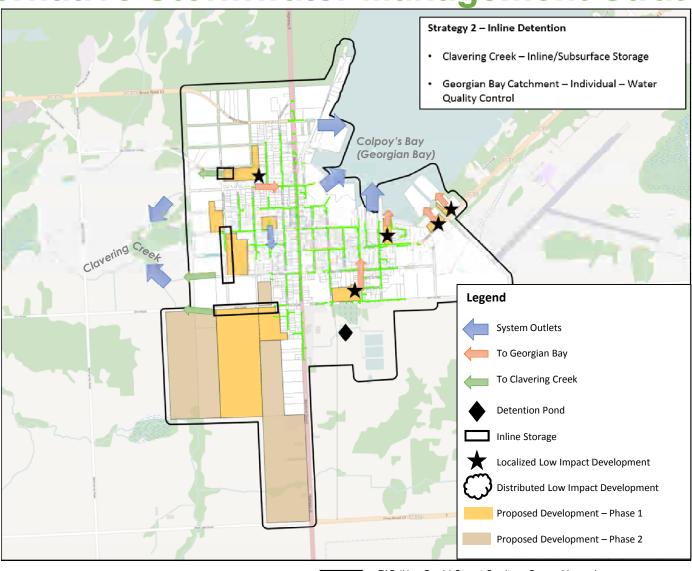






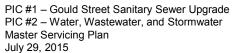




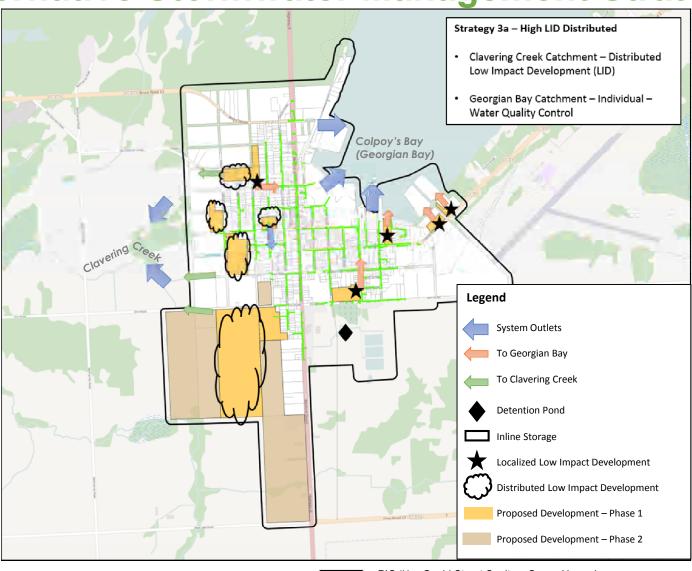








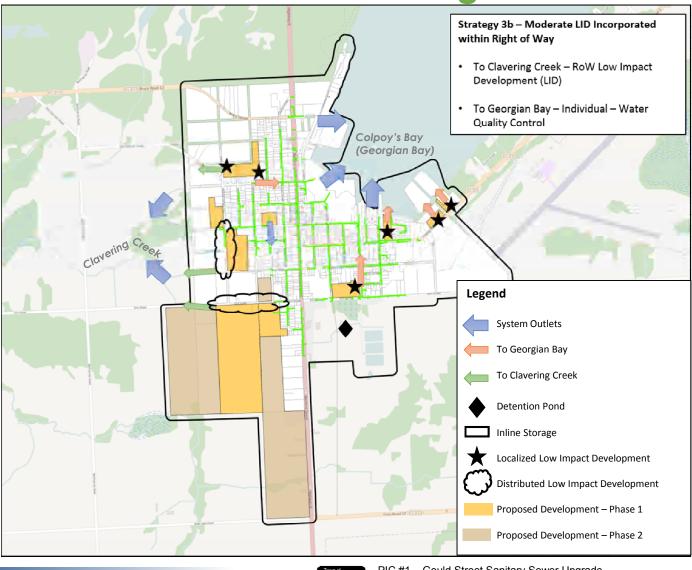






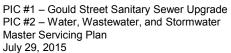




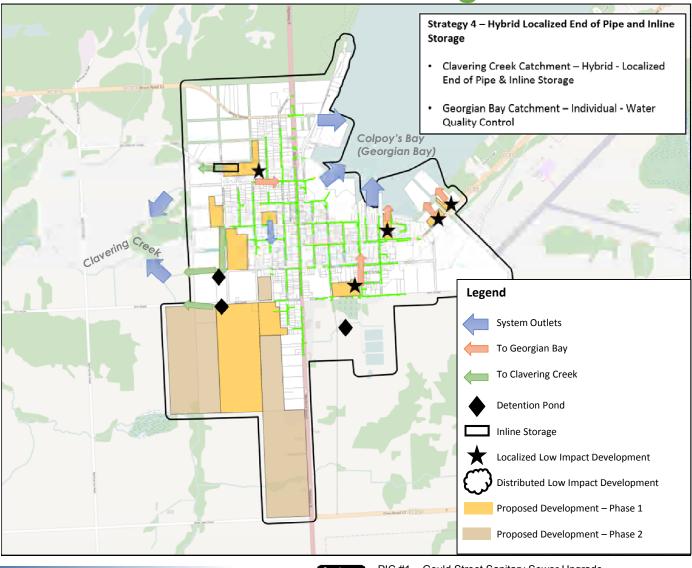






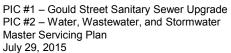






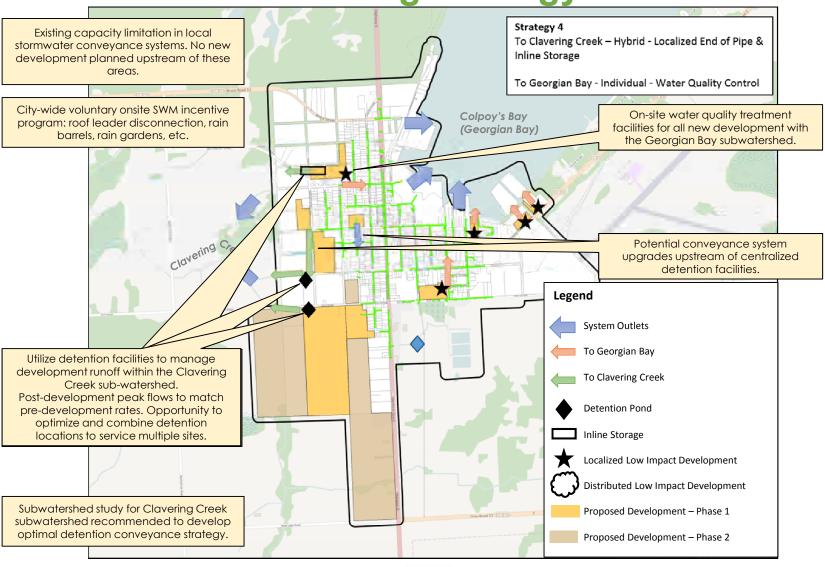








Preferred Servicing Strategy - Stormwater



WIARTON – MASTER SERVICING PLAN & GOULD STREET SANITARY SEWER UPGRADE CLASS EA STUDIE





Next Steps

- ✓ Following this PIC, the Project
 Team will Gather Feedback from
 the Public and Review Agencies
- ✓ Refine and Finalize
 Recommended Future
 Infrastructure Projects and Studies
- ✓ Complete and File the Master Servicing Plan & Class EA documentation providing a 30 Day Public Review Period by end of Summer 2015

We Welcome Your Input!

Fill out the comment sheet provided Or

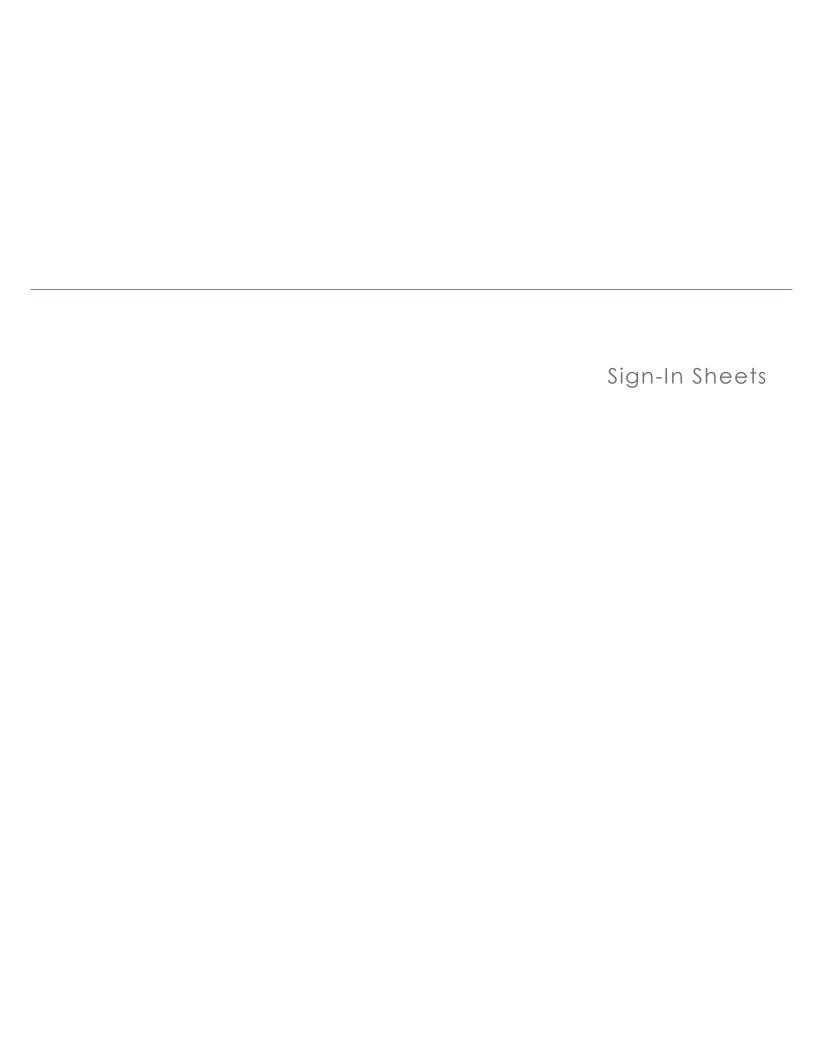
Contact the project team with your input

Mr. Tom Gray, P.Eng.
Manager of Public Works
Town of South Bruce Peninsula
315 George St, PO Box 310,
Wiarton, ON N0H 2T0
519-534-1400 ext 131
tsbppwmanager@bmts.com

Mr. John Slocombe, P.Eng.
Project Manager
GM BluePlan
1260 2nd Avenue East, Unit 1
Owen Sound, ON N4K 2J3
519-376-1805
john.slocombe@gmblueplan.ca







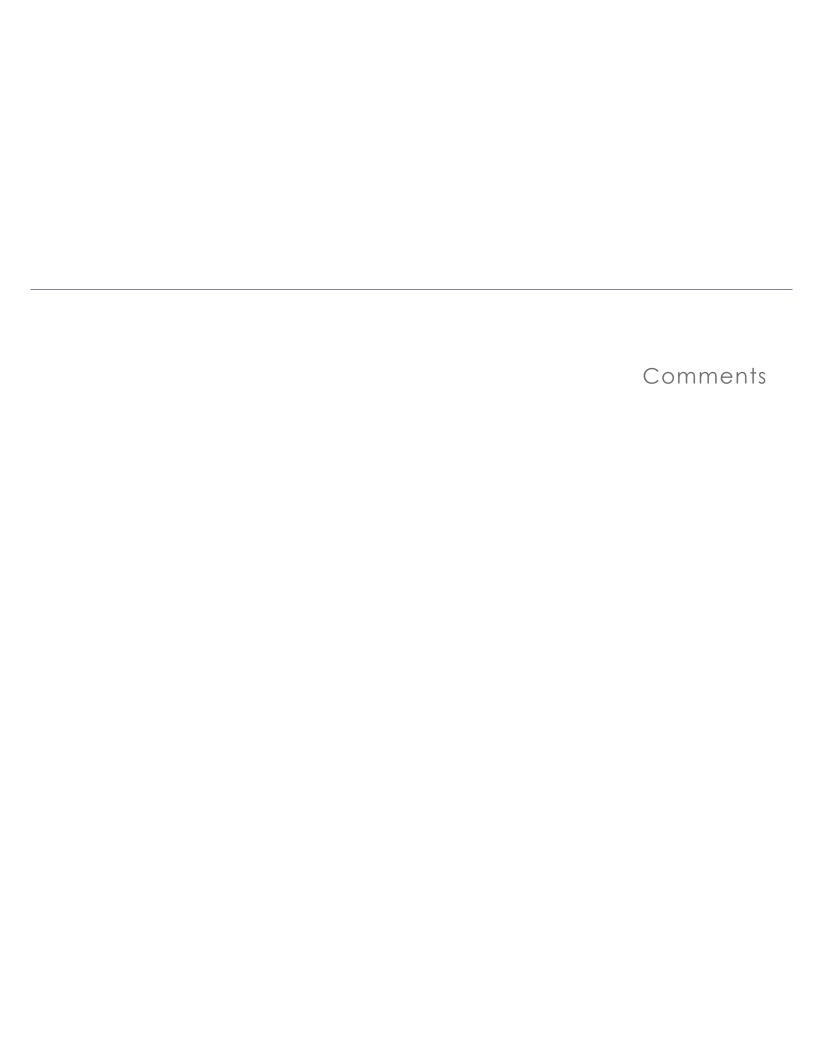




Town of South Bruce Peninsula PIC #2 for the Wiarton Water, Wastewater and Stormwater Master Servicing Plan and PIC #1 for the Gould Street Sanitary Sewer Upgrade Class Environmental Assessment Study July 29, 2015

SIGN IN SHEET

						2
Name (and Organization if applicable)	Street Address	City	Postal Code	Phone No.	Email ,	
Bruce P. ASSO 7505						
BPACL						
ANA VNKOVIC						
Gennis Sinchaire						
Pill MEKenjo						
DAN KERR						
			F.4			Ī



Laura Borowiec - GM BluePlan

From:

James Jorgensen - GM BluePlan

Tuesday, July 28, 2015 4:59 PM

Dorin Newton - GM BluePlan

Laura Borowiec - GM BluePlan

Subject:

FW: Wiarton Master Servicing Plan

Please save in correspondence file, Cheers James

From: James Jorgensen - GM BluePlan **Sent:** Thursday, July 23, 2015 11:08 PM

To: 'John Slocombe - GM BluePlan' <John.Slocombe@gmblueplan.ca>; Cuesta Planning Consultants Inc.

<cuesta@cuestaplanning.com>

Subject: RE: Wiarton Master Servicing Plan

Don,

Attached is the full slide presentation that will be on display at the Public Information Centre next Wednesday. In a nutshell: Water – upsized water mains. Wastewater: new sewage pumping station at Elm and Dawson extension taking south land future development area and portion of existing west Wiarton area (from Frank and Gould). Stormwater – site specific, as required by development. Happy to discuss.

Regards,

James

289 527 0570

From: John Slocombe - GM BluePlan [mailto:John.Slocombe@gmblueplan.ca]

Sent: Thursday, July 23, 2015 7:35 PM

To: Cuesta Planning Consultants Inc. <cuesta@cuestaplanning.com>

Cc: tsbppwmanager@bmts.com; James Jorgensen - GM BluePlan <james.jorgensen@gmblueplan.ca>

Subject: Re: Wiarton Master Servicing Plan

Don,

South end it is. We'll send you a copy of the presentation materials.

John Slocombe, P.Eng. Branch Manager, Vice President

GM BluePlan Engineering Limited 1260-2nd Avenue East | Owen Sound ON N4K 2J3

t: 519.376.1805 | c: 519.372.4600

john.slocombe@gmblueplan.ca | www.gmblueplan.ca

From: Cuesta Planning Consultants Inc. **Sent:** Thursday, July 23, 2015 6:23 PM

To: John Slocombe - GM BluePlan

Cc: tsbppwmanager@bmts.com; James Jorgensen - GM BluePlan

Subject: Wiarton Master Servicing Plan

Hi, John,

Thanks for the Notice for the Public Information Meeting on July 29th, 2015. Unfortunately, I will not be able to attend, but would like to remain on the mailing list.

I am not certain what you are up to on Gould Street, but keep all activity on the South End.

Thanks, Don.

CUESTA PLANNING CONSULTANTS INC. 978 First Avenue West Owen Sound, ON N4K 4K5

Phone: 519-372-9790 Fax: 519-372-9953

Please visit our new and improved website: www.cuestaplanning.com



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Laura Borowiec - GM BluePlan

From: Watt, Rick (MNRF) < rick.watt@ontario.ca>

Sent: Tuesday, July 28, 2015 5:25 PM **To:** James Jorgensen - GM BluePlan

Cc: Rhodes-Munk, Judy (MNRF); john.slocmbe@gmblueplan.ca;

tsbppwmanager@bmts.com; Dorin Newton - GM BluePlan

Subject: RE: Notice of Public Information Centre - July 29, 2015

Thanks James.

From: James Jorgensen - GM BluePlan [mailto:james.jorgensen@gmblueplan.ca]

Sent: Tuesday, July 28, 2015 5:08 PM

To: Watt, Rick (MNRF)

Cc: Rhodes-Munk, Judy (MNRF); john.slocmbe@gmblueplan.ca; tsbppwmanager@bmts.com; Dorin Newton - GM

BluePlan

Subject: RE: Notice of Public Information Centre - July 29, 2015

Rick,

See attached full slide deck that will be displayed tomorrow at the PIC.

You will continue to be informed as required.

Regards

James

James Jorgensen, B.SC., C.WEM, MIAM

Infrastructure Planning, Partner

GM BluePlan Engineering Limited

Royal Centre | 3300 Highway No. 7, Suite 402 | Vaughan, ON L4K 4M3

t: 416.703.0667 | **c: 289.527.0570**

james.jorgensen@gmblueplan.ca | www.gmblueplan.ca



From: Watt, Rick (MNRF) [mailto:rick.watt@ontario.ca]

Sent: Tuesday, July 28, 2015 4:51 PM

To: James Jorgensen - GM BluePlan <james.jorgensen@gmblueplan.ca>

Cc: Rhodes-Munk, Judy (MNRF) < Judy.Rhodes-Munk@ontario.ca >; john.slocmbe@gmblueplan.ca;

tsbppwmanager@bmts.com

Subject: Notice of Public Information Centre - July 29, 2015

Hello James,

I am responding to your July 17th letter for Judy Rhodes-Munk who is the Planner in our office responsible for reviewing the Class EAs, currently away but returning August 4th.

The letter advises of a PIC #2 for the Wiarton Master Servicing Plan for Water, Wastewater and Stormwater Services, and Notice of Commencement and PIC #1 for the Gould Street Sanitary Sewer Upgrade Class EA. NEC staff are unable to attend the July 29th PIC in Wiarton.

We request to be kept informed of the Class EA process and provided with all materials for review for these Class EAs. We would be pleased to meet with you to discuss any issues that may arise during the review.

Regards,
Rick

Rick Watt, Senior Planning Coordinator Niagara Escarpment Commission 99 King Street East P.O. Box 308 Thornbury ON N0H 2P0 519-599-3740 rick.watt@ontario.ca www.escarpment.org

"To enable us to serve you better, please call ahead to make an appointment."

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Laura Borowiec - GM BluePlan

From: Mahood, Chris (MTCS) < Chris.Mahood@ontario.ca>

Sent: Friday, August 14, 2015 11:46 AM **To:** Laura Borowiec - GM BluePlan

Cc: John Slocombe - GM BluePlan; James Jorgensen - GM BluePlan

Subject: RE: 0002148 - Wiarton Master Servicing Plan for Water, Wastewater and Stormwater

Services

Hi Laura,

Can you please confirm if/how cultural heritage factored into the evaluation of strategies and the identification of preferred strategies? This is not evident in the slides.

Please see the MTCS comment letter dated November 21, 2014.

Regards, Chris

Chris Mahood, MCIP, RPP
Heritage Planner
Ministry of Tourism, Culture and Sport
416-314-5424
chris.mahood@ontario.ca

From: Laura Borowiec - GM BluePlan [mailto:laura.borowiec@gmblueplan.ca]

Sent: August 13, 2015 5:00 PM **To:** Mahood, Chris (MTCS)

Cc: John Slocombe - GM BluePlan; James Jorgensen - GM BluePlan

Subject: FW: 0002148 - Wiarton Master Servicing Plan for Water, Wastewater and Stormwater Services

Hi Chris,

As requested, please see attached a pdf copy of the PIC #2 presentation materials for the Wiarton Water, Wastewater and Stormwater Master Servicing Plan.

Regards, Laura

Laura Borowiec, P.Eng.

Infrastructure Planning, Partner

GM BluePlan Engineering Limited

Royal Centre | 3300 Highway No. 7, Suite 402 | Vaughan ON L4K 4M3 t: 416.703.0667 | c: 416.846.7613

laura.borowiec@gmblueplan.ca | www.gmblueplan.ca



From: Mahood, Chris (MTCS) [mailto:Chris.Mahood@ontario.ca]

Sent: Thursday, August 13, 2015 4:08 PM

To: <u>tsbppwmanager@bmts.com</u> **Cc:** John Slocombe - GM BluePlan

Subject: 0002148 - Wiarton Master Servicing Plan for Water, Wastewater and Stormwater Services

Hello Tom,

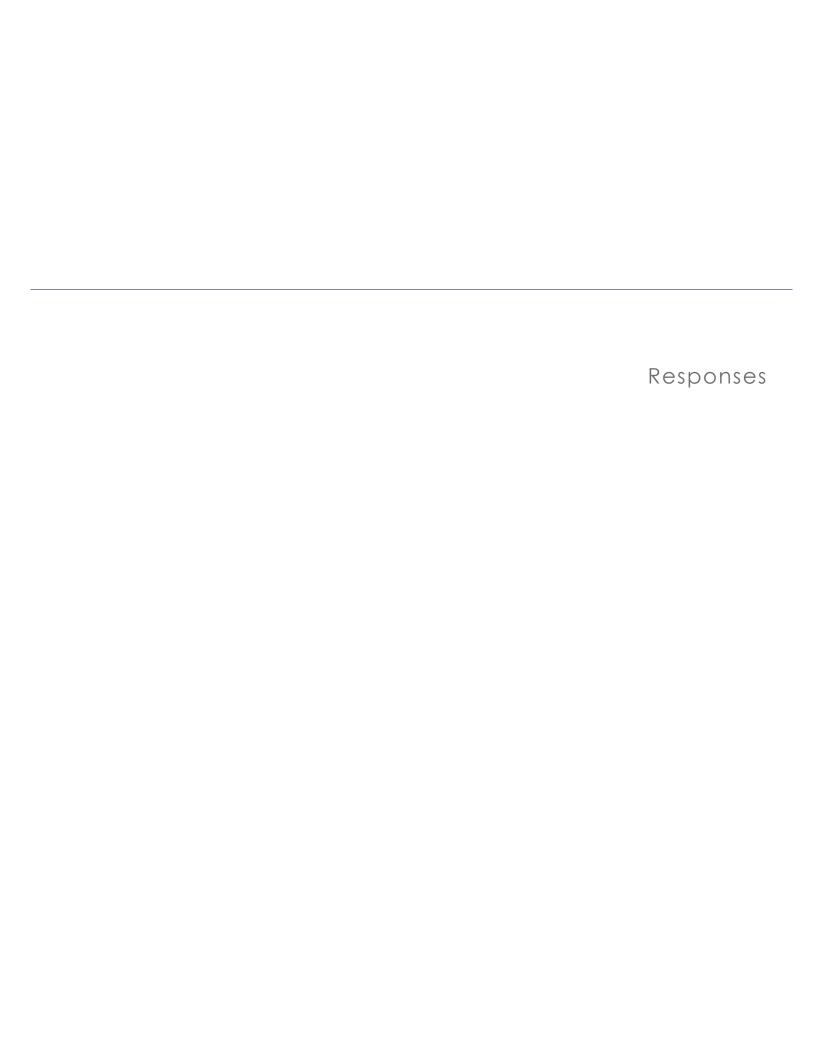
MTCS received the Notice of Public Information Centre (PIC) #2 for the above-noted project.

Can you please provide us with copies of the PIC presentation materials?

Regards, Chris

Chris Mahood, MCIP, RPP
Heritage Planner
Ministry of Tourism, Culture and Sport
416-314-5424
chris.mahood@ontario.ca

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Laura Borowiec - GM BluePlan

From: James Jorgensen - GM BluePlan <james.jorgensen@gmblueplan.ca>

Sent: Wednesday, September 09, 2015 11:17 AM

To: Mahood, Chris (MTCS)

Cc: John Slocombe - GM BluePlan; Laura Borowiec - GM BluePlan; Angie Cathrae

(sbpen@bmts.com)

Subject: RE: 0002148 - Wiarton Master Servicing Plan for Water, Wastewater and Stormwater

Services

Attachments: 214128 Wiarton MSP_MTCS response letter Sept 9 2015.pdf

Chris,

Please see attached response to your comments and questions.

Happy to discuss as required.

Regards

James Jorgensen, B.SC., C.WEM, MIAM

Infrastructure Planning, Partner

GM BluePlan Engineering Limited

Royal Centre | 3300 Highway No. 7, Suite 402 | Vaughan, ON L4K 4M3

t: 416.703.0667 | c: 289.527.0570

james.jorgensen@gmblueplan.ca | www.gmblueplan.ca



From: Mahood, Chris (MTCS) [mailto:Chris.Mahood@ontario.ca]

Sent: Friday, August 14, 2015 11:46 AM

To: Laura Borowiec - GM BluePlan < laura.borowiec@gmblueplan.ca>

Cc: John Slocombe - GM BluePlan < John.Slocombe@gmblueplan.ca>; James Jorgensen - GM BluePlan

<james.jorgensen@gmblueplan.ca>

Subject: RE: 0002148 - Wiarton Master Servicing Plan for Water, Wastewater and Stormwater Services

Hi Laura,

Can you please confirm if/how cultural heritage factored into the evaluation of strategies and the identification of preferred strategies? This is not evident in the slides.

Please see the MTCS comment letter dated November 21, 2014.

Regards, Chris

Chris Mahood, MCIP, RPP Heritage Planner



EMAIL ONLY

August 31, 2015

Chris Mahood, MCIP, RPP
Heritage Planner
Ministry of Tourism, Culture and Sport
Culture Services Unit
Programs and Services Branch
401 Bay Street, Suite 1700
Toronto ON M7A 0A7

Re: MTCS file #: 0003364 & 0002148

Response to Request for Information. Wiarton Master Servicing Plan (MSP) and Gould Street Sanitary Sewer Upgrade Class EA. Project Ref: 214128 & 214128-1

Dear Chris Mahood,

Thank you for your email and letter dated 13th August 2015 and previous email letter correspondence dated November 21st 2014, relating to Wiarton's Master Servicing Plan for Water, Wastewater and Stormwater (MSP) Services and the Gould Street Sanitary Sewer Upgrade Class Environmental Assessment (Class EA).

Please see below our response to your request for information on how the Class EA projects identified through the MSP and Gould Street Sanitary Sewer Upgrade Class EA considered archaeological, built and cultural heritage issues.

The Town of South Bruce Peninsula recognizes the importance of protecting, conserving and preserving cultural heritage, and is committed to ensuring that sufficient technical, environmental and cultural review and studies are undertaken to support design and ultimate delivery of its services.

The preferred water, wastewater and stormwater servicing strategies identified one (1) Schedule 'B' project, which relates to the Gould Street Sanitary Sewer Upgrade Class EA. This project is a new wastewater pumping station to support both existing and future growth servicing. The Town is committed to undertaking future follow on studies and consultation to ensure that all provincial, municipal and conservation authority approvals are met for individual projects.

The MSP has undertaken a Master Planning appropriate level strategy review process through a multiple bottom line evaluation approach and has included stakeholder consultation including First Nations. The multiple bottom line evaluation of alternatives considers and evaluates alternatives based on five categories: Financial, Technical, Environment, Socio/Cultural and Legal/Jurisdictional.

The Town is committed to ensuring sufficient review and additional supporting investigation are undertaken as required through the use of the Planning Act, approval and permitting stages and during the design stage.





The following sections are in response to specific queries provided by the Ministry of Tourism, Culture and Sport.

Archaeological Resources

We can confirm that an archaeological assessment was not completed as part of the MSP. We have completed a desktop review and completed the 'Criteria for Evaluating Archaeological Potential' checklist considering all the recommended projects. This process identified that the cemetery located on the southwest corner of Elm Street and Taylor Street is adjacent to Elm Street, which coincides with the proposed alignment for the new sanitary forcemain and gravity sewer.

Built Heritage Resources and Cultural Heritage Landscapes

We can confirm that a detailed cultural heritage evaluation was not completed as part of the MSP. We have completed a desktop review and completed the 'Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes' checklist considering all the recommended projects. This process identified that there is potential that there could be water/sewer pipes over forty years old within the road right of way that coincides with the location of the proposed pipe upgrades or new pipe installations.

Environmental Assessment Reporting

No additional technical heritage or archaeological studies are anticipated to be completed as part of the MSP. The screening has identified some potential for built heritage and cultural heritage landscapes impacts and archaeological potential, as indicated in the enclosed checklists.

Summary

One of the key projects being recommended through the MSP is the construction of a new sanitary pumping station to service the proposed South Lands development in Wiarton, south of Elm Street and West of Gould Street. It should be noted that this is the only project being recommended that is not within the road right of way. All other water and wastewater alignments are planned to be within the existing and future road right of ways and are subject to the road planning and approvals being met, including required investigations.

Water, wastewater and stormwater MSP projects recommended related to intensification areas are subject to further study and potential further investigation as more information becomes available. All projects will be subject to further refinement through land use planning and approval through the Planning Act.

Should you have any further questions or comments regarding this study, please contact the undersigned at the above address, by telephone at 416-703-0667 or via email at james.jorgensen@gmblueplan.ca.



Yours truly,

GM BLUEPLAN ENGINEERING LIMITED

James Jorgensen

encl. 1 - Screening for Impacts to Built Heritage and Cultural Heritage Landscapes

2 - Criteria for Evaluating Archaeological Potential

cc: Angie Cathrae Town of South Bruce Peninsula

Screening for Impacts to Built Heritage and Cultural Heritage Landscapes

This checklist is intended to help proponents determine whether their project could affect known or potential cultural heritage resources. The completed checklist should be returned to the appropriate Heritage Planner or Heritage Advisor at the Ministry of Tourism and Culture.

Step 1	1 – Screening for Recognized Cultural Heritage Value					
YES	NO	Unknown				
	X		 Is the subject property designated or adjacent* to a property designated under the Ontario Heritage Act? 			
	X		 Is the subject property listed on the municipal heritage register or a provincial register/list? (e.g. Ontario Heritage Bridge List) 			
	X		3. Is the subject property within or adjacent to a Heritage Conservation District?			
	X		4. Does the subject property have an Ontario Heritage Trust easement or is it adjacent to such a property?			
	X		5. Is there a provincial or federal plaque on or near the subject property?			
	X		6. Is the subject property a National Historic Site?			
	X		7. Is the subject property recognized or valued by an Aboriginal community?			
Step 2	2 – Scr	eening Po	tential Resources			
			Built heritage resources			
YES	NO	Unknown	 Does the subject property or an adjacent property contain any buildings or structures over forty years old[†] that are: 			
	X		 Residential structures (e.g. house, apartment building, shanty or trap line shelter) 			
	X		Farm buildings (e.g. barns, outbuildings, silos, windmills)			
	X		 Industrial, commercial or institutional buildings (e.g. a factory, school, etc.) 			
X			 Engineering works (e.g. bridges, water or communications towers, roads, water/sewer systems, dams, earthworks, etc.) 			
	X		 Monuments or Landmark Features (e.g. cairns, statues, obelisks, fountains, reflecting pools, retaining walls, boundary or claim markers, etc.) 			
	X		2. Is the subject property or an adjacent property associated with a known architect or builder?			
	X		3. Is the subject property or an adjacent property associated with a person or event of historic interest?			
	X		4. When the municipal heritage planner was contacted regarding potential cultural heritage value of the subject property, did they express interest or concern?			
YES	NO	Unknown	Cultural heritage landscapes			
ILO	140	Olikilowii	5. Does the subject property contain landscape features such as:			
	X		 Burial sites and/or cemeteries 			
	X		Parks or gardens			
	X		 Quarries, mining, industrial or farming operations 			
	X		 Canals 			
	X		 Prominent natural features that could have special value to people (such as waterfalls, rocky outcrops, large specimen trees, caves, etc.) 			
	X		 Evidence of other human-made alterations to the natural landscape (such as trails, boundary or way-finding markers, mounds, earthworks, cultivation, non-native species, etc.) 			
	X		6. Is the subject property within a Canadian Heritage River watershed?			
	X		7. Is the subject property near the Rideau Canal Corridor UNESCO World Heritage Site?			
	X		8. Is there any evidence from documentary sources (e.g., local histories, a local recognition program, research studies, previous heritage impact assessment reports, etc.) or local knowledge or Aboriginal oral history, associating the subject property/ area with historic events, activities or persons?			

Note:

If the answer is "yes" to any question in Step 1, proceed to Step 3.

The following resources can assist in answering questions in Step 1:

Municipal Clerk or Planning Department – Information on properties designated under the Ontario Heritage Act (individual properties or Heritage Conservation Districts) and properties listed on a Municipal Heritage register.

Ontario Heritage Trust – Contact the OHT directly regarding easement properties. A list of OHT plaques can be found on the website: Ontario Heritage Trust

Parks Canada – A list of National Historic Sites can be found on the website: Parks Canada

Ministry of Tourism and Culture – The Ontario Heritage Properties Database includes close to 8000 identified heritage properties. Note while this database is a valuable resource, it has not been updated since 2005, and therefore is not comprehensive or exhaustive. Ontario Heritage Properties Database

Local or Provincial archives

Local heritage organizations, such as the municipal heritage committee, historical society, local branch of the Architectural Conservancy of Ontario, etc.

Consideration should also be given to obtaining oral evidence of CHRs. For example, in many Aboriginal communities, an important means of maintaining knowledge of cultural heritage resources is through oral tradition.

If the answer is "yes" to any question in Step 2, an evaluation of cultural heritage value is required. If cultural heritage resources are identified, proceed to Step 3.

If the answer to any question in Step 1 or to questions 2-4, 6-8 in Step 2, is "unknown", further research is required.

If the answer is "yes" to any of the questions in Step 3, a heritage impact assessment is required.

If uncertainty exists at any point, the services of a qualified person should be retained to assist in completing this checklist. All cultural heritage evaluation reports and heritage impact assessment reports <u>must</u> be prepared by a qualified person. Qualified persons means individuals (professional engineers, architects, archaeologists, etc.) having relevant, recent experience in the identification and conservation of cultural heritage resources. Appropriate evaluation involves gathering and recording information about the property sufficient to understand and substantiate its heritage value; determining cultural heritage value or interest based on the advice of qualified persons and with appropriate community input. If the property meets the criteria in Ontario Regulation 9/06 under the Ontario Heritage Act, it is a cultural heritage resource.

[†] The 40 year old threshold is an indicator of potential when conducting a preliminary survey for identification of cultural heritage resources. While the presence of a built feature that is 40 or more years old does not automatically signify cultural heritage value, it does make it more likely that the property could have cultural heritage value or interest. Similarly, if all the built features on a property are less than 40 years old, this does not automatically mean the property has no cultural heritage value. Note that age is not a criterion for designation under the *Ontario Heritage Act*.

Step	Step 3 – Screening for Potential Impacts							
YES	NO	Will the proposed undertaking/project involve or result in any of the following potential impacts to the subject property or an adjacent* property?						
		Destruction, removal or relocation of any, or part of any, heritage attribute or feature.						
		Alteration (which means a change in any manner and includes restoration, renovation, repair or disturbance).						
		Shadows created that alter the appearance of a heritage attribute or change the exposure or visibility of a natural feature or plantings, such as a garden.						
		Isolation of a heritage attribute from its surrounding environment, context or a significant relationship.						
		Direct or indirect obstruction of significant views or vistas from, within, or to a built or natural heritage feature.						
		A change in land use such as rezoning a battlefield from open space to residential use, allowing new development or site alteration to fill in the formerly open spaces.						
		Soil disturbance such as a change in grade, or an alteration of the drainage pattern, or excavation, etc.						

^{*} For the purposes of evaluating potential impacts of development and site alteration "adjacent" means: contiguous properties as well as properties that are separated from a heritage property by narrow strip of land used as a public or private road, highway, street, lane, trail, right-of way, walkway, green space, park, and/or easement or as otherwise defined in the municipal official plan.



Ministry of Tourism and Culture

Programs & Services Branch 401 Bay Street, Suite 1700 Toronto ON M7A 0A7

Criteria for Evaluating Archaeological Potential A Checklist for the Non-Specialist

"Archaeological potential" is a term used to describe the likelihood that a property contains archaeological resources. This checklist is intended to assist non-specialists screening for the archaeological potential of a property where site alteration is proposed.

Note: for projects seeking a Renewable Energy Approval under Ontario Regulation 359/09, the Ministry of Tourism and Culture has developed a separate checklist to address the requirements of that regulation.

Oditure has developed a separate checklist to address the requirements of that regulation.								
Project Name Wiesten Mesten Servicine Plan and Could Street Seritary Server EA								
Wiarton Master Servicing Plan and Gould Street Sanitary Sewer EA Project Location								
Wiarton - various locations								
Whitein Various focutions								
Proponent Name								
GM BluePlan Engineering on behalf of the Town of South Bruce Peninsula								
Proponent Contact Information								
John Slocombe, Project Manager. john.slocombe@gmblueplan.ca. 519 376 1805	-							
Known Archaeological Sites	Yes	Unknown	No					
Known archaeological sites within 300 m of property								
Physical Features	Yes	Unknown	No					
Body of water within 300 m of property If yes, what kind of water?								
a) Primary water source (lake, river, large creek, etc.)								
b) Secondary water source (stream, spring, marsh, swamp, etc.)								
c) Past water source (beach ridge, river bed, relic creek, ancient shoreline, etc.)								
Topographical features on property (knolls, drumlins, eskers, or plateaus)								
4. Pockets of sandy soil (50 m² or larger) in a clay or rocky area on property								
5. Distinctive land formations on property (mounds, caverns, waterfalls, peninsulas, etc.)								
Cultural Features	Yes	Unknown	No					
Known burial site or cemetery on or adjacent to the property (cemetery is registered with the Cemeteries Regulation Unit)								
7. Food or scarce resource harvest areas on property (traditional fishing locations, agricultural/berry extraction areas, etc.)								
8. Indications of early Euro-Canadian settlement within 300 m of property (monuments, cemeteries, structures, etc.)								
 Early historic transportation routes within 100 m of property (historic road, trail, portage, rail corridor, etc.) 								
Property-specific Information	Yes	Unknown	No					
10. Property is designated and/or listed under the <i>Ontario Heritage Act</i> (municipal register and lands described in Reg. 875 of the <i>Ontario Heritage Act</i>)								
 Local knowledge of archaeological potential of property (from aboriginal communities, heritage organisations, municipal heritage committees, etc.) 								
12. Recent deep ground disturbance [†] (post-1960, widespread and deep land alterations)								
† Arabacological potential can be determined not to be present for either the entire preparty or a port(a) of it when the error under								

0478E (2011/07) Page 1 of 2

Archaeological potential can be determined not to be present for either the entire property or a part(s) of it when the area under consideration has been subject to widespread and deep land alterations that have severely damaged the integrity of any archaeological resources. Deep disturbance may include quarrying or major underground infrastructure development. Activities such as agricultural cultivation, gardening, minor grading and landscaping are not necessarily considered deep disturbance. Alterations can be considered to be extensive or widespread when they have affected a large area, usually defined as the majority of a property.

Scoring the results:					
If Yes to any of 1, 2a, 2b, 2c, 6, 10, or 11	→ high archaeological potential – assessment is required				
If Yes to two or more of 3, 4, 5, 7, 8, or 9	→ high archaeological potential – assessment is required				
If Yes to 12 or No to all of 1 - 10	→ low archaeological potential – assessment is not required				
If 3 or more Unknown	→ an archaeological assessment is required (see note below)				

[†] **Note**: If information requested in this checklist is unknown, a consultant archaeologist licensed under the *Ontario Heritage Act* should be retained to carry out at least a Stage 1 archaeological assessment to further explore the archaeological potential of the property and to prepare a report on the results of that assessment. The Ministry of Tourism and Culture reviews all such reports prepared by consultant archaeologists against the ministry's Standards and Guidelines for Consultant Archaeologists. Once the ministry is satisfied that, based on the available information, the report has been prepared in accordance with those guidelines, the ministry issues an acceptance letter to the consultant archaeologist and places the report into its registry where it is available for public inspection.

0478E (2011/07) Page 2 of 2



Municipal Heritage Registry

Town of South Bruce Peninsula

Name	Address	Owner	Recognition Type	By-Law Number	Designation Date	Cultural Value, Interest, Attributes
Barker Natural Heritage Property	Incl RP3R5266 Part 1	Federation of Ontario Naturalists, 355 Lesmill Road, North York ON M3B 2W8	Ontario Heritage Foundation Easement	Not Applicable	Unknown	Tree or landscape feature
Donaldson Archaeological Site	·	Saugeen Valley Conservation Authority, RR 1, Hanover ON N4N 3B8	National Historic Site	Not Applicable	Unknown	Unclassified site
Former Wiarton High School	McNaughton Street and South of Division Street; and Lot 8,	2136464 Ontario Inc., c/o of Jay Kirkland, RR 1, 791 Bruce Road 8, Hepworth ON N0H 1P0	Part IV OHA Designation	15-2006	27-Mar-06	Georgian Canon building proportions and Palladian evolved features (central upper window, head trim), truncated hip roof and ploygonal cupola, ashlar cut and rigidly coarsed masonry cladding, voussoirs of the main entry arch, arched entranceway reflecting Romanesque revival style of post 1885 Ontario

Gadd-About Bed & Breakfast	Lot 19, 50 Feet West 1/2 of Taylor, South of Division Streets, Lot 20, 50 feet West 1/2, West of Taylor, South of Division Streets (501 Frank Street)	Dr. Daniel B. Lothstein and Kevin Cory Dobbin, 501 Frank Street, Wiarton ON N0H 2T0	Part IV OHA Designation	111-2008	15-Sep-08	Georgian Revival "Box" home, faced with Scottish brick, original chimney and remains of a Widows Walk at centre of hipped roof, interior oak staircase, original fireplace and radiators and remnants of dumb waiter
Sauble Falls Bridge	Part of the Mill Lot and Part of the Aux Sauble River Road Allowance designated as Parts 1 and 2 shown of Reference Plan 3R-3066, former Township of Amabel	Town of South Bruce Peninsula, PO Box 310, 315 George Street, Wiarton ON N0H 2T0	Part IV OHA Designation	86-2006	30-Oct-06	Original reinforced concrete and steel bridge construction, demonstrates traveled route of original settlers, last untouched structure at Sauble Falls which represents 1920/1930 architecture
Old MacNeil Estate (The)	Concession 24 Lot A Concession 25 Pt Lot A (92 Highway 6)	Grey Sauble Conservation Authority, RR 4, Owen Sound ON N4K 5N6	Part IV OHA Designation	Not Applicable	13-Mar-89	Reticulated limestone, Georgian centre hall plan, 2 storey rectangular "T" addition at rear, full and partial cellars, face front left porch originally glazed as conservatory adjoining original library, structure originally had slate roof, foundation and some main storey walls existent, limestone barn foundations showing original stalls and storage areas are at north rear of house

Wiarton Train Station	Brown ES, Lots 9, 10, 11, Brown WS, Pt Lots 7, 8, Brown WS, Part Lot 6, Scott ES, Lot 12, Scott WS Lots 11, 12, Claude ES Pt Lots 5, 6 Plan 142A, Water Lots 5, 6,7,8, Plan 142 A, Pt Water Lot 3	George Street, Wiarton ON N0H 2T0	Part IV OHA Designation	56-2009	12-May-09	Built of locally milled pine, white cedar and hemlock, one of six known station buildings in Canada which retains it original coffered geometrically patterned tongue and groove ceilings, QueenAnne/Chateau style wooden buiding intact as originally designed, hub of transportation for CNR
Dickie House	Pt Lt 2 Con 10 EBR, Albemarle, Pt 1 RP3R4627	John Albert McCurdy and Sandra Lynn McCurdy, 108 Beech Street, RR 6 Wiarton ON N0H 2T0	Part 1V OHA Designation	118-2012	02-Oct-12	Harled walls, second level floors constructed of local soft wood, heat hole in second floor bedroom, 8x8 foot room on north westerly side of main floor (off the foyer) was used as an office for the Dickie business and remains historically correct. Home constructed by the Dickie family.

Wiarton Cenotaph	Pt Lt 10 E/S Berford St and S/S	Bryce B Miller, c/o Clerk Town	Section 29(3)	83-2014	19-Aug-14	Statue with three shafts
	Division St PI Wiarton as in	of South Bruce Peninsula, PO				and two plant holders,
	WR5223	Box 310 Wiarton ON N0H 2T0				names of the honoured
						deceased are inscribed
						on the left, centre and
						right shaft, an inscription
						on the right plant holder
						says "Korean War 1950-
						1953", an inscription on
						the left plant holder says
						"Lest We Forget", an
						inscription on the centre
						shaft says "Erected to
						Perpetuate the Memory
						of our Honoured Dead
						and those who carried
						on in the great war 1914-
						1918", statue and shafts
						made of limestone,
						used by the Royal
						Canadian Legion since
						1922 to honour
						veterans, located in a
						prominent downtown
						location on Berford
						Street





Summary Report PIC #2





Town of South Bruce Peninsula

August 2015

Prepared by:





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1. Introduction

The Wiarton Water, Wastewater, and Stormwater Master Servicing Plan (MSP) work plan provides for two rounds of Public Information Centres (PICs).

The first round of Public Information Centres (PIC #1) was held on October 30; 2014 with the intent to introduce the project, provide study background and the opportunities and constraints for the study.

This *Public Information Centre* #2 *Summary Report* focuses on PIC #2 and represents one element of the overall MSP documentation. The report documents the following:

- Information presented at PIC #2
- Summary of attendance
- All comments received and responses provided
- Summarized table of all comments received and responses provided in order to track correspondence in a transparent and traceable manner

2. Public Information Centre #2

2.1. Purpose

Public Information Centre #2 was held on July 29, 2015 and was intended to:

- Provide an update to the MSP study
- Introduce the Gould Street Sanitary Sewer Upgrade Class EA Study
- Describe the relationship between the MSP and Gould Street EA
- For the water, wastewater, and stormwater systems, present:
 - The opportunities and constraints
 - The alternative servicing strategies
 - The preliminary preferred servicing strategies
- Receive public input and answer any questions

2.2. Notifications

Stakeholders and the public were informed of PIC #2 by newspaper advertisements, by mail and via the Town of South Bruce Peninsula website.

2.2.1 Newspaper and Online Advertisement

The Notice of Public Information Centre #2 was published in the following local newspapers:

The Wiarton Echo on Tuesday July 17, 2015





The notice was also posted on the Town of South Bruce Peninsula website:

http://www.southbrucepeninsula.com/en/townhall/resources/Public Works Recreation/Wiarton MSP PI C 2 Gould St Pump Stn PIC 1 - Notice for Website.pdf

2.2.2 Mail Out

The Notice of Public Information Centre PIC #2 was dated on July 17, 2015 and was also mailed to local government, review agencies and other stakeholders.

2.3 Dates, Times, and Locations for PIC #2

PIC #2 was held at the Wiarton Arena on Taylor Street. Table 1 shows the date, time, and location of PIC #2.

Table 1. Dates, Times, and Locations for PIC#2

Municipality		Date	Time	Location
	Wiarton	Wednesday, July 29, 2015	4:30 - 6:30 p.m.	Wiarton Arena (Upstairs) 526 Taylor Street Wiarton, ON

Representatives from the Town of South Bruce Peninsula and its Consultant, GM BluePlan Engineering Limited, were present at the PIC to provide information and answer questions.

2.4 PIC #2 Display Panels

The information presented at PIC #2 included:

- Purpose of the Study
- Class EA Master Planning Process
- Study Area, Problem / Opportunity Statement for both MSP and Gould Street Class EA
- Land Use & Environmental Features
- Existing Systems
- Servicing Option Evaluation Methodology
- Water Existing Opportunities & Constraints
- Water Alternative Concepts & Strategies
- Water Preferred Servicing Strategy
- Wastewater Existing Opportunities & Constraints
- Wastewater Alternative Concepts & Strategies
- Wastewater Preferred Servicing Strategy
- Stormwater Existing Opportunities & Constraints





- Stormwater Alternative Concepts & Strategies
- Stormwater Preferred Servicing Strategy
- Next Steps

2.5 PIC #2 Attendance

A total of six (6) people attended PIC #2, counting only those who signed in.

2.6 Comments and Responses

Attendees were encouraged to provide comments related to the Master Servicing Plan study in writing. Comments were received via comment sheets, emails, and letters. A summary of the comments received is provided in the section below.

3. Next Steps

Following the second round of public consultation, the project team will:

- Consider input received from PIC #2 and respond to comments when required
- Confirm preferred servicing strategies
- Complete MSP documentation
- Prepare for project completion, including presentation of the preferred servicing strategy to Council
- Advertise the Notice of Study Completion
- File MSP documentation (Project File) for public review and comment.

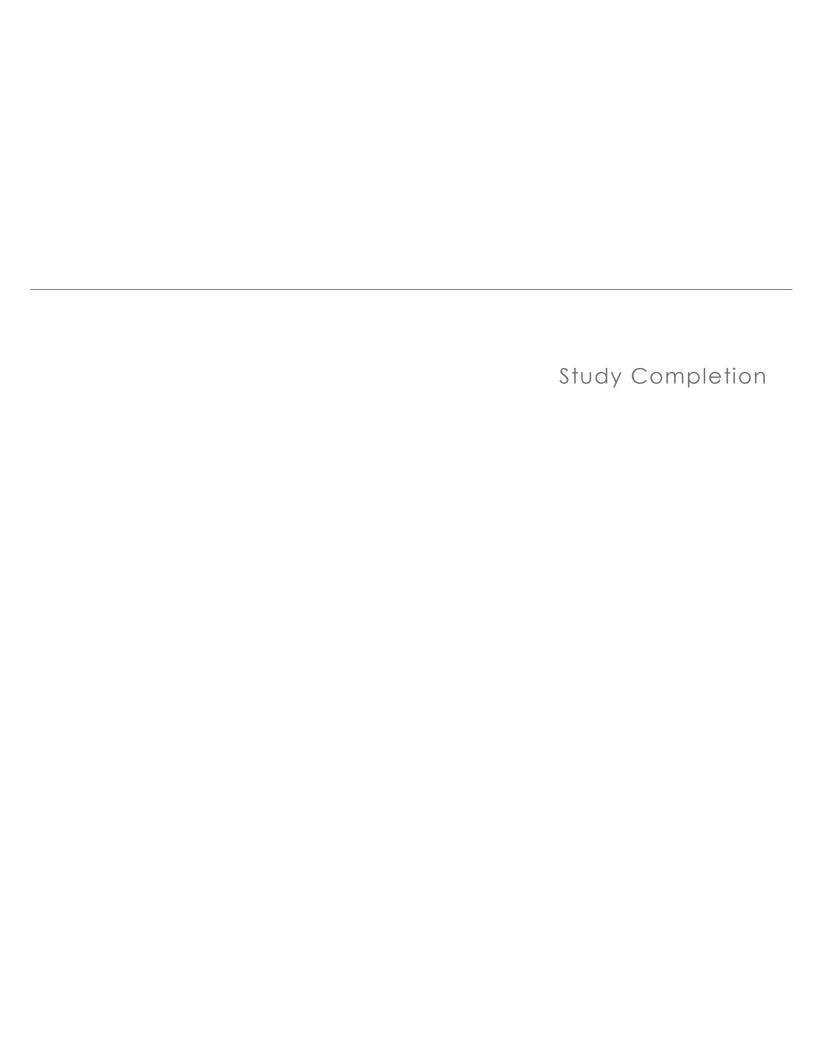




Table 2. Summary of Comments Received Related to PIC #2

No.	Correspondent	Type	Comment	Date Received	Status/Response
1	Don Cuesta (Cuesta Planning Consultants Inc.)	Email	 Not aware of the details of the Gould Street Sanitary Sewer Upgrade Class EA, but would like activities to remain in the south end of Wiarton. Would like to be kept on mailing list. 	Jul 23, 2015	Replied via e-mail with attachment of display boards.
2	Rick Watt (Niagara Escarpment Commission)	Email	 Responding on behalf of Judy Rhodes-Munk Unable to attend July 29th PIC but would like to be kept informed of Class EA process Requested Class EA materials for review Willing to meet to discuss any issues that may arise during the review. 	Jul 28, 2015	Replied via e-mail with attachment of display boards.
3a	Chris Mahood (Ministry of Tourism, Culture and Sport)	Email	Requesting copies of the PIC presentation materials	Aug 13, 2015	Replied via e-mail with attachment of display boards.
3b	Chris Mahood (Ministry of Tourism, Culture and Sport)	Email	 Wanted to know if/how cultural heritage factored into the evaluation of strategies and the identification of preferred strategies – did not believe it was evident from the PIC slides. Referenced MTCS comment letter dated November 21, 2014. 	Aug 14, 2015	Replied via e-mail with letter and completed MTCS checklists: i) Screening for Impacts to Built Heritage and Cultural Heritage Landscapes and, ii) Criteria for Evaluating Archaeological Potential.





Master Servicing Plan for Water, Wastewater and Stormwater Services

Gould Street Sanitary
Sewer Upgrade
Class Environmental
Assessment Study

Council Presentation September 1st, 2015





Why Are We Here?

Purpose of the Study

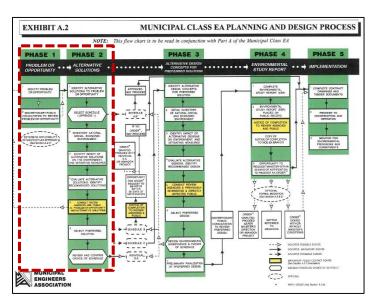
- The Town of South Bruce Peninsula is undertaking a Wiarton Master Servicing Plan (MSP) to identify a preferred water, wastewater and stormwater servicing strategy to support existing servicing needs and projected growth
- The MSP will provide the business case for the need, timing and cost of servicing and infrastructure
- The Town has also initiated a Municipal Class EA study for the Gould Street Sanitary Sewer Upgrade; this will inform the preferred wastewater servicing strategy for the MSP





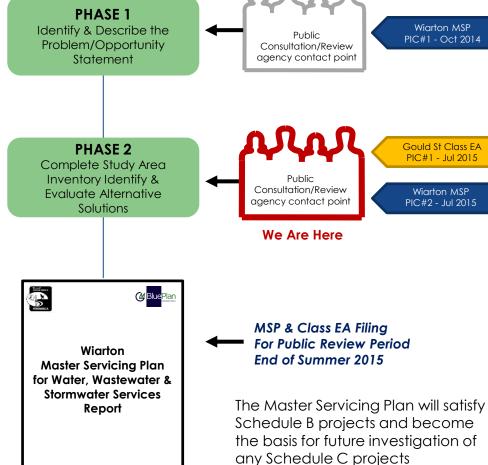


Municipal Class EA Process and Consultation



The study follows the Master Plan process as outlined in Section A.2.7 of the Municipal Engineers Association (MEA) Municipal Class Environmental Assessment (Oct 2000, as amended in 2007 and 2011).

The scope of the study involves completion of Phases 1 and 2 of the MEA Municipal Class EA process.







recommended through the study.

Master Servicing Plan

Problem / Opportunity Statement

New development is being considered and planned in the Wiarton service area. To define how developments are to be serviced, a comprehensive Master Servicing Plan for water, wastewater, and stormwater services was initiated.

There is a need to confirm the current capacity of existing water, wastewater and stormwater systems.

To meet existing servicing and future growth needs the existing system may require upgrades and new servicing extended out to growth areas. The Master Plan will ensure orderly development of these services.

Gould Street Class EA

Problem / Opportunity Statement

An existing 300 mm diameter sanitary sewer on private lands between Gould Street and Berford Street, just north of Frank Street is in very poor condition and needs to be addressed.

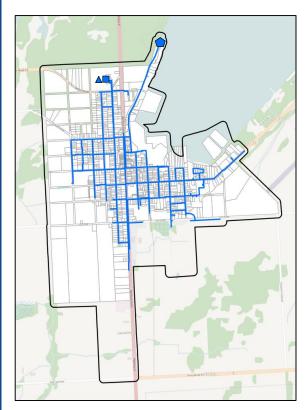
In addressing this problem, there is also an opportunity to address capacity limitations in other parts of the sanitary system, namely at the Taylor Street Pumping Station (SPS#1).



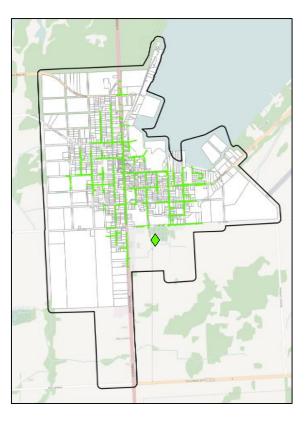




Existing Systems







WATER

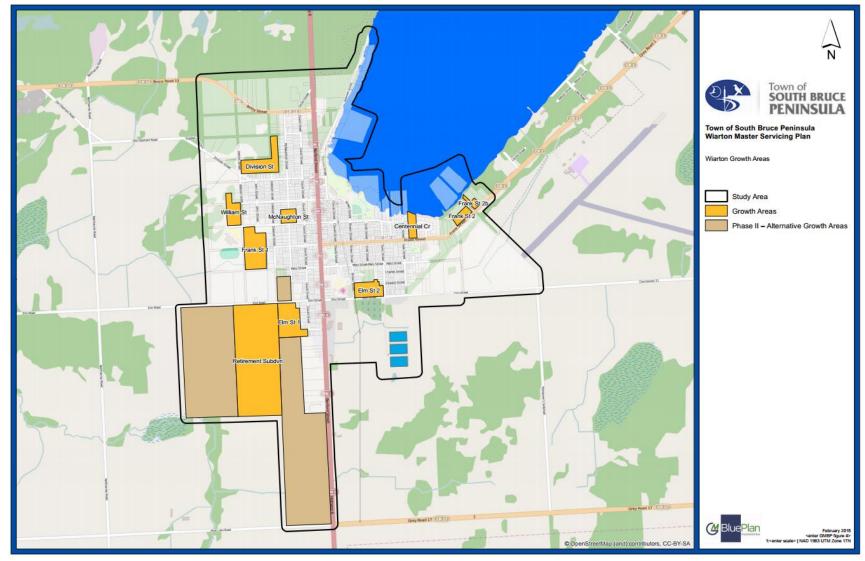
WASTEWATER

STORMWATER





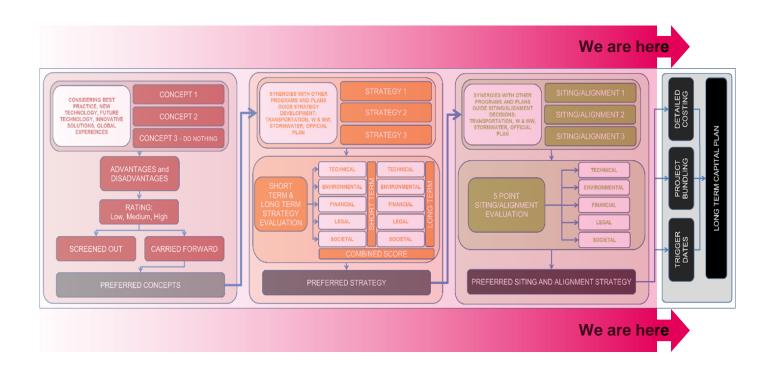
Growth Areas







Servicing Option Evaluation Methodology



All options are evaluated at the concept level. Concepts carried forward are used to build feasible strategies which are evaluated and scored against five criteria, considering both short term and long term factors. One preferred strategy is selected for further refinement and evaluation of sites and alignments before the final capital program is developed. The final program includes costs, schedule and provides an implementation plan.



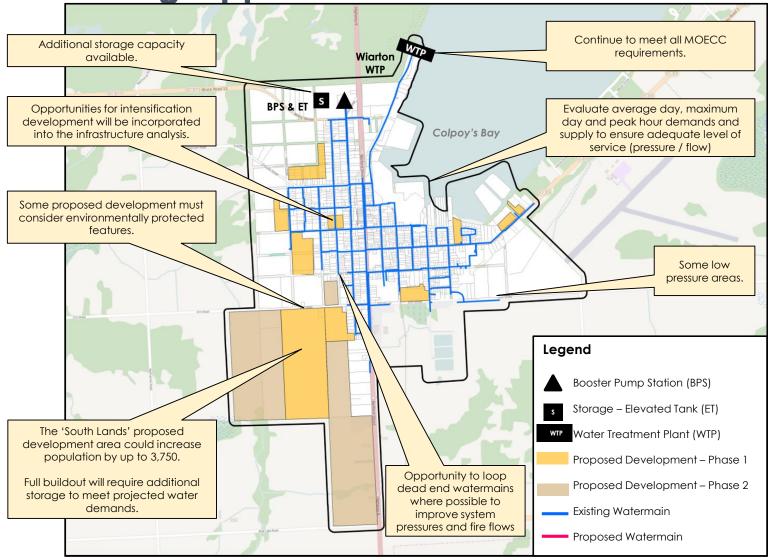


WATER





Existing Opportunities & Constraints - Water







Alternative Water Concepts & Strategies

Concepts

- No capital cost or disruptions due to construction.
- Does not address required levels of service for existing needs and future growth.

CONCEPT 1
Do Nothing



Reduces extent of upgrades required in system.

Could minimize the need for linear

High capital and construction costs

infrastructure upgrades.

for new storage facility.

Does not achieve Town's planning projections.

CONCEPT 2
Limit Community
Growth



- Helps optimize use of existing storage, BPS and WTP.
- Do not address storage deficiencies at build-out conditions on their own.

Would help optimize system

High capital and construction costs if

new PS and zone valving is required.

CONCEPT 3A Watermain Upgrades



- CONCEPT 3B
 Additional Storage
- Not considered a solution on its own and is heavily dependent on public and private participation.
- Maximizes use of existing infrastructure.

CONCEPT 4A
Pressure Zone
Optimization



CONCEPT 4B
Water Conservation /
Water Loss



Most Preferred

Mediur

Least Preferred

Strategies

Strategy 1 (3B + 4B)

 Trunk watermain upgrades to South Lands & loop southwest dead ends

Strategy 2b (3A + 3B + 4B)

New storage facility at South

Lands site & decommission

Trunk watermain upgrades to

South Lands & loop southwest

existing storage facility.

dead ends

Strategy 2a (3A + 3B + 4B)

- New storage facility at existing storage site.
- Trunk watermain upgrades to South Lands & loop southwest dead ends.



- Strategy 3 (3A + 3B + 4B)

 New storage facility at South Lands site.
- Trunk watermain upgrades to South Lands & loop southwest dead ends.



...

Strategy 4 (3A + 3B + 4A)

- New storage facility at South Lands site.
- Loop southwest dead ends.
- Expand upper pressure zone: upgrade exiting BPS, new floating storage for upper zone, existing tank for lower zone and twin trunk watermain from Division St to BPS.



Strategy 5 (3B + 4A + 4B)

- Loop southwest dead ends.
- Expand upper pressure zone: pump upgrades at WTP, decommission existing BPS and ET, PRV connection to lower zone



*

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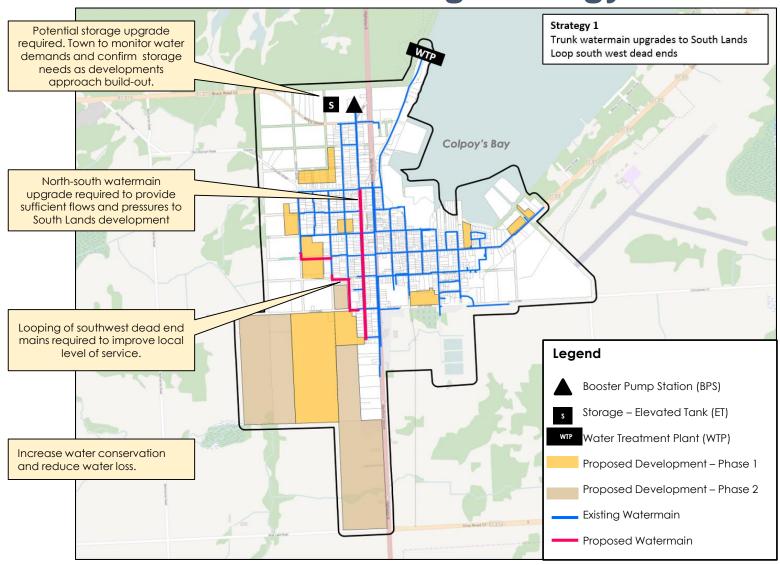
* Water Conservation common to all strategies.







Preferred Servicing Strategy - Water





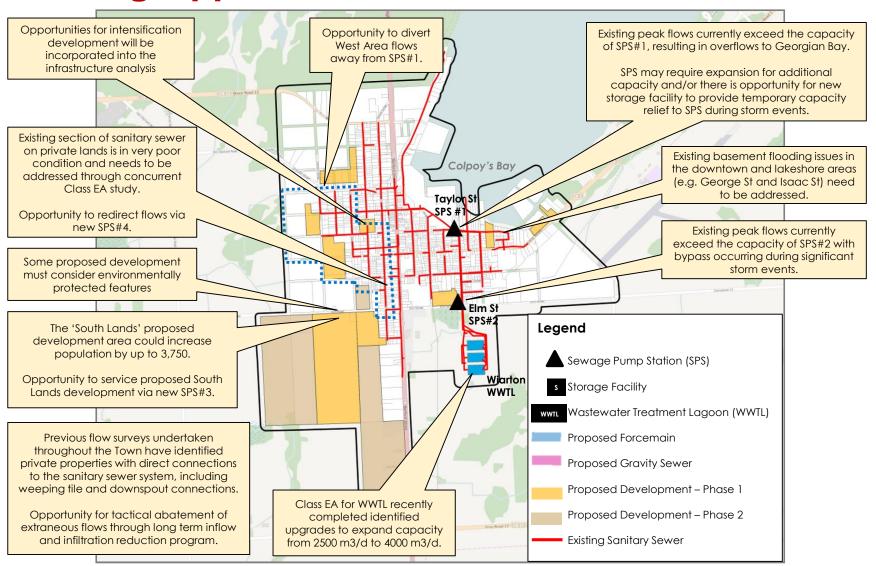


WASTEWATER





Existing Opportunities & Constraints - Wastewater







Alternative Wastewater Concepts & Strategies

Concepts

- No capital cost or disruptions due to construction.
- Does not address required levels of service for existing and future growth.
- Does not achieve Town's planning projections.

CONCEPT 1 / CONCEPT 2 Do Nothing /

Limit Community Growth



- Upgrades within existing road right of way, no need for new easements.
- Extensive upgrades increase potential for socio-economic impacts.
- Does not address issues at SPS#1

Provides relief to system, eliminating

need for additional storage at SPS#1.

Opportunity to divert flows via gravity

infrastructure to service South Lands.

Opportunity to leverage planned

CONCEPT 3

Increase Conveyance Capacity

or pumping.



- Helps manage peak flows in system.
- Minimizes need to upgrade conveyance and WWTL capacity.
- New asset incurs capital and O&M.

CONCEPT 4

New High Flow Storage



- Could address issues at SPS#1.
- On-site (septic) treatment requires ongoing O&M.
- Does not maximize use of existing infrastructure (SPS or WWTL).

CONCEPT 6

New Modified Treatment Systems





Most Preferred

Least Preferred

Strategies

Strategy 1 (Concepts 4 & 7)

- New off-line storage facility at SPS#1 to store excess flows, addressing issues at SPS #1 and reducing overflows.
- Implement Long Term I&I Reduction Program.



Strategy 2 (Concepts 5 & 7)

- Divert West Area Flows away from SPS#1 (via pumping / gravity).
- Implement Long Term I&I Reduction Program.



x

Alternative 1a

- Divert West Area flows via Pumping to SPS#2 from New SPS#4 (Frank St).
- Southlands to SPS#2 via New SPS#3.

Divert West Area flows

via Pumping to New

SPS#3 from New

SPS#4 (Frank St). Southlands to SPS#2

via New SPS#3.

Alternative 2a

Alternative 1d



Alternative 1b

- Divert West Area flows from New SPS#4 (Frank St).
- Southlands to New SPS#4 via New SPS#3



x

Alternative 1c

- Divert West Area flows via Pumping to New SPS#3 from SPS#4 (Gould St).
- Southlands to SPS#2 via New SPS#3.





- Tactical abatement of extraneous flows could significantly improve LOS.
- Maximizes use of existing infrastructure.
- Pre- and post- monitoring & public education programs required.

CONCEPT 7

Inflow & Infiltration Reduction



- via Pumping to SPS#2



- Alternative 1e Divert West Area flows to Elm Street Gravity Sewer via Pumping from New SPS#4.
- Southlands and West Area to SPS#2 via New SPS#3.



- Divert West Area flows southeast via Gravity on Frank St and Taylor St to SPS#2.
- Southlands to SPS#2 via New SPS#3.



Alternative 2b

- Divert West Area flows southwest via Gravity on Frank St and Dawson St to SPS#3.
- Southlands and West Area to SPS#2 via New SPS#3.



* Inflow & Infiltration Reduction common to all alternatives.

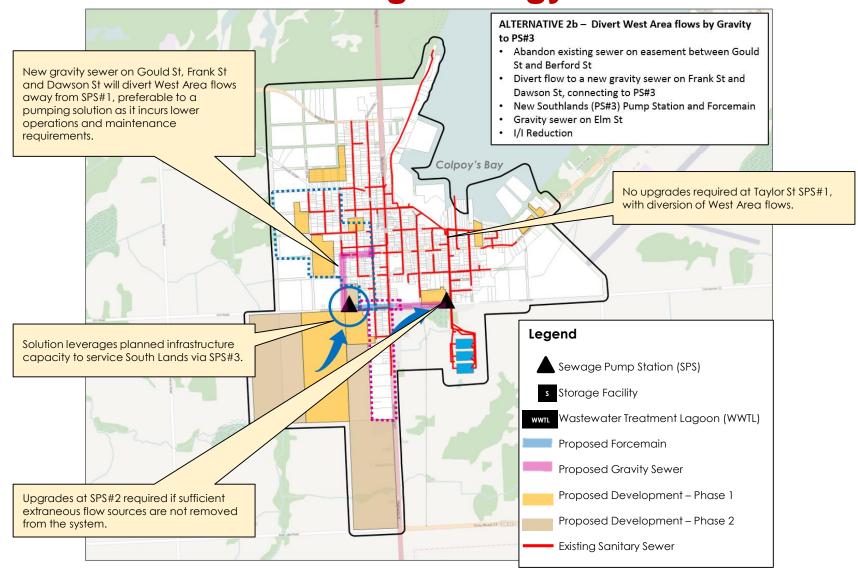








Preferred Servicing Strategy – Wastewater





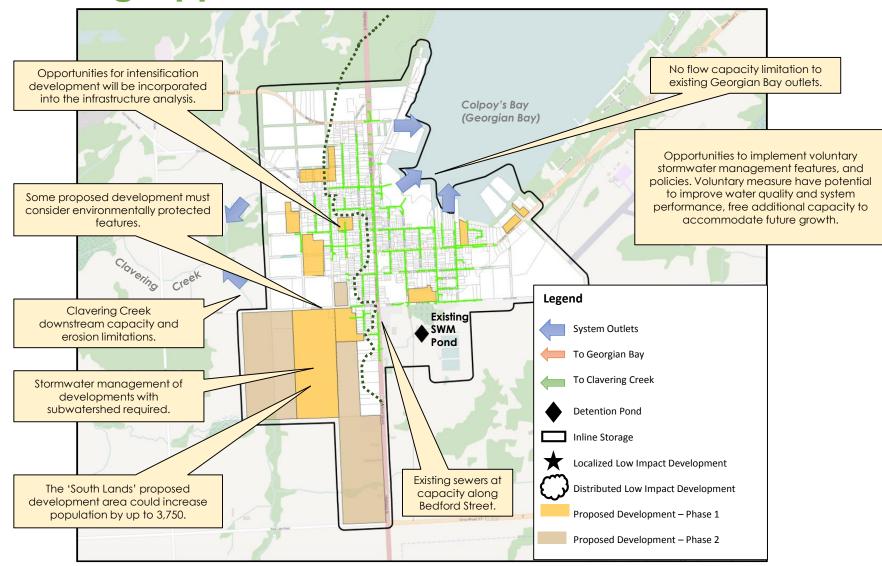


STORMWATER





Existing Opportunities & Constraints - Stormwater







Alternative Stormwater Concepts & Strategies

Concepts

- No capital cost or disruptions due to construction.
- Does not address required levels of service for existing and future growth.
- Does not achieve Town's planning projections.

CONCEPT 1 / CONCEPT 2 Do Nothing / **Limit Community Growth**



- Utilize local detention facilities to manage peak runoff rates to existing levels.
- Requires land acquisition and/or loss of developable land.

CONCEPT 3B Traditional Management (Localized Detention)



- Policies and management principles to assist in the management of stormwater runoff.
- No new facilities or conveyance upgrades required.

CONCEPT 4A Policy and Management

Most Preferred



Least Preferred

- Well understood, straightforward to implement and manage.
- Provides flood protection and addresses nuisance flooding.
- Does not address increased runoff and water quality issues.

CONCEPT 3A

Traditional Management (Increased Conveyance)



- Implement new infrastructure / upgrades to convey peak runoff to end of pipe facility.
- Facilities to manage peak runoff rates to existing levels before discharge to receiving system (creek / bay).

CONCEPT 3C

Traditional Management (Increased Conveyance & End of Pipe Detention)



Combination of decentralized LID facilities and non-structural modification to existing sites to manage peak runoff rates.

CONCEPT 4B

Low Impact Development



Strategies (Georgian Bay)

Strategy 1 (Concepts 1 & 4B)

- Do Nothing (applicable to some areas).
- Implement Low Impact Development (Policy and Management) measures.



Strategy 2 (Concepts 5 & 7)

- Low Impact Development (Development Specific Onsite).
- Voluntary onsite management incentive program for existing properties.

Strategies (Clavering Cree

Alternative 1a

- Individual Detention Facilities.
- Utilizes onsite detention ponds for peak flow control & water quality management.



Alternative 1b

- Localized End of Pipe Detention Facilities.
- Utilizes multiple small centralized detention ponds and peak flow control and water quality managemen



Alternative 1c

- End of Pipe Detention & Erosion Enhancements.
- Utilizes a single centralized detention pond for peak flow control and water quality managemen

x

Alternative 2

- Inline Detention.
- Utilizes localized detention (subsurface storage) for peak flow control management before discharging.



Alternative 3a

- High LID Distributed.
- No public facilities; control achieved through onsite LID.



Alternative 3b

Moderate LID incorporated within Right of Way to provide peak flow control and water quality management.



Alternative 4

- Hybrid Localized End of Pipe & Inline Storage.
- Utilizes localized detention (subsurface storage) and a single centralized detention pond.



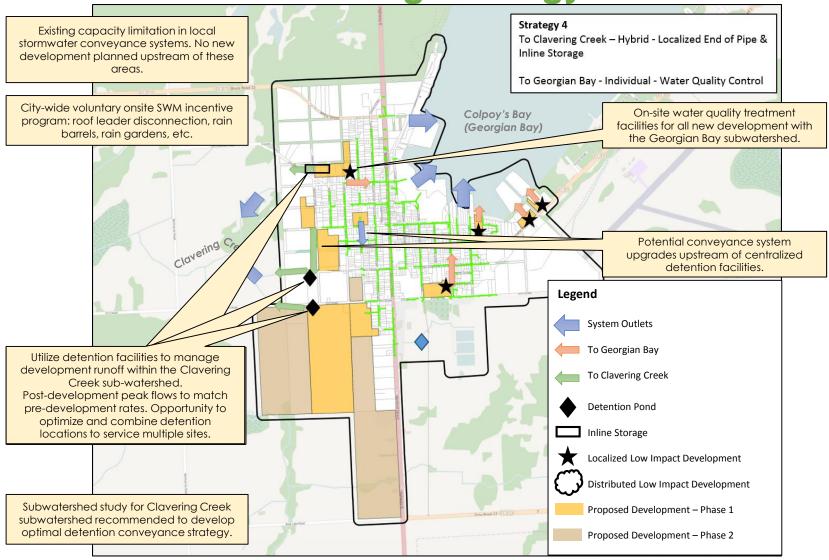
* Inflow & Infiltration Reduction common to all alternatives.







Preferred Servicing Strategy - Stormwater







Next Steps

- ✓ Gather feedback from the public and review agencies
- ✓ Refine, finalize and cost recommended future infrastructure projects and studies
- ✓ Complete and file the Master Servicing Plan & Class EA documentation providing a 30 day public review period. End of Summer 2015

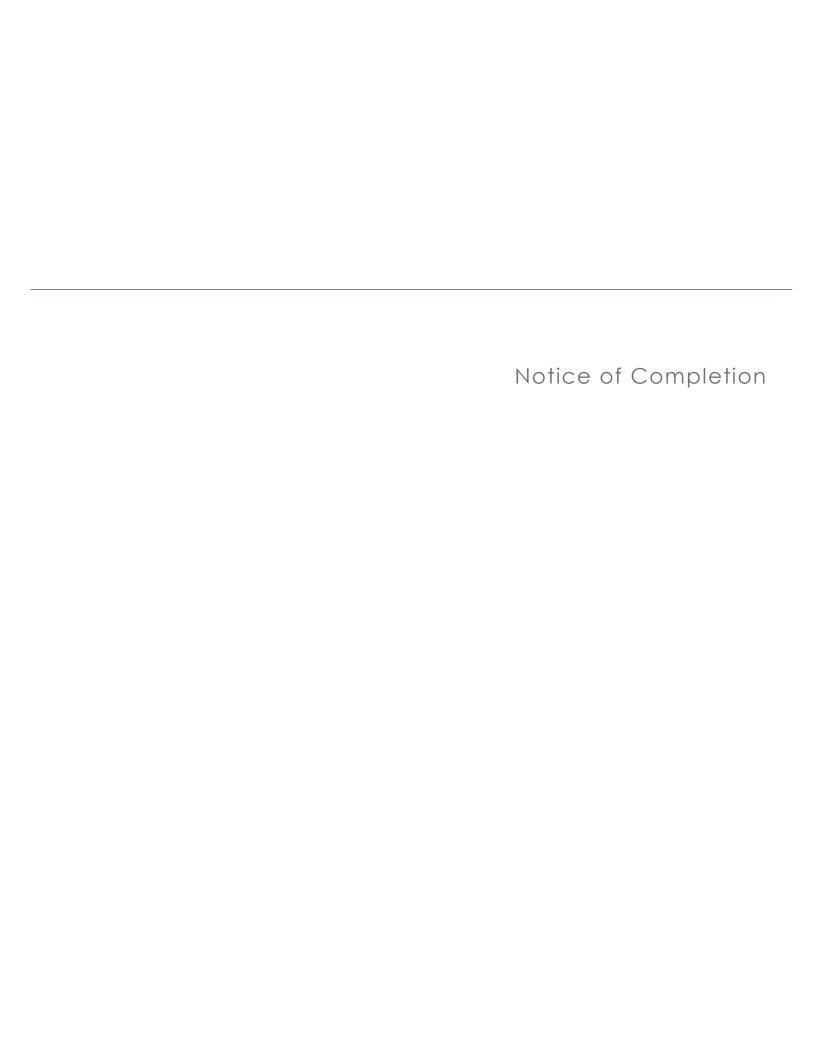




Questions









Notice of Study Completion

Wiarton Master Servicing Plan Municipal Class EA and Gould Street Sanitary Sewer Upgrade Class EA

Background

The Town of South Bruce Peninsula has completed a Water, Wastewater and Stormwater Master Servicing Plan (MSP) for Wiarton to identify a preferred strategy to support existing servicing needs and projected growth. At the same time, the Town has completed a Schedule B Municipal Class Environmental Assessment (EA) for the Gould Street Sanitary Sewer Upgrade which informed the preferred wastewater servicing strategy for the MSP.

The study has identified both short and long term servicing plans for the Town's water, wastewater and stormwater systems to support growth to 2029.

The study area is defined as the Town's limits and encompass the entire existing urban area and future service areas as per the Town's Official Plan

The Process

The study has defined existing problems and opportunities for both the MSP and the Class EA, considered and evaluated solutions and identified preferred water, wastewater and stormwater servicing strategies. The MSP follows the Master Planning Process of the Municipal Engineer's Association. The Master Plan follows Approach #2 which will fulfill the requirements for Schedule A, A+, and select Schedule B projects. Two public information centres were held in October 2014 and July 2015 as part of the Class EA process and are documented in the report.

Completion

The Report for the MSP and Class EA has been prepared to document the planning and decision making process undertaken for this study.

By this notice, the report is being placed on the public record for a 45-day review period (starting December 11, 2015 and ending January 25, 2015) in accordance with the requirements of the Municipal Class EA. The 2015 MSP documentation is available for public review on the Town's website or at the following locations:

Location #1	Location #2
Town of South Bruce Peninsula Municipal Office	Bruce County Public Library
315 George Street	578 Brown Street
Wiarton, ON N0H 2T0	Wiarton, ON N0H 2T0

No Schedule B projects were identified for the water and stormwater preferred strategies. The preferred wastewater servicing strategy has identified one Schedule B project whose requirement is being satisfied under this study:

• A 134 L/s Sewage Pumping Station to service future South Lands development and existing west area at Elm Street and Dawson Street line.

Comments

The Town wishes to ensure that anyone with an interest in this study has the opportunity to be involved and to provide input. Representatives from the Town and its consultants are available to provide further information. If concerns regarding this project cannot be resolved in discussion with the Town, a person or party may request that the Minister of Environment make an order for the project to comply with Part II of the Environmental Assessment Act (referred to as a Part II Order). Requests for a Part II Order must be received by the Minister, at the address below, by January 15, 2015. A copy of the request must also be sent to the Town of South Bruce Peninsula Manager of Public Works (contact details below).

The Honourable Glen Murray Minister of the Environment and Climate Change

11th Floor, Ferguson Block 77 Wellesley Street West Toronto, ON M7A 2T5

If you have any questions or comments, please contact:

Mr. Andrew Sprunt
Manager of Public Works
Town of South Bruce Peninsula
315 George St, PO Box 310
Wiarton, ON NOH 2T0
Tel: 519-534-1400 ext 131

Email: tsbppwmanager@bmts.com

Mr. John Slocombe, P.Eng. Project Manager GM BluePlan Engineering 1260 2nd Avenue East, Unit 1 Owen Sound, ON N4K 2J3 Tel: 519-376-1805

Email: john.slocombe@gmblueplan.ca

This Notice was first issued on the 4th of December, 2015



Town of South Bruce Peninsula

PO Box 310, 315 George St. Wiarton ON N0H 2T0

Tel: (519) 534-1400 Fax: (519) 534-4862 Toll Free (in 519 area only): 1-877-534-1400

December 3, 2015

Our File: 214128

Re: Notice of Study Completion for the Wiarton Master Servicing Plan Study and the Gould Street Sanitary Sewer Upgrade Schedule B Class EA

Dear Sir or Madam,

The Town of South Bruce Peninsula has completed both the Water, Wastewater and Stormwater Master Servicing Plan (MSP) Study as well as the Schedule B Gould Street Sanitary Sewer Upgrade Class Environmental Assessment (EA) Study.

The MSP follows the Master Planning Process of the Municipal Engineer's Association. The Master Plan follows Approach #2 which will fulfill the requirements for Schedule A, A+, and select Schedule B projects.

By this notice, the report is being placed on the public record for a 45-day review period (starting December 11, 2015 and ending January 25, 2015) in accordance with the requirements of the Municipal Class EA process. The 2015 MSP documentation is available for public review on the Town's website and at the locations indicated on the enclosed Notice of Completion.

Should you have any questions or comments regarding these studies, please contact:

Mr. Andrew Sprunt
Manager of Public Works
Town of South Bruce Peninsula
315 George St, PO Box 310
Wiarton, ON NOH 2T0

Tel: 519-534-1400 ext 131

Email: tsbppwmanager@bmts.com

Mr. John Slocombe, P.Eng.

Project Manager

GM BluePlan Engineering 1260 2nd Avenue East, Unit 1

Owen Sound, ON N4K 2J3

Tel: 519-376-1805

Email: john.slocombe@gmblueplan.ca

Enclosure: Notice of Completion

Andrew Sorensen

Environmental Planning Coordinator, Environmental Planning

Grey Sauble Conservation Authority 237897 Inglis Falls Road, R.R. 4 Owen Sound, ON N4K 5N6

Tony Amalfa

Manager, Environmental Health Policy &

Programs

Ministry of Health and Long-Term Care 393 University Avenue, 21st Floor

Toronto, ON M7A 2S1

Kim Benner

District Planner, Midhurst District Ministry of Natural Resources and Forestry 2284 Nursery Road

Midhurst, ON LOL 1X0

Annamaria Cross

Manager, Environmental Approvals Branch-Environmental Assessment Services Ministry of the Environment and Climate Change 2 St Clair Avenue West, Floor 12A Toronto, ON M4V 1L5

Joseph Muller

Heritage Planner, Culture Services Unit, Programs and Services Branch Ministry of Tourism, Culture and Sport 401 Bay Street, Suite 1700 Toronto, ON M7A 0A7

Richard Laliberte

Senior Operations Manager Ontario Clean Water Agency 78 Centennial Road, Unit 6 Orangeville, ON L9W 1P9

Jay Kirkland Deputy Mayor

Town of South Bruce Peninsula

791 Bruce Road 8

South Bruce Peninsula, ON NOH 2TO

Ana Vukovic Councillor

Town of South Bruce Peninsula

471 Bay Street

South Bruce Peninsula, ON NOH 2TO

Randy Scherzer

Director, Planning & Development Grey County

595 9th Avenue East Owen Sound, ON N4K 3E3

Daniel Robinson

Manager of Emergency Services, Station 30 (Wiarton)
South Bruce Peninsula Fire Department

382 George Street Wiarton, ON NOH 2T0 Chris Stack

Manager- West Region, Regional and Corporate

Services Division

Ministry of Tourism, Culture and Sport

4275 King Street, 2nd Floor Kitchener, ON N2P 2E9

Carol Neumann

Rural Planner, Food Safety and Environmental

Policy Branch

Ministry of Agriculture and Food 6484 Wellington Road 7, Unit 10

Elora, ON NOB 1S0

Rick Chappell

Manager, Owen Sound District Office Ministry of the Environment and Climate Change

101 17th Street East, 3rd Floor Owen Sound, ON N4K 0A5

Jennifer Arthur

Land Use Planner, Source Protection Planning Ministry of the Environment and Climate Change 3232 White Oak Road

London, ON N6E 1L8

Nancy Mott

Senior Strategic Advisor Niagara Escarpment Commission

232 Guelph Street

Georgetown, ON L7G 4B1

Charles O'Hara

Manager, Growth Policy Ontario Growth Secretariat 777 Bay Street, 4th Floor, Suite 425

Toronto, ON M5G 2E5

Craig Gammie Councillor

Town of South Bruce Peninsula

531 Third Avenue North

Sauble Beach, ON NOH 2G0

Donna Van Wyck

Deputy Clerk, Clerk's Office - Treasury

Bruce County 30 Park Street

Walkerton, ON NOG 2V0

Holly Morrison

CAO/Clerk

Township of Georgian Bluffs 177964 Grey Road 18, R.R. 3 Owen Sound, ON N4K 5N5

Steve Blake

Director of Education, Director's Office Bluewater District School Board 351 1st Avenue North, P.O. Box 190

Chesley, ON NOG 1L0

Corwin Troje

Manager, Consultation Unit, Aboriginal Relations

and Ministry Partnerships Division Ministry of Aboriginal Affairs 160 Bloor Street East, 9th Floor

Toronto, ON M7A 2E6

Bruce Curtis

Manager, Community Planning and

Development

Ministry of Municipal Affairs and Housing

659 Exeter Road, 2nd Floor London, ON N6E 1L3

Agatha Garcia-Wright

Director, Environmental Approvals Branch Ministry of the Environment and Climate Change

2 St Clair Avenue West, Floor 12A

Toronto, ON M4V 1L5

Judy Lynn Malloy

Director, Aboriginal Affairs Branch

Ministry of the Environment and Climate Change

135 St. Clair Ave West, 12th Floor

Toronto, ON M4V 1P5

Ted Smider

Client Relations Team
Ontario Clean Water Agency

434 Kaireen Street

Sudbury, ON P3E 5R9

Janice Jackson

Mayor

Town of South Bruce Peninsula 106 Eleventh Street North

Sauble Beach, ON NOH 2G0

Matt Jackson

Councillor

Town of South Bruce Peninsula

157 Mallory Beach Road

South Bruce Peninsula, ON NOH 2TO

Chris Laforest

Director, Planning Department

Bruce County

30 Park Street

Walkerton, ON NOG 2V0

Ontario Provincial Police Bruce Peninsula Detachment

50 Berford Street, #6 Highway

Wiarton, ON NOH 2TO

Catherine Montreuil Director of Education

Bruce Grey Catholic District School Board

799 16th Avenue

Hanover, ON N4N 3A1

Hazel Lynn Medical Officer of Health Grey Bruce Health Unit 101 17th Street East Owen Sound, ON N4K 0A5

David Dusome President Georgian Bay Mètis Council 355 Cranston Crescent Midland, ON L4R 4K3

Judy Rhodes-Munk Niagara Escarpment Commission 99 King Street East, P.O. Box 308 Thornbury, ON NOH 2P0

Vernon Roote Chief Saugeen First Nation 6493 Highway 21, R.R. 1 Southampton, ON NOH 2LO

Mark Knell Manager, Environmental Assessments and Regulatory Issues Métis Nation of Ontario 75 Sherbourne St., Suite 311 Toronto, ON M5A 2P9

Doug Hill Director of Operations Grey Sauble Conservation Authority 237897 Inglis Falls Road, R.R. 4 Owen Sound, ON N4K 5N6

Léo-Paul Frigault Operations Manager Ontario Clean Water Agency 897 Bayview Avenue Wiarton, ON NOH 2TO

Corey Taylor Eastlink Cable

Tom Gray Manager, Public Works Town of South Bruce Peninsula 315 George Street Wiarton, ON NOH 2TO

Jack Van Dorp Planner, County of Bruce Planning & Economic Development Department Town of South Bruce Peninsula 315 George Street, P.O. Box 310 Wiarton, ON NOH 2T0 Arlene Chegahno

Brian Knox

Chippewas of Nawash Unceded First Nation #135 Lakeshore Boulevard Neyaashiinigmiing, ON NOH 2TO

George Govier Land Use Planning Coordinator, Lands and Resources Consultation Historic Saugeen Métis 204 High Street, P.O. Box 1492 Southampton, ON NOH 2L0

Professional Engineer, Highways Bruce County 30 Park Street, P.O. Box 398 Walkerton, ON NOG 2V0

Peter Couture President MNO Great Lakes Métis Council 380 9th Street East Owen Sound, ON N4K 1P1

Archie Indoe President Historic Saugeen Métis 204 High Street, P.O. Box 1492 Southampton, ON NOH 2L0

Cheyenne Loon Sr Enviornmental Advisor, Land & Trust Services Aboriginal Affairs & Northern Development Canada 25 St. Clair Avenue East, 8th Floor Toronto, ON M4T 1M2

Arun Jain Practice Leader - Linear Infrastructure, Linear Infrastructure, Central Ontario EXP Services Inc. 1595 Clark Boulevard Brampton, ON L6T 4V1

Jeremy Miller Utility Service Manager, Union Gas

Don Scott Cuesta Planning Consultants Inc. 978 First Avenue West Owen Sound, ON N4K 4K5

Brent Miller Frosty Freeze 498 Berford Street Wiarton, ON NOH 2T0 Aly Alibhai Director, Lands, Resources and Consultations Métis Nation of Ontario 75 Sherbourne Street, Suite 311 Toronto, ON M5A 2P9

Doran Ritchie Land Use Planning Saugeen Ojibway Nation Environment Office 25 Maadookii Subdivision Neyaashiinigmiing, ON NOH 2TO

Warren Bell President Bruce Trail Conservancy Rasberry House, Arboretum Section Royal Botanical Gardens, Old Guelph Road Dundas, ON L9H 5Y6

James Wagar Manager, Natural Resources and Consultations Métis Nation of Ontario 75 Sherbourne St., Suite 311 Toronto, ON M5A 2P9

Kathy Dodge Management Biologist, Midhurst District Ministry of Natural Resources and Forestry 1450 7th Avenue East Owen Sound, ON N4K 2Z1

John Ritchie Supervisor- Owen Sound Office, Water Compliance Ministry of the Environment and Climate Change 101 17th Street East, 3rd Floor Owen Sound, ON N4K 0A5

Janine Dunlop Regional Advisor Ministry of Tourism, Culture and Sport 200 McNab Street, Suite 103 Walkerton, ON NOG 2V0

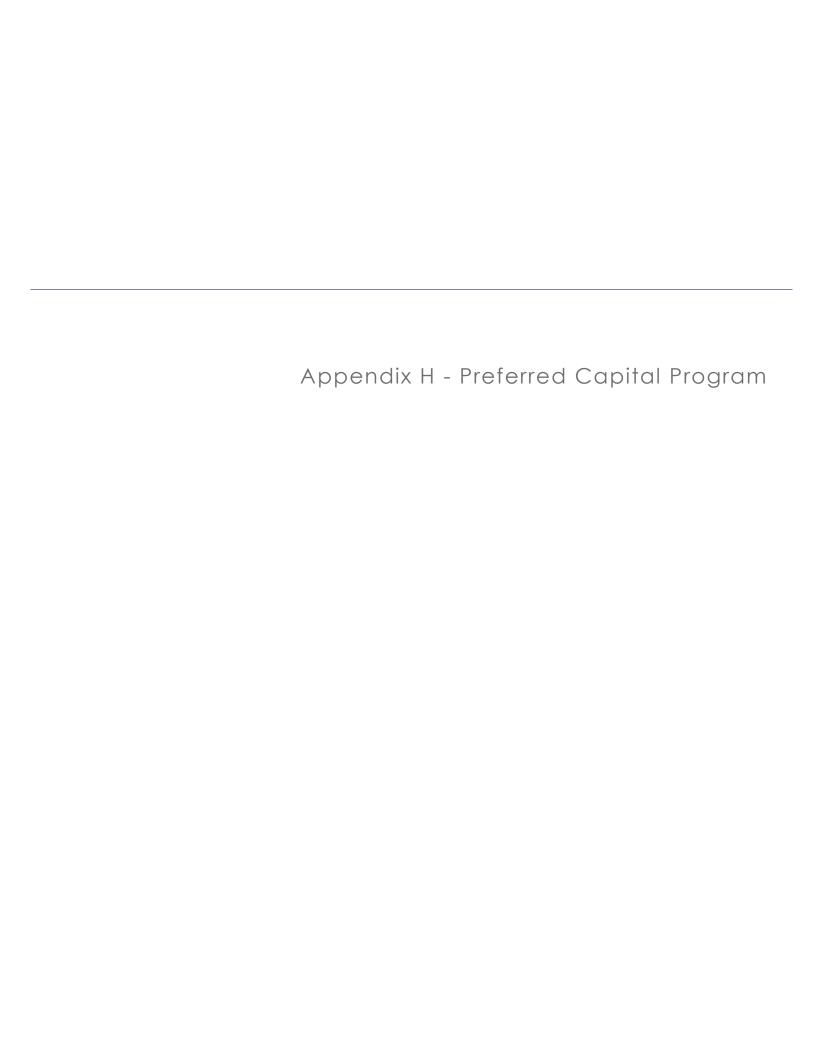
Steve Tackleberry Hydro One

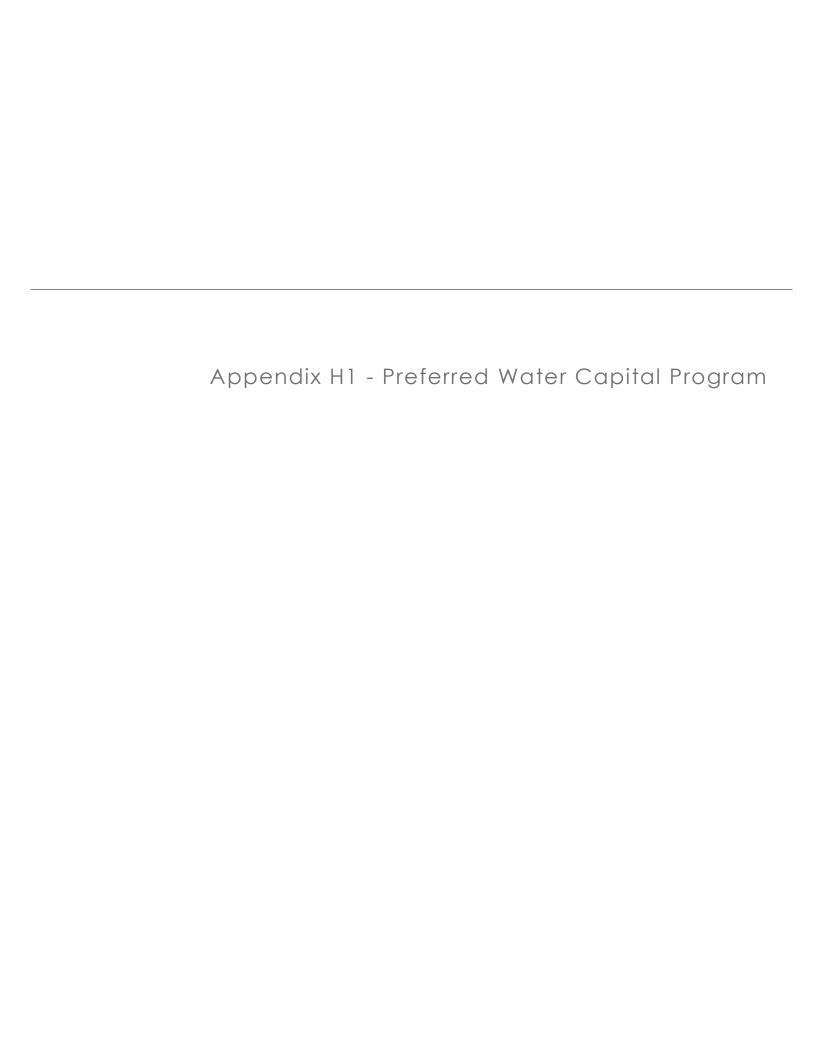


Barry Kruisselbrink
Barry's Construction and Insulation Ltd.
R.R. 2
Allenford, ON NOH 1A0

Chris Mahood Heritage Planner, Culture Services Unit, Programs and Services Branch Ministry of Tourism, Culture and Sport 401 Bay Street, Suite 1700 Toronto, ON M7A 0A7

Rick Watt Senior Planning Coordinator Niagara Escarpment Commission 99 King Street East, P.O. Box 308 Thornbury, ON NOH 2P0







WIARTON MASTER SERVICING PLAN FOR WATER, WASTEWATER AND STORMWATER SERVICES

WATER CAPITAL PROGRAM 2015

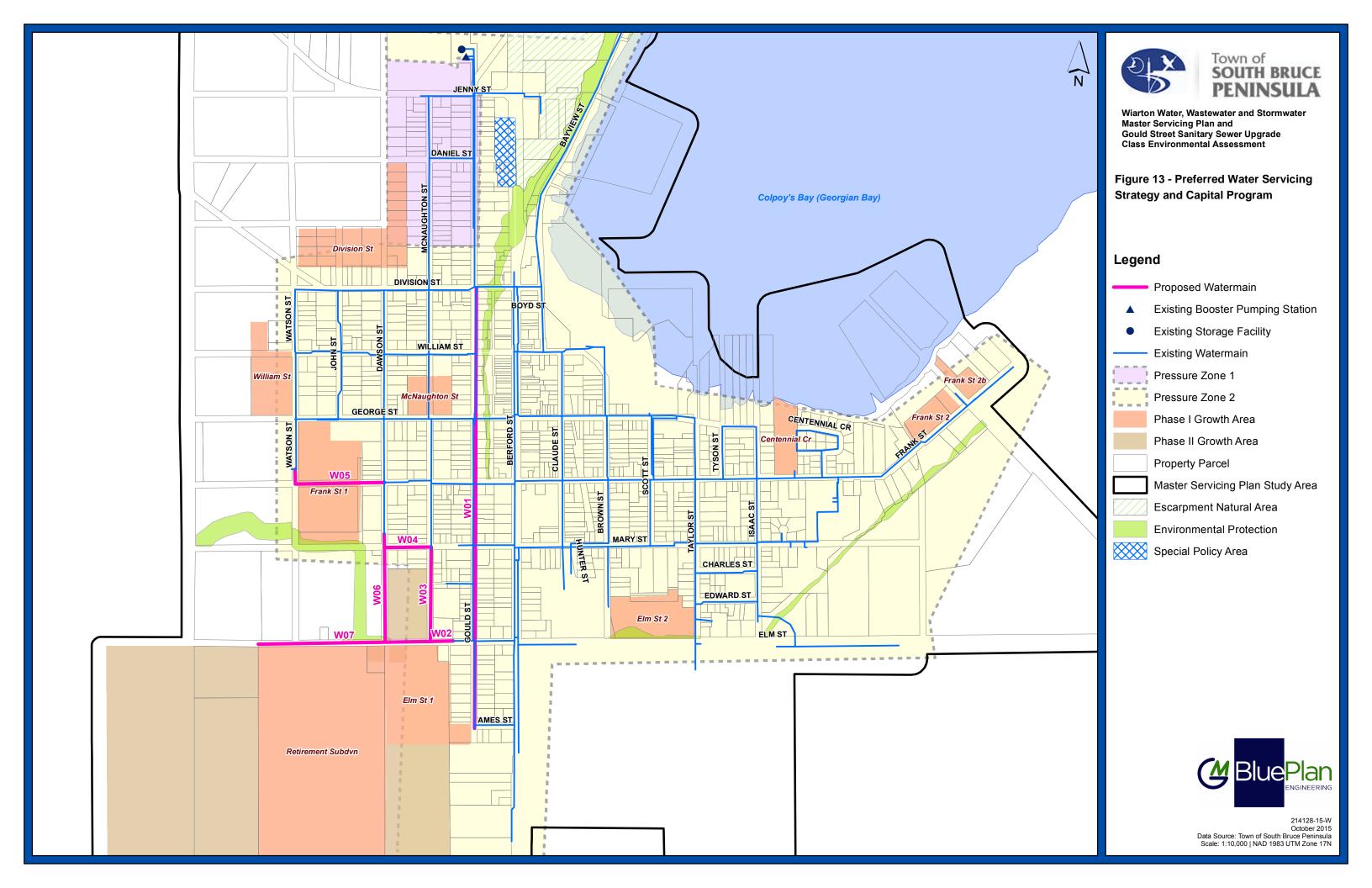
(4) BluePlan

WATER CAPITAL & IMPLEMENTATION PROGRAM

Projec Numb	t Components	Project Name	Project Description	Project Trigger	Start Year	Year in Service	Class EA Schedule	Project Type	Size/ Capacity	Length (m)	Construction Assumption		Base Cost (2014\$)	Permiting, Enviromental, Geotechnical, & Other (2014\$)	Total Construction Cost (2014\$)	Total Engineering & Design (2014\$)	Contingency (2014\$)	Non Refundable HST (2014\$)	Total Project Cost (2014\$)	Grants and Subsidies (2014\$)	Direct Developer Cost (2014\$)	Benefit to Existing (2014\$)	DC Comment
W01	Design and Construction	Gould St Watermain 1	1380 m - 250 mm watermain on Gould St from Division St to Ames St	Growth	2021	2021-2026	A+	WDM	250 mm	1380 m	Open Cut	\$958	\$1,323,000	\$204,000	\$1,526,000	\$382,000	\$153,000	\$34,000	\$2,095,000	\$0	\$2,095,000	\$0	Project is triggered by growth to 2029. 250 mm watermain will strengthen transmission capacity to future development in the south. Project is not required for existing service area.
W02	Design and Construction	Elm St Watermain 2 (Looping)	270 m - 200 mm watermain on Elm St from existing 200 mm connecting to future McNaughton St Extension Watermain 3	Growth	2016	2016-2021	A+	WDM	150 mm	90 m	Open Cut	\$776	\$70,000	\$25,000	\$95,000	\$24,000	\$10,000	\$2,000	\$131,000	\$0	\$131,000	\$0	Looping of watermains is triggered by intensification and greenfield growth to 2029. Project is intended to improve future level of service but is not required for existing service area.
W03	Design and Construction	McNaughton St & Future Extension Watermain 3 (Looping)	333 m - 200 mm watermain on future McNaughton St Extension from Elm St Watermain 2 to Mary St Extension Watermain 4	Growth	2016	2016-2021	A+	WDM	150 mm	333 m	Open Cut	\$776	\$258,000	\$53,000	\$312,000	\$78,000	\$31,000	\$7,000	\$428,000	\$0	\$428,000	\$0	Looping of watermains is triggered by intensification and greenfield growth to 2029. Project is intended to improve future level of service but is not required for existing service area.
W04	Design and Construction	Mary St Extension Watermain 4 (Looping)	190 m - 200mm watermain on future Mary St Extension from McNaughton St Watermain 3 to existing 200 mm on Dawson St	Growth	2016	2016-2021	A+	WDM	150 mm	190 m	Open Cut	\$776	\$147,000	\$51,000	\$198,000	\$50,000	\$20,000	\$4,000	\$272,000	\$0	\$272,000	\$0	Looping of watermains is triggered by intensification and greenfield growth to 2029. Project is intended to improve future level of service but is not required for existing service area.
W05	Design and Construction	Frank St Extension Watermain 5 (Looping)	333 m - 200 mm watermain on future Frank St Extension from Dawson St to Watson St	Growh	2016	2016-2021	A+	WDM	150 mm	244 m	Open Cut	\$776	\$189,000	\$52,000	\$241,000	\$60,000	\$24,000	\$5,000	\$330,000	\$0	\$330,000	\$0	Looping of watermains is triggered by intensification and greenfield growth to 2029. Project is intended to improve future level of service but is not required for existing service area.
W06	Design and Construction	Dawson St Extension Watermain 6	297 m - 150 mm watermain on Dawson St Extension from Mary St to Elm St	Growh	2016	2016-2021	A+	WDM	150 mm	297 m	Open Cut	\$776	\$231,000	\$52,000	\$283,000	\$71,000	\$28,000	\$6,000	\$388,000	\$0	\$388,000	en.	Extension of water distribution network is intended to improve security of supply to South Lands development and is intended to align with works proposed under the preferred wastewater servicing strategy.
W07	Design and Construction	Elm St Watermain 7	542 m - 200 mm watermain on Elm St from west of Gould St to west limit of South Lands development	Growh	2016	2016-2021	A+	WDM	200 mm	542 m	Open Cut	\$863	\$467,000	\$89,000	\$557,000	\$139,000	\$56,000	\$12,000	\$764,000	\$0	\$764,000		Extension of water distribution network is intended to improve security of supply to South Lands development and is intended to align with works proposed under the preferred wastewater servicing strategy.
TOTA	-													\$526,000	\$3,212,000	\$804,000	\$322,000	\$70,000	\$4,408,000	\$0	\$4,408,000	\$0	

Note: Water Tower is approaching capacity at full buildout and will require monitoring as development occurs.

Page 1of 1 10/21/2015







PROJECT NO.: PROJECT NAME: PROJECT DESCRIPTION:

Gould St Watermain 1
Watermain on Gould St, from Division St to Ames St

CAPITAL BUDGET YEAR:

2021-2026

VERSION: DATE UPDATED: 1.0 25-Sep-15 UPDATED BY:

PROPOSED DIAMETER: TOTAL LENGTH:

CLASS EA REQUIREMENTS:	Schedule A+
CONSTRUCTION ASSUMPTION:	Open Cut

COST ESTIMATION SPREADSHEET						
COMPONENT	RATE	UNIT	ESTIMATED	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost	(%)		QUANTITY			
			4000	0050	64 000 540	Coletina and dislet of con-
i. Pipe Construction Open Cut		m	1380 m	\$958	\$1,322,513	Existing road right of way
ii. Pipe Construction Uplift		m	0 m	\$0	\$0	
iii. Minor Creek Crossings		ea		\$146,610	\$0	
iv. Major Creek Crossings		ea		\$720,090	\$0	
v. Road Crossings (Highway)		ea		\$323,190	\$0	
				\$720,090	\$0	
vi. Major Road Crossings (Freeway) vii. Rail Crossings		ea				
		ea		\$323,190	\$0	
viii. Hydro Corridor Crossings		ea		\$146,610	\$0	
ix. Trans Canada Pipeline Crossings		ea		\$146,610	\$0	
x. Tunneling		m		\$4,414	\$0	
xi Valve and Chambers		ea	6	\$28,980	\$173,880	
xii. Endangered Species		Is			\$0	
xiii. Value Engineering		ls			\$0	
xiv. Other Construction Costs		ls			\$0	
Construction Sub-Total Cost					\$1,496,393	
Construction Contingency	0%				\$0	
Construction Total					\$1,496,393	
	1	1	l		÷ .,,	
Geotechnical Requirements						
i. Geotechnical/Hydrogeological/Materials	2%				\$29,928	
Geotechnical Sub-Total Cost	270					
Geotechnical Sub-Total Cost	ı	1	T		\$29,928	
Permit/Approvals Requirements						
i. Engineering Fees					\$0	
ii. Other					\$0	
iii. Other					\$0	
Permit/Approval Requirements Sub-Total			Į.	•	\$0	
Sub-Total Base Costs					\$1,526,321	
Sub-Total Base Costs					\$1,526,321	
					\$1,526,321	
Consultant Engineering	29/					
Consultant Engineering i. Study	2%				\$30,526	
Consultant Engineering i. Study ii. Design	7%				\$30,526 \$106,842	
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection	7% 6%				\$30,526 \$106,842 \$91,579	
Consultant Engineering i. Study ii. Design	7%				\$30,526 \$106,842	
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total	7% 6%				\$30,526 \$106,842 \$91,579	
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection	7% 6%				\$30,526 \$106,842 \$91,579	
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total	7% 6%				\$30,526 \$106,842 \$91,579	
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees	7% 6% 15%				\$30,526 \$106,842 \$91,579 \$228,948	
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees	7% 6% 15% 5%				\$30,526 \$106,842 \$91,579 \$228,948 \$76,316	
Consultant Engineering i. Study iii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees	7% 6% 15% 5% 5%				\$30,526 \$106,842 \$91,579 \$228,948 \$76,316 \$76,316	
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees ii. Design Fees ii. Construction Fees iii. Other	7% 6% 15% 5% 5% 0%				\$30,526 \$106,842 \$91,579 \$228,948 \$76,316	
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total	7% 6% 15% 5% 5% 0%				\$30,526 \$106,842 \$91,579 \$228,948 \$76,316 \$76,316	
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency	7% 6% 15% 5% 5% 0% 10%				\$30,526 \$106,842 \$91,579 \$228,948 \$76,316 \$76,316 \$0 \$152,632	
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency	7% 6% 15% 5% 5% 0%				\$30,526 \$106,842 \$91,579 \$228,948 \$76,316 \$70,316 \$152,632	
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency	7% 6% 15% 5% 5% 0% 10%				\$30,526 \$106,842 \$91,579 \$228,948 \$76,316 \$76,316 \$0 \$152,632	
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total	7% 6% 15% 5% 5% 0% 10%				\$30,526 \$106,842 \$91,579 \$228,948 \$76,316 \$70,316 \$152,632	
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST	7% 6% 15% 5% 5% 0% 10%				\$30,526 \$106,842 \$91,579 \$228,948 \$76,316 \$76,316 \$152,632 \$152,632	
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST	7% 6% 15% 5% 5% 0% 10%				\$30,526 \$106,842 \$91,579 \$228,948 \$76,316 \$76,316 \$30 \$152,632 \$152,632	
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees ii. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design	7% 6% 15% 5% 5% 0% 10%				\$30,526 \$106,842 \$91,579 \$228,948 \$76,316 \$70,316 \$152,632 \$152,632 \$152,632	
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees ii. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Design	7% 6% 15% 5% 5% 0% 10%				\$30,526 \$106,842 \$91,579 \$228,948 \$76,316 \$76,316 \$0 \$152,632 \$152,632 \$152,632 \$29,550	
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees ii. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design	7% 6% 15% 5% 5% 0% 10%				\$30,526 \$106,842 \$91,579 \$228,948 \$76,316 \$70,316 \$152,632 \$152,632 \$152,632	
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees ii. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Design	7% 6% 15% 5% 5% 0% 10%				\$30,526 \$106,842 \$91,579 \$228,948 \$76,316 \$76,316 \$0 \$152,632 \$152,632 \$152,632 \$29,550	
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees ii. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Design	7% 6% 15% 5% 5% 0% 10%				\$30,526 \$106,842 \$91,579 \$228,948 \$76,316 \$76,316 \$0 \$152,632 \$152,632 \$152,632 \$29,550	
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Construction Non-Refundable HST Construction Non-Refundable HST Sub-Total	7% 6% 15% 5% 5% 0% 10%				\$30,526 \$106,842 \$91,579 \$228,948 \$76,316 \$76,316 \$0 \$152,632 \$152,632 \$152,632 \$33,492 \$29,550 \$33,579	
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees ii. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements I. Land Acquisition Cost	7% 6% 15% 5% 5% 0% 10%				\$30,526 \$106,842 \$91,579 \$228,948 \$76,316 \$76,316 \$0 \$152,632 \$152,632 \$152,632 \$33,579	
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees ii. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Sub-Total Property Requirements i. Land Acquisition Cost ii. Easement	7% 6% 15% 5% 5% 0% 10%				\$30,526 \$106,842 \$91,579 \$228,948 \$76,316 \$76,316 \$152,632 \$152,632 \$152,632 \$3,579 \$3,492 \$29,550 \$33,579	Existing road right of way
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements i. Land Acquisition Cost ii. Easement iii. Other	7% 6% 15% 5% 5% 0% 10%				\$30,526 \$106,842 \$91,579 \$228,948 \$76,316 \$76,316 \$152,632 \$152,632 \$152,632 \$3,492 \$29,550 \$33,579	Existing road right of way
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees ii. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Sub-Total Property Requirements i. Land Acquisition Cost ii. Easement	7% 6% 15% 5% 5% 0% 10%				\$30,526 \$106,842 \$91,579 \$228,948 \$76,316 \$76,316 \$152,632 \$152,632 \$152,632 \$3,579 \$3,492 \$29,550 \$33,579	Existing road right of way
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements i. Land Acquisition Cost iii. Easement iii. Other Property Requirements Sub-Total	7% 6% 15% 5% 5% 0% 10%				\$30,526 \$106,842 \$91,579 \$228,948 \$76,316 \$0 \$152,632 \$152,632 \$152,632 \$33,492 \$29,550 \$30 \$0 \$0 \$0	Existing road right of way
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees ii. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Construction Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements i. Land Acquisition Cost ii. Easement iii. Other Property Requirements Sub-Total	7% 6% 15% 5% 5% 0% 10%				\$30,526 \$106,842 \$91,579 \$228,948 \$76,316 \$76,316 \$152,632 \$152,632 \$152,632 \$33,579 \$0 \$0 \$0 \$0 \$2,094,000	Existing road right of way Rounded to nearest \$1,000
Consultant Engineering i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements i. Land Acquisition Cost iii. Easement iii. Other Property Requirements Sub-Total	7% 6% 15% 5% 5% 0% 10%				\$30,526 \$106,842 \$91,579 \$228,948 \$76,316 \$76,316 \$152,632 \$152,632 \$152,632 \$3,492 \$29,550 \$30,509 \$00 \$00 \$2,094,000	Existing road right of way Rounded to nearest \$1,000





 PROJECT NO.:
 2
 CAPITAL BUDGET YEAR:
 2016-2021

 PROJECT NAME:
 Elm St Watermain 2 (Looping)
 VERSION:
 1.0

 PROJECT DESCRIPTION:
 Watermain looping on Elm St, from existing watermain west of Gould St to future watermain on McNaughton St Extension
 DATE UPDATED:
 25-Sep-15

 UPDATED BY:
 LB

PROPOSED DIAMETER: 150 mm CLASS EA REQUIREMENTS: Schedule A+
TOTAL LENGTH: 90 m CONSTRUCTION ASSUMPTION: Open Cut

COMPONENT	RATE	UNIT	ESTIMATED	COST PER UNIT	SUB-TOTAL	COMMENTS
	(%)	UNIT	QUANTITY	COST FER UNIT	30B-TOTAL	COMMENTS
Construction Cost			90 m	6770	#00 000	Full-time and disht of con-
i. Pipe Construction Open Cut		m		\$776		Existing road right of way
ii. Pipe Construction Uplift		m	0 m	\$0	\$0	
iii. Minor Creek Crossings		ea	0	\$118,754	\$0	
iv. Major Creek Crossings		ea	,	\$583,273	\$0	
v. Road Crossings (Highway)		ea		\$261,784	\$0	
			0	\$583,273	\$0	
vi. Major Road Crossings (Freeway) vii. Rail Crossings	_	ea ea	U	\$261,784	\$0	
viii. Hydro Corridor Crossings		ea		\$118,754	\$0	
ix. Trans Canada Pipeline Crossings		ea		\$118,754	\$0	
x. Tunneling		m m		\$3,576	\$0	
x. Turmening xi Valve and Chambers	_	ea		\$3,576	\$23,474	
xii. Endangered Species	_	ls	1	\$23,474	\$23,474	
xiii. Value Engineering		ls			\$0	
xiv. Other Construction Costs		ls			Φυ	
Construction Sub-Total Cost		15			\$93,337	
	00/					
Construction Contingency	0%				\$0	
Construction Total	1	l	1		\$93,337	
Geotechnical Requirements	_		 	+		
	2%				\$1,867	
i. Geotechnical/Hydrogeological/Materials	2%					
Geotechnical Sub-Total Cost		T	1		\$1,867	
Permit/Approvals Requirements					•	
i. Engineering Fees					\$0	
ii. Other					\$0	
iii. Other					\$0	
Permit/Approval Requirements Sub-Total		ı	1		\$0	
Out Total Book Out					*05.00 4	
Sub-Total Base Costs		I	l		\$95,204	
O						
Consultant Engineering	00/				64.004	
i. Study	2%				\$1,904	
ii. Design	7%				\$6,664	
iii. Construction Administration/Inspection	6%				\$5,712	
Consultant Engineering Sub-Total	15%				\$14,281	
In-House Fees	=0/					
i. Design Fees	5%				\$4,760	
ii. Construction Fees	5%				\$4,760	
iii. Other	0%				\$0	
In-House Fees Sub-Total	10%				\$9,520	
Project Contingency	4001				***	
Project Contingency	10%				\$9,520	
Project Contingency Sub-Total					\$9,520	
Non-Refundable HST				1		
Non-Refundable HST Study	1.76%				\$34	
Non-Refundable HST Design	1.76%		ļ		\$218	
Non-Refundable HST Construction	1.76%		l	<u> </u>	\$1,843	
Non-Refundable HST Sub-Total		ı	•		\$2,094	
			ļ			
Property Requirements			ļ	1		
i. Land Acquisition Cost					\$0	
ii. Easement					\$0	
iii. Other					\$0	
Property Requirements Sub-Total					\$0	
Total (2015 Dollars)						Rounded to nearest \$1,000
Other Estimate					\$0	
Chosen Estimate					\$131,000	Master Plan 2015 Estimate





2016-2021 PROJECT NO.: CAPITAL BUDGET YEAR: 1.0

McNaughton St & Future Extension Watermain 3 (Looping) VERSION: PROJECT NAME:

Watermain looping on McNaughton St / McNaughton St Extension, from future watermain on Elm St to existing watermain on Mary St $\,$ PROJECT DESCRIPTION: DATE UPDATED: 25-Sep-15

UPDATED BY: LB

PROPOSED DIAMETER:	150 mm	CLASS EA REQUIREMENTS:	Schedule A+
TOTAL LENGTH:	333 m	CONSTRUCTION ASSUMPTION:	Open Cut

COST ESTIMATION SPREADSHEET						·
COMPONENT	RATE (%)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost	(70)		QUANTITY			
i. Pipe Construction Open Cut		m	333 m	\$776	\$258.494	Partial unopened road allowance, partial road ROW
ii. Pipe Construction Uplift		m	0 m	\$0	\$0	
iii. Minor Creek Crossings		ea	0	\$118,754	\$0	
iv. Major Creek Crossings		ea		\$583,273	\$0	
v. Road Crossings (Highway)		ea		\$261,784	\$0	
vi. Major Road Crossings (Freeway)		ea	0	\$583,273	\$0	
vii. Rail Crossings		ea		\$261,784	\$0	
viii. Hydro Corridor Crossings		ea		\$118,754	\$0	
ix. Trans Canada Pipeline Crossings		ea		\$118,754	\$0	
				\$3,576	\$0	
x. Tunneling xi Valve and Chambers		m	2	\$23,474	\$46,948	
xii. Endangered Species		ea	2	\$23,474	\$40,946	
		Is		1		
xiii. Value Engineering		Is			\$0	
xiv. Other Construction Costs		ls			****	
Construction Sub-Total Cost					\$305,441	
Construction Contingency	0%				\$0	
Construction Total	•	•		•	\$305,441	
Geotechnical Requirements						
i. Geotechnical/Hydrogeological/Materials	2%				\$6,109	
Geotechnical Sub-Total Cost					\$6,109	
Permit/Approvals Requirements						
i. Engineering Fees					\$0	
ii. Other					\$0	
iii. Other					\$0	
Permit/Approval Requirements Sub-Total			•	•	\$0	
Sub-Total Base Costs		•			\$311,550	
Consultant Engineering						
i. Study	2%				\$6,231	
ii. Design	7%				\$21,809	
iii. Construction Administration/Inspection	6%	İ		1	\$18,693	
Consultant Engineering Sub-Total	15%				\$46,733	
3 11 3 11 11					, ,, ,,	
In-House Fees		İ		1		
i. Design Fees	5%				\$15,578	
ii. Construction Fees	5%				\$15,578	
iii. Other	0%				\$0	
In-House Fees Sub-Total	10%				\$31,155	
III-HOUSE FEES GUB-FOLUI	1070				401,100	
Project Contingency		 	 	1		
Project Contingency Project Contingency	10%	-	 	+ -	\$31,155	
Project Contingency Sub-Total	10 70				\$31,155	
1 Toject Contingency Gub-Total					φ31,155	
Non-Refundable HST		 	 	1		
	1.76%	 	 	1	6440	
Non-Refundable HST Study		.	1	1	\$110	
Non-Refundable HST Design	1.76%	ļ		1	\$713	
Non-Refundable HST Construction	1.76%	L	L		\$6,032	
Non-Refundable HST Sub-Total					\$6,854	
		ļ				
Property Requirements		ļ	ļ	1		
i. Land Acquisition Cost					\$0	
ii. Easement						Unopened road allowance from Elm St to Pengally Ave
iii. Other					\$0	
Property Requirements Sub-Total					\$0	
Total (2015 Dollars)					\$427,000	Rounded to nearest \$1,000
Other Estimate					\$0	
Chosen Estimate					\$427,000	Master Plan 2015 Estimate





 PROJECT NO.:
 4
 CAPITAL BUDGET YEAR:
 2016-2021

 PROJECT NAME:
 Mary St Extension Watermain 4 (Looping)
 VERSION:
 1.0

 PROJECT DESCRIPTION:
 Watermain on Mary St Extension, from existing watermain on McNaughton St to existing watermain on Dawson St
 DATE UPDATED:
 25-Sep-15

 UPDATED BY:
 LB

PROPOSED DIAMETER: 150 mm CLASS EA REQUIREMENTS: Schedule A+
TOTAL LENGTH: 190 m CONSTRUCTION ASSUMPTION: Open Cut

COMPONENT Construction Cost i. Pipe Construction Open Cut ii. Pipe Construction Uplift iii. Minor Creek Crossings	(%)	UNIT				
I. Pipe Construction Open Cut ii. Pipe Construction Uplift			QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
ii. Pipe Construction Uplift						
		m	190 m	\$776	\$147,489	All unopened road allowance
iii. Minor Creek Crossings	-	m	0 m	\$0	\$0	
iii. Minor Creek Crossings						
		ea		\$118,754	\$0	
iv. Major Creek Crossings		ea		\$583,273	\$0	
v. Road Crossings (Highway)		ea		\$261,784	\$0	
vi. Major Road Crossings (Freeway)		ea	0	\$583,273	\$0	
vii. Rail Crossings (Freeway)		ea	Ů	\$261,784	\$0	
viii. Hydro Corridor Crossings		ea		\$118,754	\$0	
ix. Trans Canada Pipeline Crossings		ea		\$118,754	\$0	
				\$3,576	\$0	
x. Tunneling xi Valve and Chambers		m ea	2	\$23,474	\$46,948	
		ls	2	\$23,474		
xii. Endangered Species xiii. Value Engineering		ls Is			\$0 \$0	
xii. Value Engineering xiv. Other Construction Costs					\$0	
		Is			6404 407	
Construction Sub-Total Cost					\$194,437	
Construction Contingency	0%	l			\$0	
Construction Total		1	1		\$194,437	
Geotechnical Requirements	00'				****	
i. Geotechnical/Hydrogeological/Materials	2%				\$3,889	
Geotechnical Sub-Total Cost					\$3,889	
<u>l</u>						
Permit/Approvals Requirements						
i. Engineering Fees					\$0	
ii. Other					\$0	
iii. Other					\$0	
Permit/Approval Requirements Sub-Total		•			\$0	
Sub-Total Base Costs		<u>, </u>			\$198,325	
Consultant Engineering						
Consultant Engineering i. Study	2%				\$3,967	
i. Study	2% 7%				\$3,967 \$13,883	
i. Study ii. Design	7%				\$13,883	
i. Study ii. Design iii. Construction Administration/Inspection	7% 6%				\$13,883 \$11,900	
i. Study ii. Design	7%				\$13,883	
i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total	7% 6%				\$13,883 \$11,900	
i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees	7% 6% 15%				\$13,883 \$11,900 \$29,749	
i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees	7% 6% 15%				\$13,883 \$11,900 \$29,749 \$9,916	
i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees	7% 6% 15% 5% 5%				\$13,883 \$11,900 \$29,749 \$9,916 \$9,916	
i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees ii. Design Fees iii. Construction Fees iii. Other	7% 6% 15% 5% 5% 0%				\$13,883 \$11,900 \$29,749 \$9,916 \$9,916	
i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees	7% 6% 15% 5% 5%				\$13,883 \$11,900 \$29,749 \$9,916 \$9,916	
i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total	7% 6% 15% 5% 5% 0%				\$13,883 \$11,900 \$29,749 \$9,916 \$9,916	
i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency	7% 6% 15% 5% 5% 0% 10%				\$13,883 \$11,900 \$29,749 \$9,916 \$9,916 \$0 \$19,833	
i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees ii. Design Fees iii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency	7% 6% 15% 5% 5% 0%				\$13,883 \$11,900 \$29,749 \$9,916 \$9,916 \$0 \$19,833	
i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency	7% 6% 15% 5% 5% 0% 10%				\$13,883 \$11,900 \$29,749 \$9,916 \$9,916 \$0 \$19,833	
i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total	7% 6% 15% 5% 5% 0% 10%				\$13,883 \$11,900 \$29,749 \$9,916 \$9,916 \$0 \$19,833	
i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees ii. Design Fees iii. Construction Fees iiii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST	7% 6% 15% 5% 5% 0% 10%				\$13,883 \$11,900 \$29,749 \$9,916 \$9,916 \$0 \$19,833 \$19,833	
i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees ii. Design Fees iii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST	7% 6% 15% 5% 5% 0% 10%				\$13,883 \$11,900 \$29,749 \$9,916 \$9,916 \$0 \$19,833 \$19,833	
i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design	7% 6% 15% 5% 5% 0% 10% 10%				\$13,883 \$11,900 \$29,749 \$9,916 \$9,916 \$0 \$19,833 \$19,833	
i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees iii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Design Non-Refundable HST Design Non-Refundable HST Design	7% 6% 15% 5% 5% 0% 10%				\$13,883 \$11,900 \$29,749 \$9,916 \$9,916 \$0 \$19,833 \$19,833 \$19,833	
i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design	7% 6% 15% 5% 5% 0% 10% 10%				\$13,883 \$11,900 \$29,749 \$9,916 \$9,916 \$0 \$19,833 \$19,833	
i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees ii. Design Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Construction Non-Refundable HST Construction Non-Refundable HST Sub-Total	7% 6% 15% 5% 5% 0% 10% 10%				\$13,883 \$11,900 \$29,749 \$9,916 \$9,916 \$0 \$19,833 \$19,833 \$19,833	
i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Design Fees iii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements	7% 6% 15% 5% 5% 0% 10% 10%				\$13,883 \$11,900 \$29,749 \$9,916 \$9,916 \$0 \$19,833 \$19,833 \$19,833 \$4,833	
i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees iii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements I. Land Acquisition Cost	7% 6% 15% 5% 5% 0% 10% 10%				\$13,883 \$11,900 \$29,749 \$9,916 \$9,916 \$0 \$19,833 \$19,833 \$19,833 \$454 \$3,840 \$4,363	
i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees ii. Design Fees iii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements Land Acquisition Cost ii. Easement	7% 6% 15% 5% 5% 0% 10% 10%				\$13,883 \$11,900 \$29,749 \$9,916 \$9,916 \$0 \$19,833 \$19,833 \$19,833 \$454 \$3,840 \$4,363	Unopened road allowance McNaughton to Dawson
i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees ii. Design Fees iii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements I. Land Acquisition Cost III. Easement III. Other	7% 6% 15% 5% 5% 0% 10% 10%				\$13,883 \$11,900 \$29,749 \$9,916 \$9,916 \$0 \$19,833 \$19,833 \$19,833 \$4,4363	Unopened road allowance McNaughton to Dawson
i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees ii. Design Fees iii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements Land Acquisition Cost ii. Easement	7% 6% 15% 5% 5% 0% 10% 10%				\$13,883 \$11,900 \$29,749 \$9,916 \$9,916 \$0 \$19,833 \$19,833 \$19,833 \$454 \$3,840 \$4,363	Unopened road allowance McNaughton to Dawson
i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees iii. Construction Fees iii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements i. Land Acquisition Cost ii. Easement iii. Other Property Requirements Sub-Total	7% 6% 15% 5% 5% 0% 10% 10%				\$13,883 \$11,900 \$29,749 \$9,916 \$9,916 \$0 \$19,833 \$19,833 \$19,833 \$454 \$3,840 \$4,363 \$0 \$0 \$0	
i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees ii. Design Fees iii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements I. Land Acquisition Cost II. Easement III. Other Property Requirements Sub-Total Total (2015 Dollars)	7% 6% 15% 5% 5% 0% 10% 10%				\$13,883 \$11,900 \$29,749 \$9,916 \$9,916 \$0 \$19,833 \$19,833 \$19,833 \$454 \$3,840 \$4,363 \$0 \$0 \$0	Unopened road allowance McNaughton to Dawson Rounded to nearest \$1,000
i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees iii. Construction Fees iii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements i. Land Acquisition Cost ii. Easement iii. Other Property Requirements Sub-Total	7% 6% 15% 5% 5% 0% 10% 10%				\$13,883 \$11,900 \$29,749 \$9,916 \$9,916 \$0 \$19,833 \$19,833 \$19,833 \$19,833 \$0 \$4,363 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	





PROJECT NO.: CAPITAL BUDGET YEAR: 2016-2021 VERSION: 1.0

Frank St Extension Watermain 5 (Looping) PROJECT NAME: PROJECT DESCRIPTION:

Watermain on Frank St Extension, from existing watermain on Dawson St to existing watermain on Watson St $\,$ DATE UPDATED: 25-Sep-15 LB

UPDATED BY:

PROPOSED DIAMETER:	150 mm	CLASS EA REQUIREMENTS	: Schedule A+
TOTAL LENGTH:	244 m	CONSTRUCTION ASSUMPT	ION: Open Cut

COST ESTIMATION SPREADSHEET	DATE		ESTIMATED			
COMPONENT	RATE (%)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost	(70)		QUARTITI			
i. Pipe Construction Open Cut		m	244 m	\$776	\$189.407	All unopened road allowance
ii. Pipe Construction Uplift		m	0 m	\$0	\$0	
iii. Minor Creek Crossings		ea		\$118,754	\$0	
iv. Major Creek Crossings		ea		\$583,273	\$0	
v. Road Crossings (Highway)		ea		\$261,784	\$0	
vi. Major Road Crossings (Freeway)		ea		\$583,273	\$0	
vii. Rail Crossings		ea		\$261,784	\$0	
viii. Hydro Corridor Crossings		ea		\$118,754	\$0	
ix. Trans Canada Pipeline Crossings		ea		\$118,754	\$0	
x. Tunneling		m		\$3,576	\$0	
xi Valve and Chambers		ea	2	\$23,474	\$46,948	
xii. Endangered Species				\$20,474	\$0,940	
		ls			\$0	
xiii. Value Engineering		ls .			\$0	
xiv. Other Construction Costs		Is				
Construction Sub-Total Cost					\$236,355	
Construction Contingency	0%				\$0	
Construction Total					\$236,355	
Geotechnical Requirements						
i. Geotechnical/Hydrogeological/Materials	2%				\$4,727	
Geotechnical Sub-Total Cost				l	\$4,727	
					. ,	
Permit/Approvals Requirements						
					\$0	
i. Engineering Fees					\$0	
ii. Other					\$0	
iii. Other					\$0	
Permit/Approval Requirements Sub-Total					\$0	
Sub-Total Base Costs					\$241,082	
Consultant Engineering						
i. Study	2%				\$4,822	
ii. Design	7%				\$16,876	
iii. Construction Administration/Inspection	6%				\$14,465	
Consultant Engineering Sub-Total	15%				\$36,162	
					. ,	
In-House Fees						
i. Design Fees	5%				\$12,054	
ii. Construction Fees	5%				\$12,054	
iii. Other	0%				\$12,054	
In-House Fees Sub-Total	10%				\$24,108	
Project Contingency						
Project Contingency	10%				\$24,108	
Project Contingency Sub-Total					\$24,108	
Non-Refundable HST						
Non-Refundable HST Study	1.76%			1	\$85	
Non-Refundable HST Design	1.76%				\$552	
Non-Refundable HST Construction	1.76%	1	1		\$4,667	
Non-Refundable HST Sub-Total	1.7070	ļ	ļ			
INOTI-INSTURIDANIE FIOT OUD-TOTAL	1	1	ı		\$5,304	
Brown to Brown to						
Property Requirements						
i. Land Acquisition Cost					\$0	
ii. Easement						Unopened road allowance Dawson to Watson
iii. Other					\$0	
Property Requirements Sub-Total					\$0	
Total (2015 Dollars)					\$331.000	Rounded to nearest \$1,000
Other Estimate					\$0	
Chosen Estimate						Master Plan 2015 Estimate
enocon-Louintate					\$33 I,000	Master Flair 2010 Estimate





PROJECT NO.: 6 CAPITAL BUDGET YEAR: 2016-2021

 PROJECT NAME:
 Dawson St Extension Watermain 6
 VERSION:
 1.0

 PROJECT DESCRIPTION:
 Watermain on Dawson St Extension, from Mary St to Elm St
 DATE UPDATED:
 19-Oct-15

 UPDATED BY:
 LB

 PROPOSED DIAMETER:
 150 mm
 CLASS EA REQUIREMENTS:
 Schedule A+

 TOTAL LENGTH:
 297 m
 CONSTRUCTION ASSUMPTION:
 Open Cut

COST ESTIMATION SPREADSHEET	DATE		ESTIMATED			
COMPONENT	RATE (%)	UNIT	QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost	(76)		QUANTITI			
i. Pipe Construction Open Cut		m	297 m	\$776	\$230.548	All unopened road allowance
·		""				
ii. Pipe Construction Uplift		m	0 m	\$0	\$0	
iii. Minor Creek Crossings		ea		\$118,754	\$0	
iv. Major Creek Crossings		ea		\$583,273	\$0	
v. Road Crossings (Highway)		ea		\$261,784	\$0	
vi. Major Road Crossings (Freeway)		ea		\$583,273	\$0	
vii. Rail Crossings				\$261,784	\$0	
=		ea				
viii. Hydro Corridor Crossings		ea		\$118,754	\$0	
ix. Trans Canada Pipeline Crossings		ea		\$118,754	\$0	
x. Tunneling		m		\$3,576	\$0	
xi Valve and Chambers		ea	2	\$23,474	\$46,948	
xii. Endangered Species		Is			\$0	
xiii. Value Engineering		ls			\$0	
xiv. Other Construction Costs		ls				
Construction Sub-Total Cost					\$277,496	
Construction Contingency	0%				\$0	
Construction Total		l	1	I	\$277,496	
- Constitution Folds	1	1	ı		Ψ211, 43 0	
Control Paguiromant						
Geotechnical Requirements						
i. Geotechnical/Hydrogeological/Materials	2%				\$5,550	
Geotechnical Sub-Total Cost					\$5,550	
Permit/Approvals Requirements						
i. Engineering Fees					\$0	
ii. Other					\$0	
iii. Other					\$0	
Permit/Approval Requirements Sub-Total					\$0	
r ennuapprovar requirements Sub-Total	I	I	I	I	40	
Sub Total Base Costs					6202.046	
Sub-Total Base Costs	1	1	<u> </u>		\$283,046	
Consultant Engineering						
i. Study	2%				\$5,661	
ii. Design	7%				\$19,813	
iii. Construction Administration/Inspection	6%				\$16,983	
Consultant Engineering Sub-Total	15%				\$42,457	
In-House Fees						
i. Design Fees	5%				\$14,152	
ii. Construction Fees	5%				\$14,152	
iii. Other	0%				\$0	
	10%					
In-House Fees Sub-Total	10%				\$28,305	
2						
Project Contingency						
Project Contingency	10%				\$28,305	
Project Contingency Sub-Total					\$28,305	
Non-Refundable HST						
Non-Refundable HST Study	1.76%				\$100	
Non-Refundable HST Design	1.76%				\$648	
Non-Refundable HST Construction	1.76%	1	1		\$5,480	
	1.7070	ļ	ļ			
Non-Refundable HST Sub-Total	1	1	ı		\$6,227	
Book and a Book look and a						
Property Requirements						
i. Land Acquisition Cost					\$0	
ii. Easement					\$0	Unopened road allowance Mary St to Elm St
iii. Other				İ	\$0	
Property Requirements Sub-Total					\$0	
					-	
Total (2015 Dollars)	l	l	I	1	\$388 000	Rounded to nearest \$1,000
Other Estimate					\$388,000	
Chosen Estimate					\$388,000	Master Plan 2015 Estimate





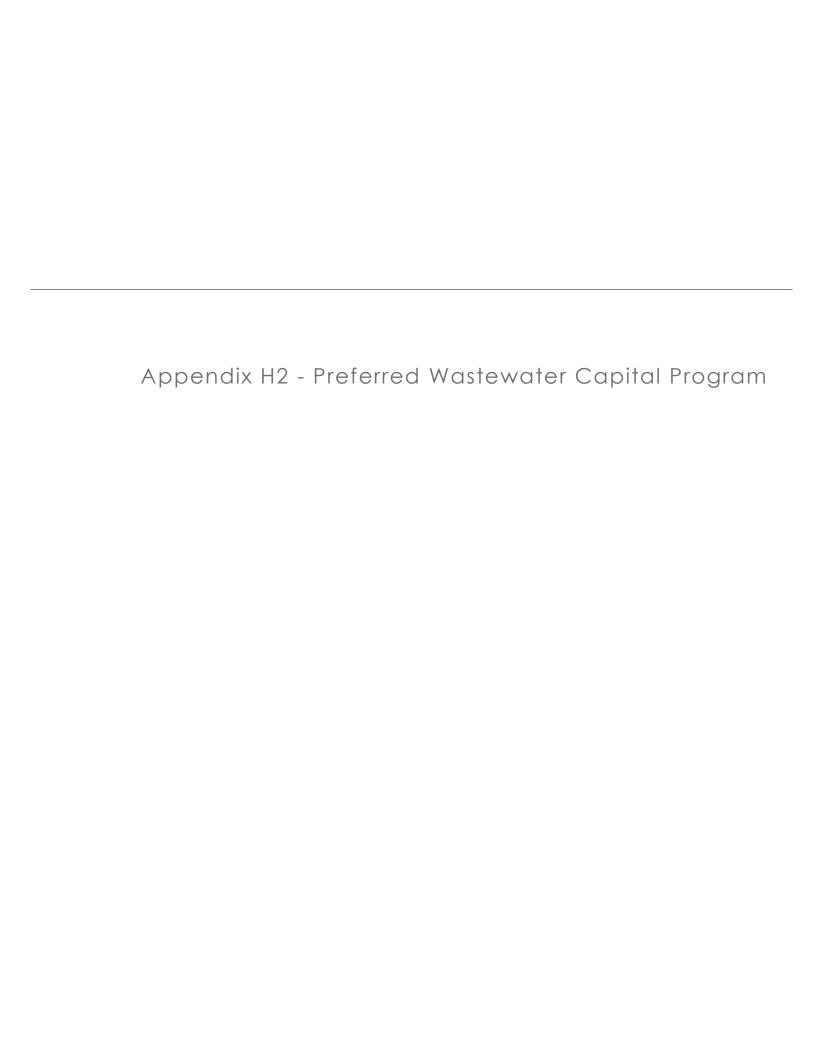
LB

CAPITAL BUDGET YEAR: PROJECT NO.: 2016-2021

PROJECT NAME: Elm St Watermain 7 VERSION: 1.0 PROJECT DESCRIPTION: Watermain on Elm St, from existing watermain west of Gould St to west limit of DATE UPDATED: 19-Oct-15 South Lands development UPDATED BY:

CLASS EA REQUIREMENTS: CONSTRUCTION ASSUMPTION: PROPOSED DIAMETER: 200 mm Schedule A+ TOTAL LENGTH: Open Cut 542 m

COMMENTS COMMENTS	COST ESTIMATION SPREADSHEET						
Construction Ceals	COMPONENT	RATE	UNIT	ESTIMATED	COST PER UNIT	SUB-TOTAL	COMMENTS
Pipe Construction Open Coal	Construction Cost	(%)		QUANTITY			
If Minor Conte Conserge			m	542 m	\$863	\$467 480	Existing road right of way
B. Minor Creek Consings							
MAGING CREAT (PRIVINGY)	II. Pipe Construction Uplift		m	0 m	\$0	\$0	
MAGING CREAT (PRIVINGY)							
Valor (Contemporary (Contemporary) 60 \$394,077 \$50			ea				
M. Algor Posad Crossings (Freeway)	iv. Major Creek Crossings		ea		\$648,081		
In Part Consisting ea \$200,871 \$9	v. Road Crossings (Highway)		ea		\$290,871	\$0	
Mil. Priorit Control Crossings eq \$131,949 50			ea				
S. Transfer Grantes Proprince Crossrings ea \$131.349 50	_		ea		\$290,871		
x Turnelling			ea				
at Valve and Chembers	ix. Trans Canada Pipeline Crossings		ea		\$131,949	\$0	
Six Value Engineering Six x. Tunneling		m		\$3,973	\$0		
State Engineering 1s 50 50 50 50 50 50 50 5	xi Valve and Chambers		ea	3	\$26,082	\$78,246	
Section Sect	xii. Endangered Species		Is			\$0	
September Sept	xiii. Value Engineering		Is			\$0	
Construction Contingercy	xiv. Other Construction Costs		Is				
Sedes	Construction Sub-Total Cost					\$545,726	
Constraint Engineering Sub-Total 15% Sub	Construction Contingency	0%				\$0	
Construction Cons	Construction Total	•	•	•		\$545,726	
Construction Cons							
Construction Cons	Geotechnical Requirements				j		
September Sequirements Sequire		2%			j	\$10,915	
Permit/Approvals Requirements	Geotechnical Sub-Total Cost			L.	L	\$10,915	
Engineering Fees S0 S0						. ,	
Engineering Fees S0 S0							
Engineering Fees S0 S0	Permit/Approvals Requirements						
						\$0	
Solition							
Sub-Total Base Costs							
Sub-Total Base Costs							
Consultant Engineering	Termina Approvar Requirements oub-Total					Ψ	
Consultant Engineering	Sub-Total Base Costs					\$556 640	
Shudy	Cub : Cia: Ducc Cocio						
Shudy					1	*****	
Design	Consultant Engineering					,,,,,,	
Construction Administration/Inspection 6% \$33,398		2%					
Second S	i. Study					\$11,133	
In-House Fees	i. Study ii. Design	7%				\$11,133 \$38,965	
Design Fees 5% \$27,832	i. Study ii. Design iii. Construction Administration/Inspection	7% 6%				\$11,133 \$38,965 \$33,398	
Design Fees 5% \$27,832	i. Study ii. Design iii. Construction Administration/Inspection	7% 6%				\$11,133 \$38,965 \$33,398	
Construction Fees 5% \$27,832	i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total	7% 6%				\$11,133 \$38,965 \$33,398	
Other	I. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees	7% 6% 15%				\$11,133 \$38,965 \$33,398 \$83,496	
In-House Fees Sub-Total	I. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees	7% 6% 15% 5%				\$11,133 \$38,965 \$33,398 \$83,496	
Project Contingency	i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees	7% 6% 15% 5%				\$11,133 \$38,965 \$33,398 \$83,496 \$27,832 \$27,832	
Project Contingency	i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other	7% 6% 15% 5% 5% 0%				\$11,133 \$38,965 \$33,398 \$83,496 \$27,832 \$27,832 \$27,832	
Project Contingency	i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other	7% 6% 15% 5% 5% 0%				\$11,133 \$38,965 \$33,398 \$83,496 \$27,832 \$27,832 \$27,832	
Project Contingency Sub-Total \$55,664	i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total	7% 6% 15% 5% 5% 0%				\$11,133 \$38,965 \$33,398 \$83,496 \$27,832 \$27,832 \$27,832	
Non-Refundable HST Study 1.76% \$196 Non-Refundable HST Design 1.76% \$196 Non-Refundable HST Design 1.76% \$11,274 Non-Refundable HST Construction 1.76% \$11,077 Non-Refundable HST Sub-Total \$12,246 Property Requirements	i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees ii. Design Fees iii. Construction Fees iiii. Other In-House Fees Sub-Total Project Contingency	7% 6% 15% 5% 5% 0% 10%				\$11,133 \$38,965 \$33,398 \$83,496 \$27,832 \$27,832 \$0 \$55,664	
Non-Refundable HST Study	i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency	7% 6% 15% 5% 5% 0% 10%				\$11,133 \$38,965 \$33,398 \$83,496 \$27,832 \$27,832 \$0 \$55,664	
Non-Refundable HST Study	i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency	7% 6% 15% 5% 5% 0% 10%				\$11,133 \$38,965 \$33,398 \$83,496 \$27,832 \$27,832 \$0 \$55,664	
Non-Refundable HST Design 1.76% \$1,274	i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total	7% 6% 15% 5% 5% 0% 10%				\$11,133 \$38,965 \$33,398 \$83,496 \$27,832 \$27,832 \$0 \$55,664	
Non-Refundable HST Construction 1.76% \$10,777	i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST	7% 6% 15% 5% 5% 0% 10%				\$11,133 \$38,965 \$33,398 \$83,496 \$27,832 \$27,832 \$0 \$55,664	
Non-Refundable HST Sub-Total	i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST	7% 6% 15% 5% 5% 0% 10%				\$11,133 \$38,965 \$33,398 \$83,496 \$27,832 \$27,832 \$0 \$55,664 \$55,664	
Property Requirements	I. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design	7% 6% 15% 5% 5% 0% 10%				\$11,133 \$38,965 \$33,398 \$83,496 \$27,832 \$27,832 \$55,664 \$55,664	
Land Acquisition Cost	I. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees ii. Design Fees iii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Design	7% 6% 15% 5% 5% 0% 10%				\$11,133 \$38,965 \$33,398 \$83,496 \$27,832 \$27,832 \$0 \$55,664 \$55,664	
Land Acquisition Cost	I. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees ii. Design Fees iii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Design	7% 6% 15% 5% 5% 0% 10%				\$11,133 \$38,965 \$33,398 \$83,496 \$27,832 \$27,832 \$0 \$55,664 \$55,664	
Easement	i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Construction Non-Refundable HST Sub-Total	7% 6% 15% 5% 5% 0% 10%				\$11,133 \$38,965 \$33,398 \$83,496 \$27,832 \$27,832 \$0 \$55,664 \$55,664	
Other	i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements	7% 6% 15% 5% 5% 0% 10%				\$11,133 \$38,965 \$33,398 \$83,496 \$27,832 \$27,832 \$0 \$55,664 \$55,664 \$1,274 \$10,777 \$12,246	
Property Requirements Sub-Total	i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements	7% 6% 15% 5% 5% 0% 10%				\$11,133 \$38,965 \$33,398 \$83,496 \$27,832 \$27,832 \$0 \$55,664 \$55,664 \$1,274 \$10,777 \$12,246	
Total (2015 Dollars)	I. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements I. Land Acquisition Cost	7% 6% 15% 5% 5% 0% 10%				\$11,133 \$38,965 \$33,398 \$83,496 \$27,832 \$27,832 \$0 \$55,664 \$55,664 \$196 \$11,274 \$10,777 \$12,246	
Other Estimate \$0	i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Sub-Total Non-Refundable HST Design Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements i. Land Acquisition Cost ii. Easement	7% 6% 15% 5% 5% 0% 10%				\$11,133 \$38,965 \$33,398 \$83,496 \$27,832 \$27,832 \$0 \$55,664 \$55,664 \$196 \$11,274 \$10,777 \$12,246	
Other Estimate \$0	i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Suby Non-Refundable HST Suby Non-Refundable HST Construction Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements i. Land Acquisition Cost ii. Easement iii. Other	7% 6% 15% 5% 5% 0% 10%				\$11,133 \$38,965 \$33,398 \$83,496 \$27,832 \$27,832 \$0 \$55,664 \$55,664 \$1,274 \$10,777 \$12,246	
Other Estimate \$0	i. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Suby Non-Refundable HST Suby Non-Refundable HST Construction Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements i. Land Acquisition Cost ii. Easement iii. Other	7% 6% 15% 5% 5% 0% 10%				\$11,133 \$38,965 \$33,398 \$83,496 \$27,832 \$27,832 \$0 \$55,664 \$55,664 \$1,274 \$10,777 \$12,246	
	I. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Sub-Total Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements I. Land Acquisition Cost iii. Easement iii. Other Property Requirements Sub-Total	7% 6% 15% 5% 5% 0% 10%				\$11,133 \$38,965 \$33,398 \$83,496 \$27,832 \$27,832 \$0 \$55,664 \$1,274 \$10,777 \$12,246	
	I. Study ii. Design iii. Construction Administration/Inspection Consultant Engineering Sub-Total In-House Fees i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Design Non-Refundable HST Design Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements i. Land Acquisition Cost ii. Easement iii. Other Property Requirements Sub-Total Total (2015 Dollars)	7% 6% 15% 5% 5% 0% 10%				\$11,133 \$38,965 \$33,965 \$83,496 \$27,832 \$27,832 \$27,832 \$55,664 \$55,664 \$1,274 \$10,777 \$12,246 \$0 \$0 \$0 \$0 \$0 \$0	Rounded to nearest \$1,000





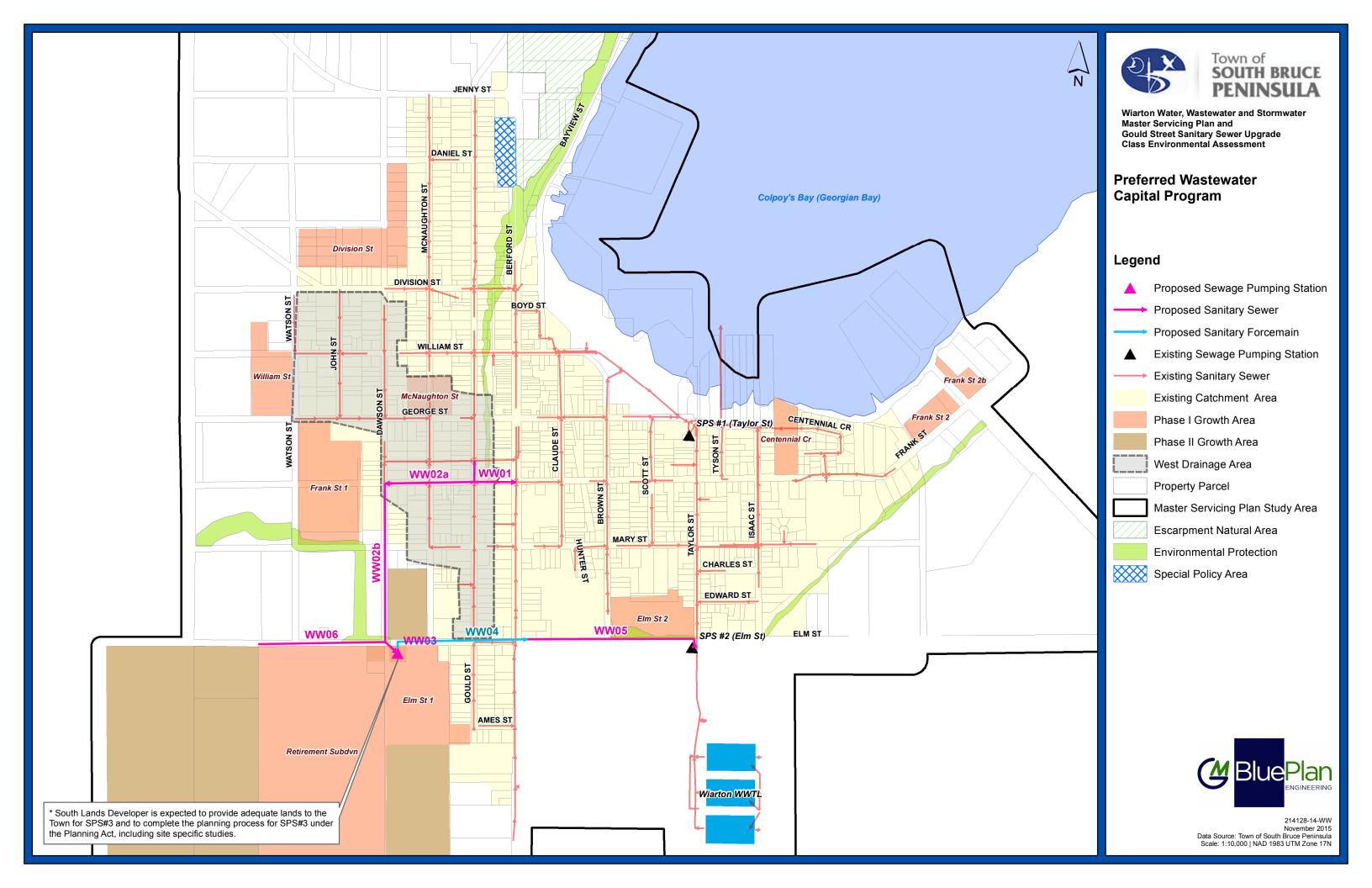
WIARTON WATER, WASTEWATER AND STORMWATER MASTER SERVICING PLAN

WASTEWATER CAPITAL PROGRAM 2015



WASTEWATER CAPITAL & IMPLEMENTATION PROGRAM

Project Number	Project Name	Project Description	Project Trigger	Start Year	Year in Service	Class EA Schedule	Project Type	Size/ Capacity	Length (m) / Size (L/s)	Construction Assumption	Unit Cost (2014\$)	Base Cost (2014\$)	Crossing & Tunnelling (2014\$)	Permiting, Enviromental, Geotechnical, & Other (2014\$)	Total Construction Cost (2014\$)	Total Engineering & Design (2014\$)	Contingency (2014\$)	Non Refundable HST (2014\$)	Total Project Cost (2015\$)	Grants and Subsidies (2014\$)	Growth Split (%)	Existing Split (%)	Direct Developer Cost (2014\$)	Benefit to Existing (2014\$)	DC Comment
WW01	Gould St Diversion Sewer 1	200 m - 375 mm sanitary sewer on Gould Street, from easement to Frank Street, and on Frank Street, from Gould Street to Berford Street (Short Term Diversion).	Existing Condition / Capacity Requirements.	2016	2016-2021	A+	SAN	375 mm	200 m	5m	\$692	\$138,000	\$0	\$10,000	\$148,000	\$36,000	\$15,000	\$3,000	\$202,000	\$0	12.6%	87.4%	\$25,496	\$176,504	Project required to address existing deficient sever on easement north of Frank St, from Gould St to Beford St. New sanitary sever will convey flows from existing west area to Beford St. Recommend splitting based on proportion of future growth flows tributary to west area to existing flows in west area.
WW02a	Gould St Diversion Sewer 2a	351 m - 375 mm sanitary sewer on Frank Street, from Gould Street to Dawson Street (Long Term Diversion).	Project is required to support existing service area as well as growth. Trigger for long term diversion will be development of South Lands.	2021	2021-2026	A+	SAN	375 mm	283 m	10m	\$2,339	\$662,000	\$0	\$13,000	\$675,000	\$166,000	\$68,000	\$15,000	\$924,000	\$0	44.4%	55.6%	\$409,796	\$514,204	Intent of the Gould Street Diversion Sewer is to divertifices from the west area sway from SPS#1 to the future South Lands SPS#3. The project benefits existing service area and intensification growth in the west area to 2029. Recommend splitting based on proportion of toal future growth flows in Winton to total existing flows in Winton.
WW02b		845 m - 375 mm sanitary sewer on Dawson Street, from Frank Street to future SPS #3 on Elm Street (Long Term Diversion).	Project is required to support existing service area as well as growth. Trigger for long term diversion will be development of South Lands.	2021	2021-2026	A+	SAN	375 mm	495 m	5m	\$692	\$343,000	\$0	\$7,000	\$349,000	\$86,000	\$35,000	\$8,000	\$478,000	\$0	44.4%	55.6%	\$211,994	\$266,006	Intent of the Gould Street Diversion Sewer is to divert flows from the west area away from SPS41 to the future South Lands SPS43. The project honeifits existing service area and intensification growth in the west area to 2029. Recommend splitting based on proportion of total future growth flows in Wintron to total existing flows in Wintron.
WW03	South Lands Pump Station #3	134 L/s Sewage Pumping Station at the corner of Elm Street and the future Dawson Street extension, servicing the future South Lands development and the existing west area. Location may vary depending on layout of development.	Project is required to support growth in southwest Wiarton, and will also improve existing system performance by diverting flows away from SPS #1.	2021	2021-2026	В	SAN		134 L/s	-	\$16,736	\$2,243,000	\$0	\$45,000	\$2,332,000	\$381,000	\$224,000	\$118,000	\$3,055,000	\$1,000,000	44.4%	55.6%	\$1,354,900	\$1,700,100	Intent of SPStR3 is to convey existing flows from the west area and future flows from the South Lands development to SPStR2. The project benefits the entire existing service area and supports Greenfield and Intensification growth to 2029. Recommend splitting based on proportion of total future growth flows in Wilatron to total existing flows in Wilatron to total existing flows in Wilatron.
WW04	Elm St Forcemain	452 m - 400 mm sanitary forcemain on Elm Street, from SPS#3 to east of Berford Street.	Project is required to support growth in southwest Wiarton, and will also improve existing system performance by diverting flows away from SPS #1.	2021	2021-2026	A+	SAN	400 mm	452 m	Forcemain	\$1,072	\$485,000	\$0	\$10,000	\$494,000	\$122,000	\$49,000	\$11,000	\$676,000	\$0	44.4%	55.6%	\$299,808	\$376,192	Intent of Elm Street sanitary forcemain is to convey existing flows from the west area and future flows from the South Lands development to SPSM2. The project benefits the entire existing service area and supports Greenfield and intensification growth to 2029. Recommend splitting based on proportion of total future growth flows in Witarton.
WW05	Elm St Gravity Sewer to SPS #2	557 m - 450 mm sanitary sewer on Elm Street, from east of Berford Street to SPS #2 at Taylor Street.	Project is required to support growth in southwest Wiarton, and will also improve existing system performance by diverting flows away from SPS #1.	2021	2021-2026	A+	SAN	450 mm	557 m	5m	\$735	\$409,000	\$153,000	\$11,000	\$574,000	\$141,000	\$57,000	\$13,000	\$785,000	\$0	44.4%	55.6%	\$348,149	\$436,851	Intent of Elm Street sanitary sever is to convey existing flows from the west area and future flows from the South Lands development to SPS4Z. The project benefits the entire existing service area and supports Greenfield and intensification growth for 2029. Recommend splitting based on proportion of total future growth flows in Witarton to total existing flows in Witarton.
WW06	South Lands Elm St Sanitary Sewer to SPS #3	662 m - 375 mm sanitary sewer on Elm Street, from west limit of Phase I South Lands development to SPS #3 at Dawson Street.	Growth in South Lands.	2021	2021-2026	A+	SAN	375 mm	468 m	5m	\$692	\$324,000	\$0	\$6,000	\$337,000	\$83,000	\$34,000	\$7,000	\$461,000	\$0	100.0%	0.0%	\$461,000	\$0	Intent of South Lands sanitary sewer on Elm Street is to convey future flows from the South Lands development to SPS#3. The project supports Greenfield to 2023. All costs to be assumed by developer.
WW07	Long Term Inflow & Infiltration Reduction Program	Removal of extraneous flow connections to the sanitary sewer system (downspouts, weeping tiles / foundation drains, sump pump, catchbasin connections, etc.) identified through previous surveys. Approximately 100 candidate properties are identified for disconnection works estimated at a cost of \$10,000 per property. Program is recommended to be implemented from 2016 to 2026 at approximately \$100,000 per year.	Program is required to support existing service area as well as growth. Removal of extraneous flows is expected to reduce peak flows at SPS#1 and SPS#2, eliminating the need to upgrade existing SPS facilities.	2016	2016-2029		SAN		N/A	N/A									\$1,000,000	\$0	44.4%	55.6%	\$443,503	\$556,497	Project is required to support existing service area as well as growth. Removal of extraneous flows is expected to further reduce peak flows at SPS#1 and SPS#2, eliminating the need to upgrade existing SPS facilities. It Reduction was also recommended as part of the 2015 Wiarton WWTP Class EA.
TOTAL												\$4,604,000	\$153,000	\$102,000	\$4,909,000	\$1,015,000	\$482,000	\$175,000	\$7,581,000	\$1,000,000	-	-	\$3,554,647	\$3,026,353	







PROJECT NO.: PROJECT NAME: PROJECT DESCRIPTION:

1 Temporary Gould St Diversion Sewer 1

Short-term diversion of flows from West Area away from existing connection at Gould St and easement to Frank St and Berford St.

CAPITAL BUDGET YEAR: VERSION: DATE UPDATED: UPDATED BY:

2016-2021 1.0 9/25/2015

 PROPOSED DIAMETER:
 375 mm

 TOTAL LENGTH:
 200 m

CLASS EA REQUIREMENTS:	Schedule A+
CONSTRUCTION ASSUMPTION:	5m

COST ESTIMATION SPREADSHEET						
COMPONENT	RATE (%)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost	(76)		QUANTITI			
i. Pipe Construction Open Cut		m	200 m	\$692	\$138 414	Existing road ROW
ii. Pipe Construction Uplift	0%		0 m	\$0		
	0%	m				Drop manhole(s) may be required due to elevation drop.
iii. Minor Creek Crossings		ea	0	\$142,000	\$0	
iv. Major Creek Crossings		ea		\$795,000	\$0	
v. Road Crossings (Highway)		ea		\$343,000	\$0	
vi. Major Road Crossings (Freeway)		ea	0	\$795,000	\$0	
vii. Rail Crossings		ea		\$343,000	\$0	
viii. Hydro Corridor Crossings		ea		\$343,000	\$0	
ix. Trans Canada Pipeline Crossings		ea	0	\$142,000	\$0	
x. Tunneling		m		\$5,020	\$0	
xi. Endangered Species		ls		ψ0,020	\$0	
xii. Value Engineering		Is			\$0	
		IS				
xii. Other Construction Costs					\$7,000	Drop manhole(s) may be required due to elevation drop.
Construction Sub-Total Cost					\$145,414	
Construction Contingency	10%				\$0	

Construction Total	1	I	1		\$145,414	
Geotechnical Requirements			+	+		
i. Geotechnical/Hydrogeological/Materials	2%				\$2,908	
Geotechnical Sub-Total Cost	270			1		
Geotechnical Sub-Total Cost		1			\$2,908	
Permit/Approvals Requirements						
i. Engineering Fees					\$0	
ii. Other					\$0	
iii. Other					\$0	
Permit/Approval Requirements Sub-Total			_!		\$0	
	1	l			***	
				_		
Sub-Total Base Costs	·	i	1		\$148,322	
Consultant Engineering						
i. Study	2%				\$2,373	
ii. Design	7%				\$10,383	
iii. Construction Administration/Inspection	6%				\$8,899	
Consultant Engineering Sub-Total	15%				\$21,655	
Consultant Engineering Sub-Total	1376				Ψ21,033	
In Haves Fees				+		
In-House Fees						
i. Design Fees	5%				\$7,416	
ii. Construction Fees	5%				\$7,416	
iii. Other	0%				\$0	
In-House Fees Sub-Total	10%				\$14,832	
Project Contingency			1			
Project Contingency	10%		+		\$14,832	
Project Contingency Sub-Total	1070				\$14,832	
1 Toject Contingency Gub-Total					⊅14,03 2	
New Personal LIOT			+	1		
Non-Refundable HST			1	ļ		
Non-Refundable HST Study	1.76%				\$42	
Non-Refundable HST Design	1.76%				\$339	
Non-Refundable HST Construction	1.76%				\$2,872	
Non-Refundable HST Sub-Total	•		•	•	\$3,253	
			T		,	
Property Requirements	_		+			
i. Land Acquisition Cost			+	1	\$0	
			+	1		
ii. Easement					\$0	
iii. Other					\$0	
Property Requirements Sub-Total					\$0	
Total (2015 Dollars)			•	•	\$203,000	Rounded to nearest \$1,000
Other Estimate						
Chosen Estimate					\$203,000	Master Plan 2015 Estimate
					Ψ 2 03,000	master Fian 2013 Estimate



PROJECT NAME:

PROJECT DESCRIPTION:

WIARTON WATER, WASTEWATER AND STORMWATER MASTER SERVICING PLAN PROJECT TRACKING AND COSTING SHEET



PROJECT NO .:

Gould St Diversion Sewer 2a

First of two sections of gravity sewer on Frank St intended to convey existing 70 L/s from West Area southwest to future SPS #3

CAPITAL BUDGET YEAR: 2021-2026 VERSION: 1.0 DATE UPDATED: 9/25/2015

LB

UPDATED BY:

PROPOSED DIAMETER: TOTAL LENGTH: 375 mm 283 m

CLASS EA REQUIREMENTS:	Schedule A+
CONSTRUCTION ASSUMPTION:	10m

	RATE		ESTIMATED			
COMPONENT	(%)	UNIT	QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost						
i. Pipe Construction Open Cut		m	283 m	\$2,339	\$661,981	Potential for deep sewer construction on Frank Street
ii. Pipe Construction Uplift	0%	m	0 m	\$0	\$0	
iii. Minor Creek Crossings		ea	0	\$142,000	\$0	
iv. Major Creek Crossings		ea		\$795,000	\$0	
v. Road Crossings (Highway)		ea		\$343,000	\$0	
vi. Major Road Crossings (Freeway)		ea	0	\$795,000	\$0	
vii. Rail Crossings		ea		\$343,000	\$0	
viii. Hydro Corridor Crossings		ea		\$343,000	\$0	
ix. Trans Canada Pipeline Crossings		ea	0	\$142,000	\$0	
x. Tunneling		m		\$5,020	\$0	
xi. Endangered Species		ls			\$0	
xii. Value Engineering		ls			\$0	
xii. Other Construction Costs					\$0	
Construction Sub-Total Cost					\$661,981	
Construction Contingency	0%				\$0	
, , , , , , , , , , , , , , , , , , ,						
Construction Total	l				\$661,981	
			1		, ,	
Geotechnical Requirements						
i. Geotechnical/Hydrogeological/Materials	2%				\$13,240	
Geotechnical Sub-Total Cost				1	\$13,240	
Geolecinical cub-rotal cost	1		1	1	ψ10,£40	
Permit/Approvals Requirements						
i. Engineering Fees					\$0	
ii. Other					\$0	
iii. Other					\$0	
Permit/Approval Requirements Sub-Total		L	<u> </u>		\$0	
reminapproval Requirements Sub-Total	1	1	1		ψU	
Out Tatal Base Orate						
Sub-Total Base Costs	ı	ı			\$675,221	
Consultant Engineering						
i. Study	2%				\$10,804	
ii. Design iii. Construction Administration/Inspection	7% 6%				\$47,265 \$40,513	
Consultant Engineering Sub-Total	15%				\$98,582	
In Harris Face						
			+	+		
In-House Fees	#0/				400 804	
i. Design Fees	5%				\$33,761	
i. Design Fees ii. Construction Fees	5%				\$33,761	
i. Design Fees ii. Construction Fees iii. Other	5% 0%				\$33,761 \$0	
i. Design Fees ii. Construction Fees	5%				\$33,761	
i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total	5% 0%				\$33,761 \$0	
i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency	5% 0% 10%				\$33,761 \$0 \$67,522	
i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency	5% 0%				\$33,761 \$0 \$67,522 \$67,522	
i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency	5% 0% 10%				\$33,761 \$0 \$67,522	
i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total	5% 0% 10%				\$33,761 \$0 \$67,522 \$67,522	
i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST	5% 0% 10%				\$33,761 \$0 \$67,522 \$67,522 \$67,522	
i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST	5% 0% 10% 10%				\$33,761 \$0 \$67,522 \$67,522 \$67,522	
i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design	5% 0% 10% 10%				\$33,761 \$0 \$67,522 \$67,522 \$67,522 \$190 \$1,545	
i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Construction	5% 0% 10% 10%				\$33,761 \$0 \$67,522 \$67,522 \$67,522 \$190 \$1,545	
i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design	5% 0% 10% 10%				\$33,761 \$0 \$67,522 \$67,522 \$67,522 \$190 \$1,545	
i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Construction Non-Refundable HST Sub-Total	5% 0% 10% 10%				\$33,761 \$0 \$67,522 \$67,522 \$67,522 \$190 \$1,545	
i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements	5% 0% 10% 10%				\$33,761 \$0 \$67,522 \$67,522 \$67,522 \$190 \$1,545 \$13,072 \$14,807	
i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Non-Refundable HST Design Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements I. Land Acquisition Cost	5% 0% 10% 10%				\$33,761 \$0 \$67,522 \$67,522 \$67,522 \$190 \$1,545 \$13,072 \$14,807	
i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements i. Land Acquisition Cost ii. Easement	5% 0% 10% 10%				\$33,761 \$0 \$67,522 \$67,522 \$67,522 \$13,072 \$14,807	
i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Design Non-Refundable HST Design Non-Refundable HST Sub-Total Property Requirements I. Land Acquisition Cost	5% 0% 10% 10%				\$33,761 \$0 \$67,522 \$67,522 \$67,522 \$190 \$1,545 \$13,072 \$14,807	
i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements i. Land Acquisition Cost ii. Easement	5% 0% 10% 10%				\$33,761 \$0 \$67,522 \$67,522 \$67,522 \$13,072 \$14,807	
i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Study Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements i. Land Acquisition Cost ii. Easement iii. Other	5% 0% 10% 10%				\$33,761 \$0 \$67,522 \$67,522 \$67,522 \$190 \$1,545 \$13,072 \$14,807	
i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Study Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements i. Land Acquisition Cost ii. Easement iii. Other	5% 0% 10% 10%				\$33,761 \$0 \$67,522 \$67,522 \$67,522 \$190 \$1,545 \$13,072 \$14,807 \$0 \$0	Rounded to nearest \$1,000
i. Design Fees ii. Construction Fees iii. Other In-House Fees Sub-Total Project Contingency Project Contingency Project Contingency Sub-Total Non-Refundable HST Non-Refundable HST Study Non-Refundable HST Design Non-Refundable HST Construction Non-Refundable HST Sub-Total Property Requirements i. Land Acquisition Cost iii. Easement iii. Other Property Requirements Sub-Total	5% 0% 10% 10%				\$33,761 \$0 \$67,522 \$67,522 \$67,522 \$190 \$1,545 \$13,072 \$14,807 \$0 \$0	



UPDATED BY:



LB

PROJECT NO.: CAPITAL BUDGET YEAR: 2021-2026 PROJECT NAME: VERSION: Gould St Diversion Sewer 2b 1.0 PROJECT DESCRIPTION: DATE UPDATED: 9/25/2015

Second of two sections of gravity sewer on Dawson St intended to convey existing 70 L/s from West Area southwest to future SPS #3

PROPOSED DIAMETER:	375 mm	CLASS EA REQUIREMENTS:	Schedule A+
TOTAL LENGTH:	495 m	CONSTRUCTION ASSUMPTION:	5m

COST ESTIMATION SPREADSHEET						
COMPONENT	RATE (%)	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost	(70)		QUANTITY			
i. Pipe Construction Open Cut		m	495 m	\$692	\$342.575	Existing road ROW and unopened road allowance
ii. Pipe Construction Uplift	0%	m	0 m	\$0	\$0	
iii. Minor Creek Crossings	070	ea	0 111	\$142,000	\$0	
iv. Major Creek Crossings		ea		\$795,000	\$0	
v. Road Crossings (Highway)		ea		\$343,000	\$0	1
		1		\$795,000	\$0	
vi. Major Road Crossings (Freeway)		ea				I.
vii. Rail Crossings		ea		\$343,000	\$0	1
viii. Hydro Corridor Crossings		ea		\$343,000	\$0	
ix. Trans Canada Pipeline Crossings		ea		\$142,000	\$0	1
x. Tunneling		m		\$5,020	\$0	
xi. Endangered Species		ls			\$0	I.
xii. Value Engineering		Is			\$0	
xii. Other Construction Costs					\$0	
Construction Sub-Total Cost					\$342,575	
Construction Contingency	0%				\$0	
	•					
Construction Total					\$342,575	
Geotechnical Requirements						
i. Geotechnical/Hydrogeological/Materials	2%				\$6,851	
Geotechnical Sub-Total Cost			l.		\$6,851	
Cooleeninear Cap Total Cool		1			, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Permit/Approvals Requirements						
					\$0	
i. Engineering Fees						1
ii. Other					\$0	1
iii. Other				1	\$0	1
Permit/Approval Requirements Sub-Total					\$0	
Sub-Total Base Costs					\$349,426	
Consultant Engineering						
i. Study	2%				\$5,591	
ii. Design	7%				\$24,460	
iii. Construction Administration/Inspection	6%				\$20,966	
Consultant Engineering Sub-Total	15%				\$51,016	
	1470				70.,010	
In-House Fees						
i. Design Fees	5%				\$17,471	
_	5%				\$17,471	
ii. Construction Fees iii. Other	0%				\$17,471	
In-House Fees Sub-Total	10%				\$34,943	
Project Contingency						
Project Contingency	10%				\$34,943	
Project Contingency Sub-Total					\$34,943	
Non-Refundable HST						
Non-Refundable HST Study	1.76%				\$98	
Non-Refundable HST Design	1.76%	1	1	1	\$799	
Non-Refundable HST Construction	1.76%	1		† 1	\$6,765	
Non-Refundable HST Sub-Total					\$7,663	
				1	7.,000	
Property Requirements		 		+ -		
i. Land Acquisition Cost	+	 	+	+	\$0	
ii. Easement	_	 		+		Unopened road allowance from Mary St to Dawson St
	_	 		1		
iii. Other		L	L	L	\$0	1
Property Requirements Sub-Total					\$0	
		<u> </u>				
Total (2015 Dollars)					\$478,000	Rounded to nearest \$1,000
Other Estimate						
Chosen Estimate					\$478,000	Master Plan 2015 Estimate



PROJECT DESCRIPTION:

MAP REF:

WIARTON WATER, WASTEWATER AND STORMWATER MASTER SERVICING PLAN PROJECT TRACKING AND COSTING SHEET

Town of SOUTH BRUCE PENINSULA 2021-2026

PROJECT NO.: PROJECT NAME:

Wiarton South Lands Sewage Pumping Station (SPS#3)

Sewage Pumping Station intended to convey existing west area & future South Lands development flows (134 L/s)

214128-WW-14

PROPOSED SIZE: 11.58 ML/d 134.00 L/s

CAPITAL BUDGET YEAR:

VERSION: 1.0 DATE UPDATED:

UPDATED BY: LB

CLASS EA REQUIREMENTS: Schedule B

COST ESTIMATION SPREADSHEET						
COMPONENT	RATE	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost	(%)		QUANTITY			
i. Greenfield Wastewater Pumping Station		L/s	134	\$16,736	\$2 242 624	To convey future South Lands & existing west area
ii. Wastewater Pumping Station Expansion		L/s	134	\$4,184	\$2,242,024	To convey fatare count Eurido & existing west area
iii. Wastewater Treatment Pre Treatment (headworks)		ML/D		\$380,202	\$0	
iv. Primary Treatment		ML/D		\$61,783	\$0	
v. Secondary Treatment		ML/D		\$261,389	\$0	
vi. Thickening/dewatering/storage/unloading		ML/D		\$70,835	\$0	
vii. Incineration		ML/D		\$190,101	\$0	
viii.Disinfection/de-chlorination		ML/D		\$11,881	\$0	
ix. Outfall	-	LM	-	\$7,604	\$0	
x. Wastewater Storage	-	LIVI	-	\$7,604	\$0	
xi. Extra Factor for Rock Excavation		2		\$453	80	
xii. Endangered Species		m ²		\$453	\$0	
		ls			\$0	
xiii. Value Engineering		ls			\$0	
xiv. Other Construction Costs					\$0	
Construction Sub-Total Cost					\$2,242,624	
Construction Contingency	0%				\$0	
Construction Total	1	1	1		\$2,242,624	
				1		
Geotechnical Requirements						
i. Geotechnical/Hydrogeological/Materials	2%				\$44,852	
Geotechnical Sub-Total Cost					\$44,852	
Permit/Approvals Requirements						
i. Engineering Fees	2%				\$45,000	Allowance for potential extra permitting requirements due to potential construction within GSCA regulation limits.
ii. Other					\$0	
iii. Other					\$0	
Permit/Approval Requirements Sub-Total		l.	1		\$45,000	
					4 10,000	
Sub-Total Base Costs					\$2,332,476	
					, ,,,,,,,	
Consultant Engineering						
i. Study	1.4%				\$30,500	
ii. Design	4.8%				\$106,749	
iii. Construction Administration/Inspection	4.1%				\$91,499	
Consultant Engineering Sub-Total	10%				\$228,748	
Constitute Engineering Cub-10tui	1076				\$220,740	
In-House Fees						
i. Design Fees	3.4%		-		\$76,249	
ii. Construction Fees iii. Other	3.4% 0.0%	-			\$76,249 \$0	
In-House Fees Sub-Total						
III-House rees Sub-Total	7%				\$152,498	
Business Counting and Counting						
Project Contingency						
Project Contingency	10%		1		\$224,262	
Project Contingency Sub-Total					\$224,262	
New Before debte 1107	+	-	+	1		
Non-Refundable HST			<u> </u>			
Non-Refundable HST Study	1.76%	ļ	1		\$39,470	
Non-Refundable HST Design	1.76%	ļ	1		\$39,470	
Non-Refundable HST Construction	1.76%	<u> </u>	1		\$39,470	
Non-Refundable HST Sub-Total					\$118,411	
	1		1			
Property Requirements			1			
i. Land Acquisition Cost						Land expected to be provided by developer.
ii. Easement					\$0	
iii. Other					\$0	
Property Requirements Sub-Total					\$0	To be confirmed.
						_
Total (2015 Dollars)	•	•			\$3,056,396	Rounded to nearest \$1,000
Other Estimate						
Chosen Estimate					\$3,056,396	Master Plan 2015 Estimate





PROJECT NO.: PROJECT NAME: PROJECT DESCRIPTION:

Elm St Forcemain
Forcemain from future SPS #3 intended to convey existing west area flows and
future flows from South Lands development to existing SPS#2

CAPITAL BUDGET YEAR: VERSION: DATE UPDATED: UPDATED BY:

2021-2026 1.0 9/25/2015 LB

400 mm 452 m PROPOSED DIAMETER: TOTAL LENGTH:

CLASS EA REQUIREMENTS:	Schedule A+
CONSTRUCTION ASSUMPTION:	Forcemain

COST ESTIMATION SPREADSHEET						
COMPONENT	RATE	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost	(%)		QUANTITY			
i. Pipe Construction Open Cut		m	452 m	\$1,072	\$484 570	Existing road ROW
ii. Pipe Construction Uplift	0%	m	0 m	\$0	\$0	
iii. Minor Creek Crossings	070	ea	0	\$174,000	\$0	
iv. Major Creek Crossings		ea	U	\$851.000	\$0	
v. Road Crossings (Highway)				\$382,000	\$0	
		ea				
vi. Major Road Crossings (Freeway)		ea		\$851,000	\$0	
vii. Rail Crossings		ea		\$382,000	\$0	
viii. Hydro Corridor Crossings		ea		\$382,000	\$0	
ix. Trans Canada Pipeline Crossings		ea		\$174,000	\$0	
x. Tunneling		m		\$5,210	\$0	
xi. Endangered Species		Is			\$0	
xii. Value Engineering		Is			\$0	
xii. Other Construction Costs					\$0	
Construction Sub-Total Cost					\$484,579	
Construction Contingency	0%				\$0	
Construction Total	•	1	1	1	\$484,579	
			ļ			
Geotechnical Requirements						
i. Geotechnical/Hydrogeological/Materials	2%				\$9,692	
Geotechnical Sub-Total Cost					\$9,692	
Permit/Approvals Requirements						
i. Engineering Fees					\$0	
ii. Other					\$0	
iii. Other					\$0	
Permit/Approval Requirements Sub-Total	•	•	•	•	\$0	
Sub-Total Base Costs					\$494,271	
Consultant Engineering						
i. Study	2%				\$7,908	
ii. Design	7%				\$34,599	
iii. Construction Administration/Inspection	6%				\$29,656	
Consultant Engineering Sub-Total	15%				\$72,164	
	10,0				¥,	
In-House Fees						
i. Design Fees	5%				\$24,714	
ii. Construction Fees	5%				\$24,714	
iii. Other	0%					
					\$0	
In-House Fees Sub-Total	10%				\$49,427	
Bushest Continues	-	ļ	ļ			
Project Contingency	400/		ļ		***	
Project Contingency	10%				\$49,427	
Project Contingency Sub-Total					\$49,427	
		1	ļ			
Non-Refundable HST						
Non-Refundable HST Study	1.76%				\$139	
Non-Refundable HST Design	1.76%				\$1,131	
Non-Refundable HST Construction	1.76%				\$9,569	
Non-Refundable HST Sub-Total					\$10,839	
Property Requirements						
i. Land Acquisition Cost					\$0	
ii. Easement					\$0	
iii. Other			İ		\$0	
Property Requirements Sub-Total		•			\$0	
, , , , , , , , , , , , , , , , , , , ,						
Total (2015 Dollars)					\$676.000	Rounded to nearest \$1,000
Other Estimate					7 , 500	
Chosen Estimate					\$676,000	Master Plan 2015 Estimate
-moon _cumato					\$010,000	master Flair 2010 Estimate





PROJECT NO.: PROJECT NAME: PROJECT DESCRIPTION:

5 Elm St Gravity Sewer to SPS #2

Gravity Sewer on Elm St to convey flows from South Lands development to future SPS $\mbox{\tt\#3}$

CAPITAL BUDGET YEAR: VERSION: DATE UPDATED: UPDATED BY:

2021-2026 1.0 9/25/2015 LB

PROPOSED DIAMETER: 450 mm
TOTAL LENGTH: 557 m

CLASS E	A REQUIREMENTS:	Schedule A+
CONSTR	UCTION ASSUMPTION:	5m

COST ESTIMATION SPREADSHEET						
COMPONENT	RATE	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost	(%)		QUANTITY			
i. Pipe Construction Open Cut		m	557 m	\$735	\$400.313	Existing road ROW
ii. Pipe Construction Uplift	0%	m	0 m	\$0	\$409,515	
iii. Minor Creek Crossings	070	ea	1	\$153,000		Minor creek (culvert) crossing at approx. Brown St
iv. Major Creek Crossings			-	\$880,000		· · · · · · · · · · · · · · · · · · ·
_		ea			\$0	
v. Road Crossings (Highway)		ea		\$377,000	\$0	
vi. Major Road Crossings (Freeway)		ea		\$880,000	\$0	
vii. Rail Crossings		ea		\$377,000	\$0	
viii. Hydro Corridor Crossings		ea		\$377,000	\$0	
ix. Trans Canada Pipeline Crossings		ea		\$153,000	\$0	
x. Tunneling		m		\$5,588	\$0	
xi. Endangered Species		Is			\$0	
xii. Value Engineering		ls			\$0	
xii. Other Construction Costs					\$0	
Construction Sub-Total Cost					\$562,313	
Construction Contingency	0%				\$0	
J,		l		1		
Construction Total					\$562,313	
		1			, ,	
Geotechnical Requirements	+	 	1	1		
i. Geotechnical/Hydrogeological/Materials	2%	+	 	+	\$11,246	
	2 /0	<u> </u>		1	\$11,246	
Geotechnical Sub-Total Cost		1			\$11,24b	
Permit/Approvals Requirements						
i. Engineering Fees					\$0	
ii. Other					\$0	
iii. Other					\$0	
Permit/Approval Requirements Sub-Total					\$0	
Sub-Total Base Costs					\$573,560	
Consultant Engineering						
i. Study	2%				\$9,177	
ii. Design	7%	<u> </u>		+	\$40,149	
iii. Construction Administration/Inspection	6%			+	\$34,414	
-	15%				\$83,740	
Consultant Engineering Sub-Total	15%				\$03,740	
In-House Fees						
i. Design Fees	5%				\$28,678	
ii. Construction Fees	5%				\$28,678	
iii. Other	0%				\$0	
In-House Fees Sub-Total	10%				\$57,356	
Project Contingency						
Project Contingency	10%				\$57,356	
Project Contingency Sub-Total					\$57,356	
					•	
Non-Refundable HST				 		
Non-Refundable HST Study	1.76%			1	\$162	
Non-Refundable HST Design	1.76%	1		+	\$1,312	
Non-Refundable HST Construction	1.76%	 	+	+	\$1,104	
	1.7070	<u> </u>	<u> </u>	1		
Non-Refundable HST Sub-Total					\$12,578	
		ļ		+ +		
Property Requirements				 		
i. Land Acquisition Cost		ļ	1	1	\$0	
ii. Easement		L			\$0	
iii. Other					\$0	
Property Requirements Sub-Total	•				\$0	
Total (2015 Dollars)				•	\$785,000	Rounded to nearest \$1,000
Other Estimate						
Chosen Estimate					\$785,000	Master Plan 2015 Estimate
					4.00 ,000	matter Flam 2010 Estimate





PROJECT NO.: PROJECT NAME:

PROJECT DESCRIPTION:

South Lands Elm St Sanitary Sewer to SPS #3

Gravity Sewer on Elm St to convey flows from future SPS#3 at Elm St and Dawson St, to existing SPS#2 at Elm St and Taylor St.

CAPITAL BUDGET YEAR: VERSION:

2021-2026 1.0

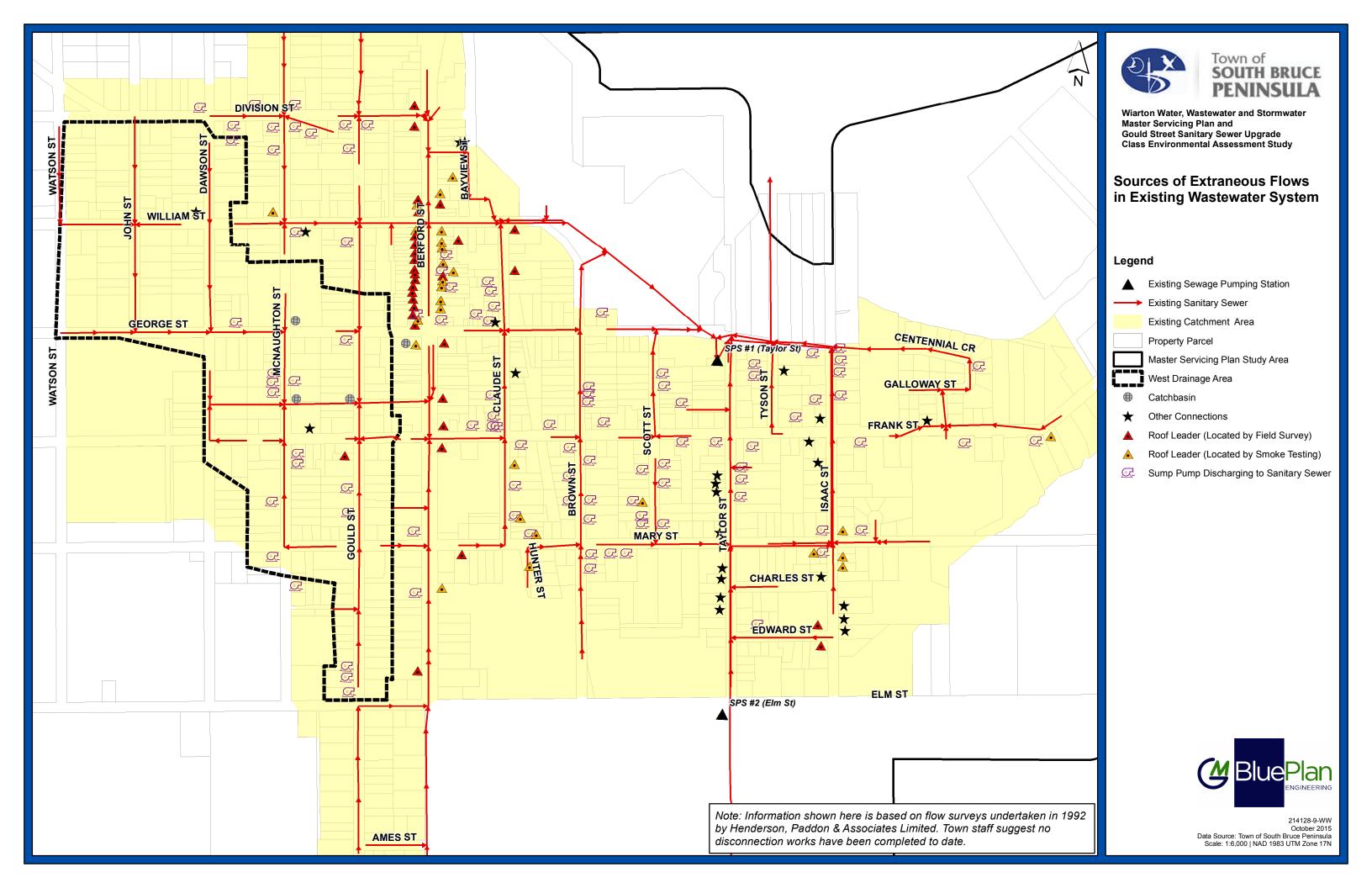
DATE UPDATED: 9/25/2015 UPDATED BY: LB

PROPOSED DIAMETER: TOTAL LENGTH:

CLASS EA REQUIREMENTS:	Schedule A+
CONSTRUCTION ASSUMPTION:	5m

276 37,000 to pote	COMMENTS ting road ROW
Construction Cost	ting road ROW
II. Pipe Construction Uplift	ting road ROW
II. Pipe Construction Uplift 0%	
III. Minor Creek Crossings	
IV. Major Creek Crossings ea \$795,000 \$0	
v. Road Crossings (Highway) ea \$343,000 \$0 vi. Major Road Crossings (Freeway) ea \$795,000 \$0 vii. Rail Crossings ea \$343,000 \$0 viii. Hydro Corridor Crossings ea \$343,000 \$0 x. Trans Canada Pipeline Crossings ea \$142,000 \$0 x. Tunneling m \$5,020 \$0 x. Tunneling m \$5,020 \$0 xi. Endangered Species is is \$0 xi. Other Construction Costs is \$0 \$0 xi. Other Construction Costs \$0 \$0 \$0 xi. Other Construction Total \$323,889 \$323,889 Construction Total \$323,889 \$323,889 \$323,889 Geotechnical Requirements \$34,478 \$34,478 \$34,478 \$34,478 Geotechnical Requirements \$34,478 \$34,478 \$34,478 \$34,478 \$34,478 \$34,478 \$34,478 \$34,478 \$34,478 \$34,478 \$34,478 \$34,478 \$34,478	
vi. Major Road Crossings (Freeway) ea \$795,000 \$0 vii. Rail Crossings ea \$343,000 \$0 viii. Hydro Corridor Crossings ea \$343,000 \$0 ix. Trans Canada Pipeline Crossings ea \$142,000 \$0 ix. Tunneling m \$5,020 \$0 xi. Undergred Species ls \$0 xii. Value Engineering ls \$0 xii. Other Construction Costs \$0 Construction Sub-Total Cost \$0 Construction Sub-Total Cost \$0 Construction Total \$323,889 Construction Total \$323,889 Geotechnical Requirements \$0 i. Geotechnical Sub-Total Cost \$6,478 Permit/Approvals Requirements \$6,478 I. Engineering Fees 2% \$7,000 ii. Other \$0 iii. Other \$0 50b	
vii. Rail Crossings ea \$343,000 \$0 viii. Hydro Corridor Crossings ea \$343,000 \$0 viii. Trans Canada Pipeline Crossings ea \$142,000 \$0 x. Tunneling m \$5,020 \$0 xi. Endangered Species is \$0 xii. Value Engineering Is \$0 xii. Other Construction Costs \$0 Construction Sub-Total Cost \$0 Construction Contingency 0% \$323,889 Construction Total \$323,889 Geotechnical Requirements \$0 \$0 I. Geotechnicall'hydrogeological/Materials 2% \$6,478 Geotechnical Sub-Total Cost \$6,478 \$6,478 Geotechnical Sub-Total Cost \$0 \$0 ii. Cither \$0 \$0 iii. Other \$0 \$0 <	
viii. Hydro Corridor Crossings ea \$343,000 \$0 ix. Trans Canada Pipeline Crossings ea \$142,000 \$0 xi. Tunneling m \$5,020 \$0 xi. Lendangered Species ls \$5,020 \$0 xii. Value Engineering ls \$0 \$0 xii. Value Engineering ls \$0 \$0 xiii. Other Construction Costs \$0 \$0 \$0 Construction Sub-Total Cost \$0 \$0 \$0 Construction Contingency 0% \$0 \$0 Construction Total \$323,889 \$0 Geotechnical Requirements \$0 \$0 \$0 I. Geotechnical Whydrogeological/Materials 2% \$6,478 \$6,478 Geotechnical Sub-Total Cost \$6,478 \$6,478 \$7,000 Ii. Chier \$0 \$7,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	
Ix. Trans Canada Pipeline Crossings ea	
X. Tunneling	
Xi. Endangered Species Is S0 Xii. Value Engineering Is S0 Xii. Value Engineering Is S0 Xii. Value Engineering Is S0 Xii. Other Construction Costs S0 Xii. Other Construction Costs S0 Xii. Other Construction Sub-Total Cost S323,889 Xii. Other Construction Contingency O% S0 Xii. Value Engineering Xii. Other Xi	
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iii. Other	otential construction within GSCA regulation limits.
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la University	
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Non-Refundable HST Study 1.76% \$95	
Non-Refundable HST Design 1.76% \$772	
Non-Refundable HST Construction 1.76% \$6,531	
Non-Refundable HST Sub-Total \$7,398	
Property Requirements	
i. Land Acquisition Cost \$0	
ii. Easement \$0	
iii. Other \$0	
Property Requirements Sub-Total \$0	
Total (2015 Dollars) \$461,000 Rounc	
	inded to pearest \$1,000
Other Estimate Other Estimate	nded to nearest \$1,000
Chosen Estimate \$461,000 Maste	





Appendix J - Project File (Schedule B Sewage Pumping Station)

2015 Wiarton Master Servicing Plan For Water, Wastewater and Stormwater Services PROJECT FILE

MSP PROJECT ID: WW03

Project Description: 11.6 ML/d SPS on Elm St /

Dawson St Extension (134 L/s)



2015 Wiarton Master Servicing Plan For Water, Wastewater and Stormwater Services



PROJECT FILE - Schedule B Class EA

Project Name: South Lands Sewage Pumping Station (SPS#3)

MS	P Project ID: WW03		
WA V	JECT TYPE TER Vatermain Pumping Station Storage Treatment Other Specify: JECT OVERVIEW	☐ Sewer (G	n / Pumping Station
Pro	ject Description: New Wastewater Pumpi ds development flows to SPS#2. Station w		
Ger	neral Area Description: Elm St and Daws	on St extensior	1
Mas	ster Plan Reference ID: WW03		Map Reference: 214128-WW-14
Imp	elementation Timeline: Phase 1 – 2017, F	Phase 2 – as So	outh Lands development occurs
Cap	oital Cost: \$3.06 M		
TAE	BLE OF CONTENTS		
1	Introduction		3
2	Problem / Opportunity Statement		3
3	Project Need and Rationale		3
4	Preliminary Alternatives		3
5	Existing Conditions		4
6	Planning Projections and Future Flows		
7	Evaluation of Alternatives		
8	Preferred Servicing Strategy (Alignment and Site)		
9	Public Consultation and Review Agency Summary		
10	Future Commitments		8
Atta Atta Atta	achment 1 – Regulation for Developmen achment 2 – Site Analysis Maps achment 3 – Evaluation Tables achment 4 – Preferred Wastewater Servi achment 5 – Project Tracking & Costing	icing Strategy	- , ,



1 Introduction

Wiarton is a small community located in the Town of South Bruce Peninsula on the west shores of Colpoy's Bay, an inlet off Georgian Bay. The existing population in Wiarton is approximately 2,291 (2011 Census). There is a significant amount of growth planned for Wiarton within the 2029 timeframe which largely consists of residential units in Greenfield areas with some intensification areas. The largest planned growth area is the South Lands which has a retirement subdivision development application.

This Project File contains project-specific information related to the extension of the existing wastewater collection system to service existing and future growth in the Town of Wiarton, specifically the proposed sewage pumping station (SPS) #3. The proposed works outlined in this documentation are intended to address existing system issues and constraints and are in line with the Town's recent Master Servicing Plan.

2 Problem / Opportunity Statement

The problem/opportunity statement for the proposed Wiarton Sewage Pumping Station SPS#3 is defined as follows:

- A comprehensive Master Servicing Plan (MSP) for storm water, wastewater, and water systems
 was undertaken to define how new developments are to be serviced. The preferred wastewater
 servicing strategy identified as part of the MSP is to direct future development lands south of Elm
 Street and west of Berford Street to a new Sanitary Pumping Station (SPS) #3 that will convey
 flows to SPS#2 on Elm Street.
- Analysis of the wastewater system has also confirmed that existing peak flows exceed the
 pumping and forcemain capacity out of SPS#1. There is opportunity through this solution to direct
 flows away from this facility, leverage planned infrastructure capacity and eliminate the need for
 any upgrades at SPS#1.
- There is also opportunity through this solution to address an existing sanitary sewer that is in very poor condition located on private property that conveys flow from the west area to the SPS#1 at Taylor Street and George Street.

3 Project Need and Rationale

The long term wastewater servicing strategy identified that a new SPS#3 is required to service future development lands south of Elm Street and west of Berford Street. This project will also divert the west area flows away from Taylor Street SPS#1, via a new gravity sewer starting from Gould Street and Frank Street to Dawson Street and Elm Street. This west area flow diversion will address capacity limitations at SPS#1, eliminating the need for upgrades at SPS#1, reducing overflows to Colpoy's Bay, and alleviating basement flooding to residents in low lying areas.

Given the capital infrastructure requirements of this strategy, an interim solution to address the sanitary sewer north of Frank Street, between Gould Street and Berford Street is to construct a gravity sewer starting on Gould Street, north of Frank Street to Frank Street and Berford Street.

4 Preliminary Alternatives

Site alternatives for this SPS#3 are required around Elm Street as the South Lands slope generally towards Elm Street and slightly to the west. As such, three sites have been identified along Elm St described as follows and shown on maps in Attachment 1:

Site 1 - Elm St and Future Dawson St Extension



There are three (3) variations within this location:

- Site 1a is located at the intersection on the northeast corner of Elm St and the future Dawson St extension. According to the existing Official Plan (OP) designation, existing land use on this parcel is zoned residential but it is currently vacant with some vegetation and small shrubs.
- Site 1b is located at the intersection on the southeast corner of Elm St and the future Dawson St extension. According to the existing OP designation, existing land use on this parcel is zoned residential but it is also vacant with limited vegetation and small shrubs.
- Site 1c is located at the intersection on the southwest corner of Elm St and the future Dawson St
 extension. According to the existing OP designation, existing land use on this parcel is zoned
 industrial but there is currently a dwelling that occupies this parcel.

Site 2 - Elm St and Future Watson St Extension

Site 2 is at the intersection of Elm Street and the future Watson Street extension. According to the
existing OP designation, existing land use on this parcel is zoned industrial and it is not currently
occupied by any dwellings.

Site 3 - Elm St and West Town Limit

Site 3 is at the west limit of the urban settlement boundary. According to the existing OP
designation, existing land use on this parcel is zoned industrial and is currently occupied by a
private dwelling.

5 Existing Conditions

Wastewater Collection System

Wiarton generally conveys wastewater flow collected from the urban area to SPS#1 (at Taylor St and George St) and then to SPS#2 (at Taylor St and Elm St), which are in place to overcome topographic constraints and direct flows from the shoreline of Colpoy's Bay (Georgian Bay) to the Wastewater Treatment Lagoons (WWTL) atop the Niagara Escarpment. Treated flows are then discharged from the Wiarton WWTL to Colpoy's Bay via gravity sewer. There is currently no servicing that extends to service the South Lands west of Gould Street, north or south of Elm Street.

Topography within the future South Lands development ranges from 197 m to 208 m in elevation.

Natural Environment

Natural habitat along the Elm Street alignment is limited to trees and vegetation associated with Clavering Creek and there is an existing Protected Area in the proximity of Elm Street and the Dawson Street extension as shown in Figure 1 (Official Land Use). Any proposed works within close proximity to this Protected Area will require consultation with Grey Sauble Conservation Authority (GSCA).

Land Use

The majority of Wiarton is designated for residential and rural land use. There is a downtown commercial area located on Berford Street and east towards the waterfront area. A key attraction of the Town is the recreation and open space along the waterfront. Industrial and highway commercial & industrial areas are located to the north and south limits of the Town. Wiarton currently has plans to improve areas along the waterfront and in the downtown area. Environmental Protection Areas under the jurisdiction of Grey



Sauble Conservation Authority border the urban settlement area along the northwest bay shoreline, the east, the west and the south limit of the Town, as shown in

.

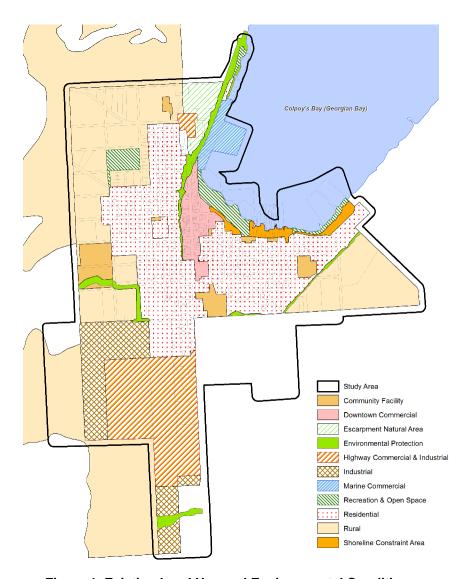


Figure 1. Existing Land Use and Environmental Conditions



6 Planning Projections and Future Flows

The Town of South Bruce Peninsula (TSBP) uses the following design criteria for new development:

Residential Average Day Flow	450 L/cap/d
Peaking Factor	Harmon Formula
Inflow & Infiltration Allowance	0.23 L/s

Through the Master Servicing Plan, it was estimated that the average existing inflow & infiltration rate is 0.69 L/s for existing areas based on maximum day flows, population and tributary areas.

The proposed growth areas within Wiarton are shown in Figure 2.

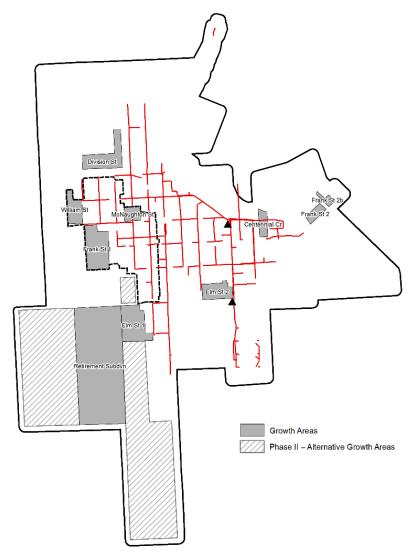


Figure 2. Growth Areas within Wiarton



The proposed planning projections for Wiarton including the South Lands (Retirement Subdivision) development allows for the following:

Table 1. Planning Forecasts for Phase I Growth Areas (South of Elm St)

Growth Area Description	Growth Units	Pop Density (ppu)	Growth Population	New Contributing Area (ha)
Retirement Subdivision	1,500	1.90	2,850	40.67
Elm St 1	28	2.50	70	6.01
Total	1,528	-	2,920	46.68

As such, the estimated average dry weather flow (ADWF), peak dry weather flow (PDWF), inflow & infiltration flow (I/I) and peak wet weather flow (PWWF) generated by the South Lands (south of Elm St and west of Berford St) are summarized in Table 2.

Table 2. Wastewater Flow Projections for Phase I Growth Areas (South of Elm St)

Growth Area Description	ADWF (L/s)	Harmon Peak Factor	PDWF (L/s)	I/I (L/s)	PWWF (L/s)
Retirement Subdivision	14.84	3.46	51.38	9.35	60.73
Elm St 1	0.36	4.00	1.46	1.38	2.84
Total Growth Flows (South of Elm St)	15.21	3.45	52.50	10.74	63.24

The preferred wastewater servicing strategy identified through the Wiarton MSP is to divert west area flows to the future SPS#3 planned to service the South Lands development thereby leveraging future capacity. There is some intensification growth planned within the west area catchment, including William St, McNaughton St and Frank St as shown in Figure 1.

The hydraulic model simulations indicate that there is approximately 70 L/s (PWWF) that could be diverted from the west catchment area. This accounts for extraneous flow that ingresses the sanitary sewer system through direct (foundation drains, sump pumps and downspouts) and indirect (groundwater infiltration) connections from private property. As such, the pumping capacity at SPS#3 will need to be approximately 63.2 + 70 = 133.2 L/s.

7 Evaluation of Alternatives

The site alternatives were evaluated against the five point evaluation criteria including: environmental, technical, socio/cultural, legal/jurisdictional and financial. The evaluation table is provided in Attachment 2.

8 Preferred Servicing Strategy (Alignment and Site)

Based on the Master Servicing Plan, the following is recommended:

- Given the capital infrastructure requirements of this strategy, an interim solution to address the sanitary sewer north of Frank Street, between Gould Street and Berford Street is to construct a gravity sewer starting on Gould Street, north of Frank Street to Frank Street and Berford Street.
- New gravity sewer (Projects WW01 and WW02) on Gould Street, Frank Street and Dawson Street will be required to direct flows southwest from Gould Street, north of Frank Street to the new SPS#3 at Elm Street and Dawson Street.





- A new SPS#3 (Project WW03) will be required on the southeast corner of Elm Street and Dawson Street. It is assumed that when SPS#3 is constructed, in addition to planned development, all currently serviced lands south of Elm Street and west of Berford Street will be diverted to SPS#3.
- A new sanitary forcemain (WW04) will direct flows on Elm Street from SPS#3 to east of Berford Street where it will discharge to a new sanitary sewer (Project WW05) that will convey flows to SPS#2 and subsequently to the Wastewater Treatment Lagoons.

9 Public Consultation and Review Agency Summary

There were two rounds of public consultation undertaken as part of the MSP. A summary of the public consultation activities are summarized below:

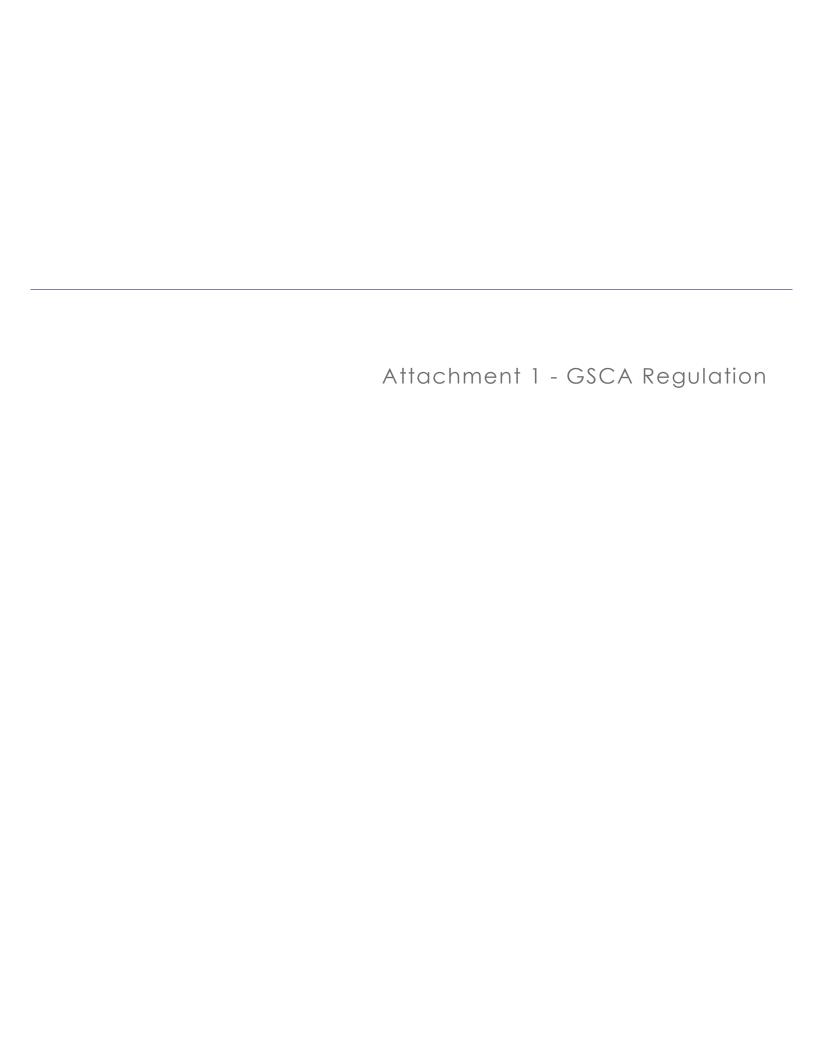
- Notice of Commencement and Public Information Centre (PIC) #1 for the MSP was issued in October 2014.
- Notice of Commencement and Public Information Centre (PIC) #1 for the Gould Street Sanitary Sewer Upgrade Class EA was issued in July 2015.
- Public Information Centre (PIC) #1 was held in October 2014.
- Public Information Centre (PIC) #2 was held in July 2015.

Two (2) comments were received regarding i) future growth areas, and ii) the need for reducing inflow and infiltration in the sanitary sewer system. No comments regarding the preferred servicing strategy have yet been received.

10 Future Commitments

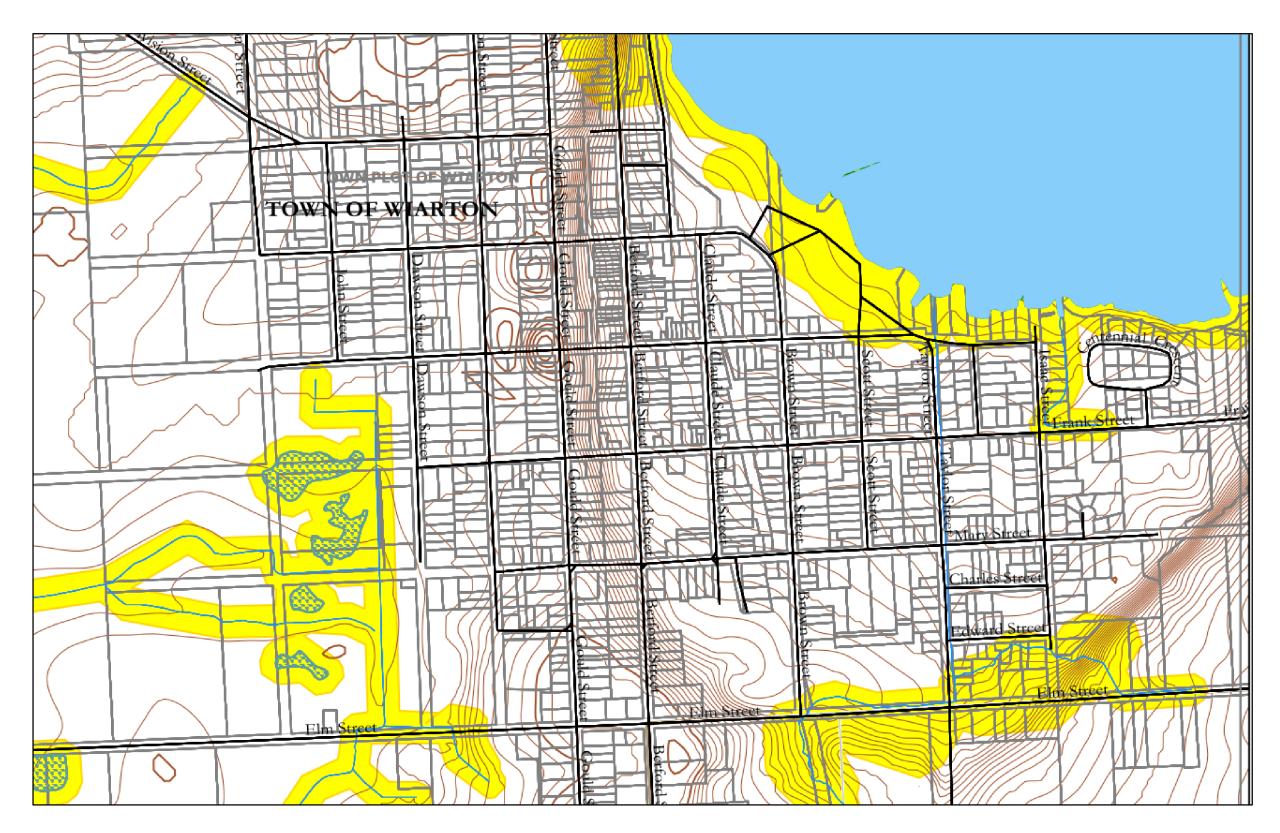
The following provides a summary of the key design, construction and post-construction commitments required as part of this project:

- Initial development of South Lands will require Developer to provide adequate lands to the Town for SPS#3 and to complete the planning process for SPS#3 under the Planning Act, including site specific studies.
- Site-specific investigations will be required to further inform the engineering design and preparation of contingency plans for the proposed works.
- The emergency outfall for SPS#3 will likely discharge to a tributary of Clavering Creek. As such, the design and construction of the emergency outfall for the new SPS#3 will require environmental permitting and approvals from Grey Sauble Conservation Authority prior to proceeding to construction.
- The preferred servicing strategy requires a new gravity sewer on Dawson Street from Frank Street to the new SPS#3 which is partially on an existing road right of way. The section from Mary Street to Elm Street is currently an unopened road allowance. The proposed gravity sewer will follow the future road right of way along this alignment.
- Pre-construction surveys shall be completed including preparation of a construction noise and vibration mitigation plan, if applicable.
- Construction Traffic Management Plan shall be prepared, including maintenance of property access at all times, or alternatively, makes necessary accommodations to the construction schedule.
- Construction will restore disturbed areas to an existing or better condition.





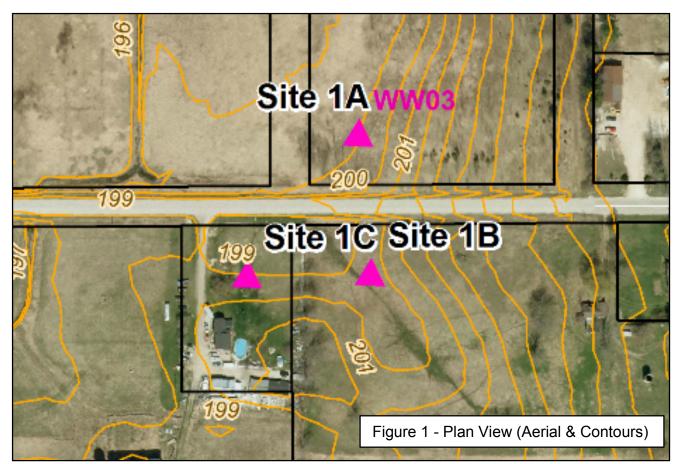
Attachment 1 - Regulation for Development Interference with Wetlands O.Reg 151.06 in the Town of Wiarton (Grey Sauble Conservation Authority)

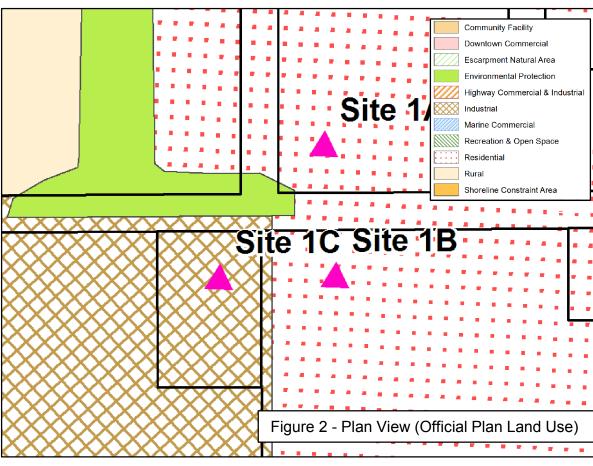




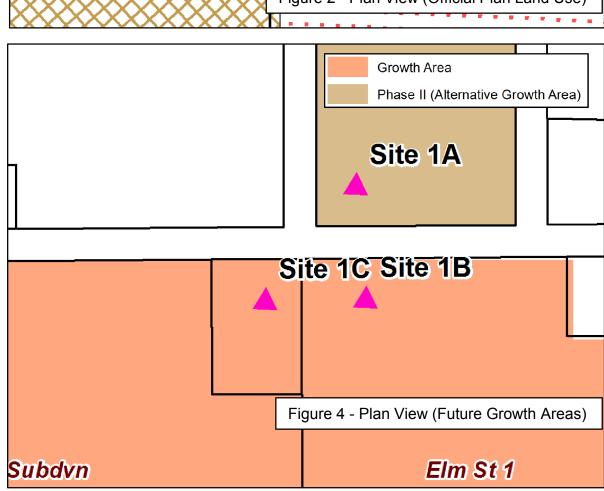


South Lands Pumping Station (SPS#3) – Site Analysis (Alt Site 1a, 1b & 1c)



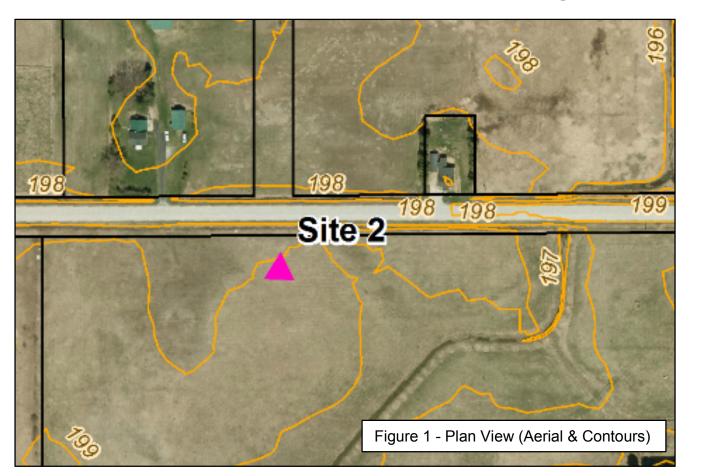


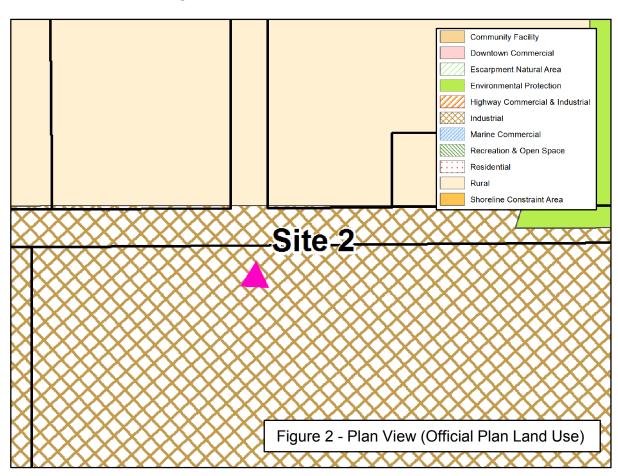




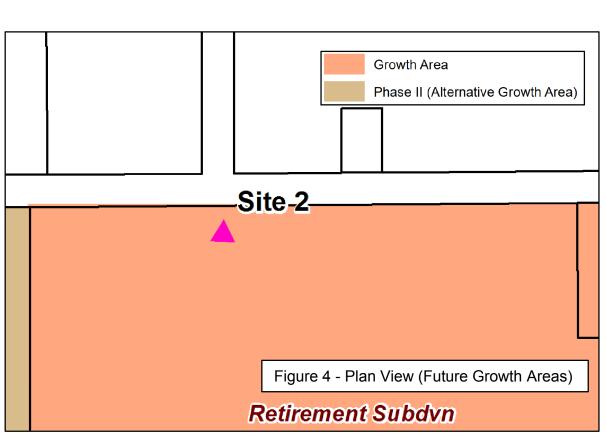


South Lands Pumping Station (SPS#3) – Site Analysis (Alt Site 2)



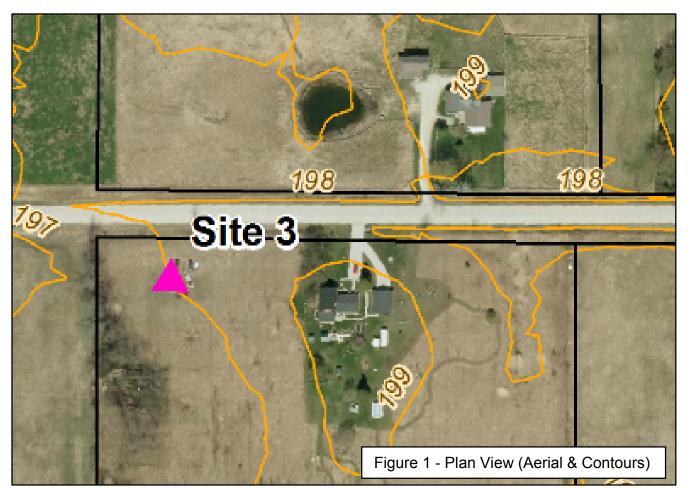


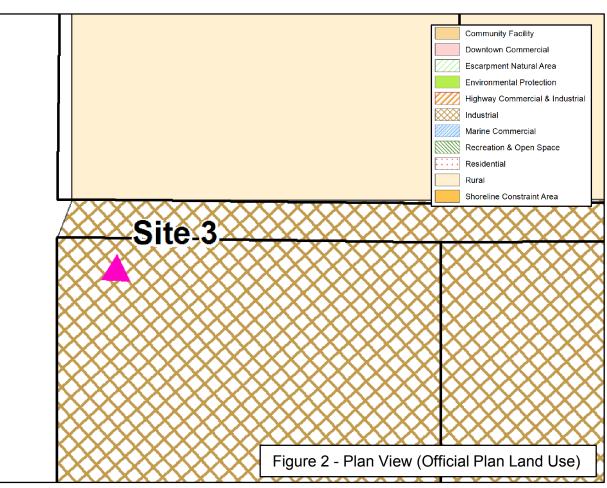




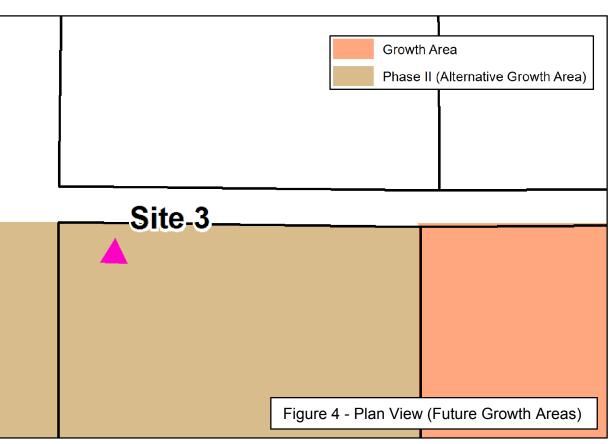


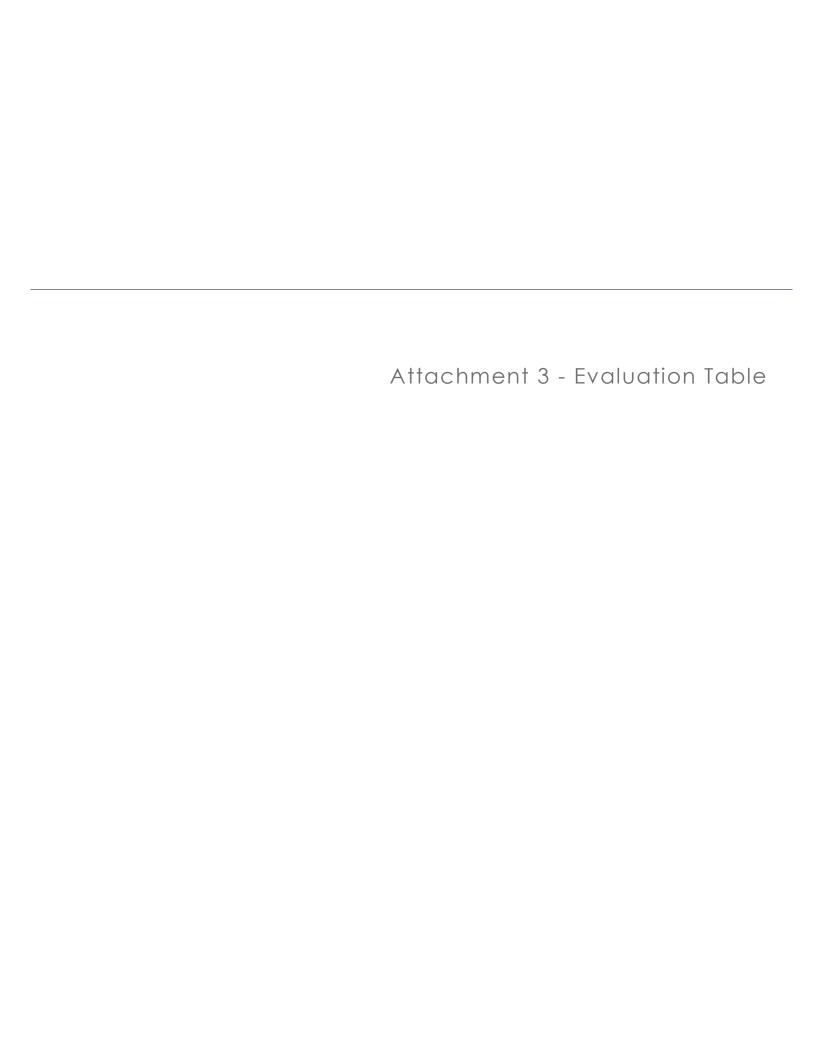
South Lands Pumping Station (SPS#3) – Site Analysis (Alt Site 3)













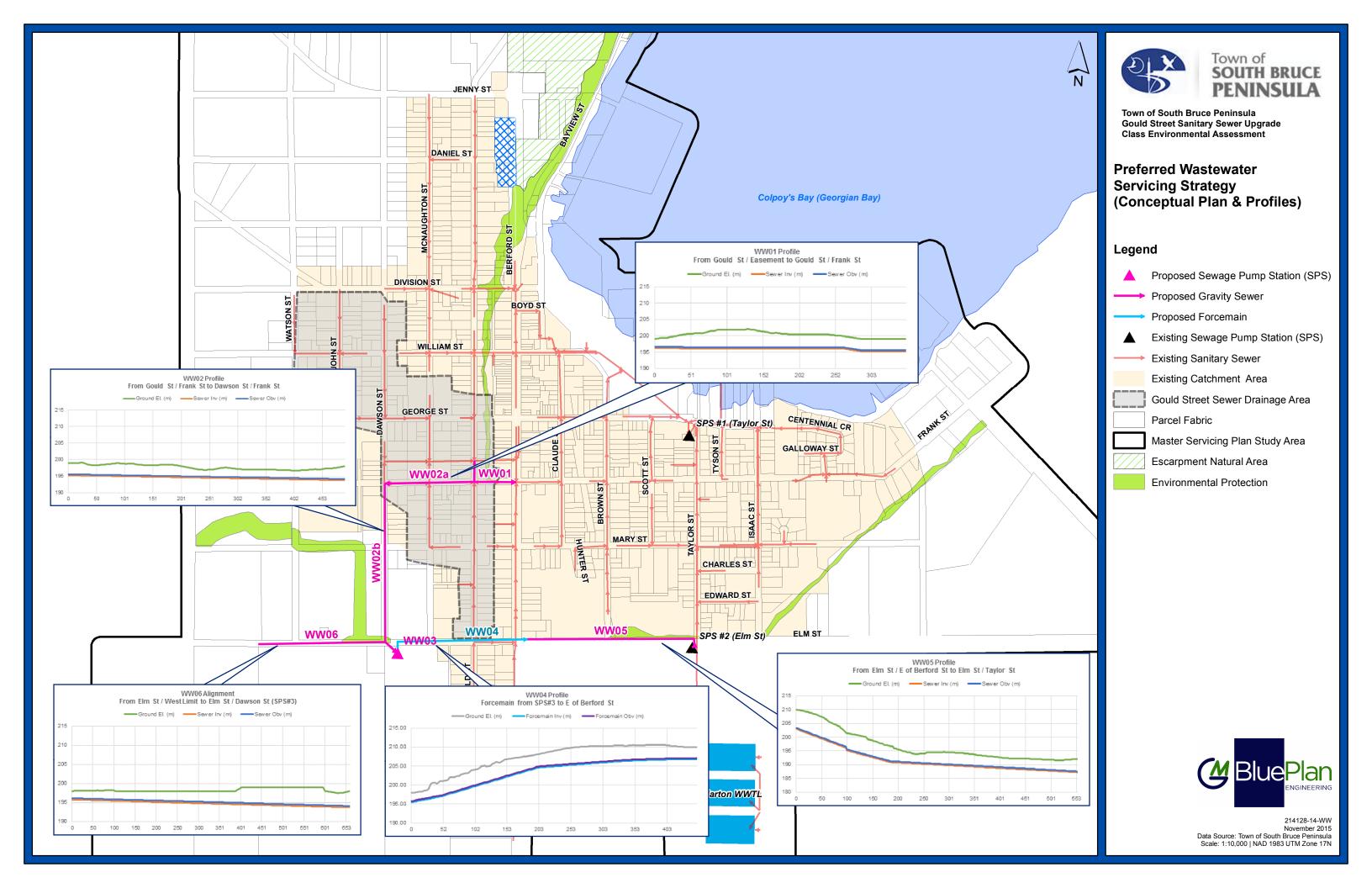


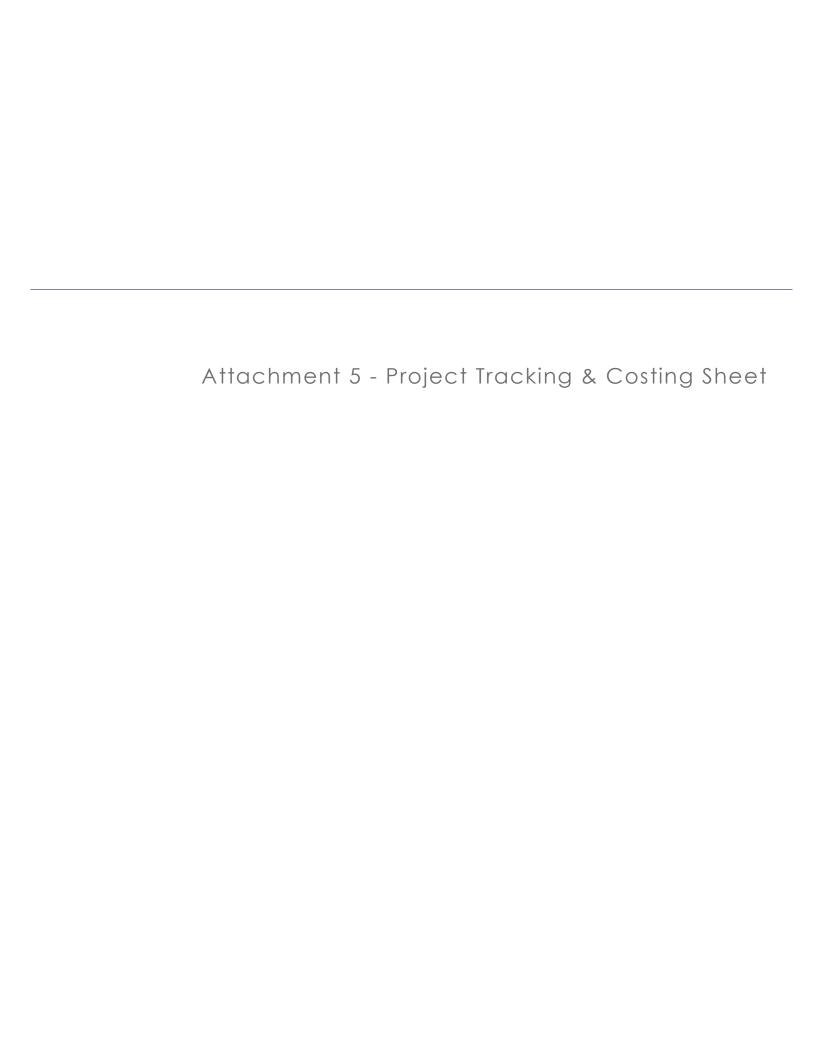




ALTERNATIVES		SPS#3 SITE ALTERNATIVES			
	Site 1a	Site 1b	Site 1c	Site 2	Site 3
Description	Northeast Corner of Elm Street and Dawson Street extension.	Southeast Corner of Elm Street and Dawson Street extension.	Southwest Corner of Elm Street and Dawson Street extension.	South of Elm Street at the south limit of Watson Street extension.	West Town Limit and Elm Street.
Environmental	- The proposed SPS#3 and its emergency outfall may have greater potential for environmental impact than Alternatives 2 and 3 and may require mitigative requirements through design and implementation, as there is an Environmental Protection Area west of the site, starting at the intersection of Elm St and the Dawson Street extension and continuing north of Elm Street and west Dawson Street (common to Alternatives 1a, 1b, and 1c).	- The proposed SPS#3 and its emergency outfall may have greater potential for environmental impact than Alternatives 2 and 3 and may require mitigative requirements through design and implementation, as there is an Environmental Protection Area west of the site, starting at the intersection of Elm St and the Dawson Street extension and continuing north of Elm Street and west Dawson Street (common to Alternatives 1a, 1b, and 1c).	- The proposed SPS#3 and its emergency outfall may have greater potential for environmental impact than Alternatives 2 and 3 and may require mitigative requirements through design and implementation, as there is an Environmental Protection Area west of the site, starting at the intersection of Elm St and the Dawson Street extension and continuing north of Elm Street and west Dawson Street (common to Alternatives 1a, 1b, and 1c).	1.2 and 3 and may require mitigative requirements through design and impact than Alternative 3 (but less than Site 1 Alternatives) and may require mitigative eis an Environmental Protection Area west of the site, starting at the dt the Dawson Street extension and continuing north of Elm Street and Protection Area east of the site.	
	Current land use on site is vacant. Site has some minor vegetation. Potential for site to be within a GSCA regulated area under the Regulation 151/06,	- Current land use on site is vacant. Site is largely open space with marginal vegetation Potential for site to be within a GSCA regulated area under the Regulation 151/06,	- Current site is occupied by a private dwelling and contains minor vegetation Potential for site to be within close proximity to a GSCA regulated area under the <i>Regulation</i>	- Current land use on site is largely open space with few trees or shrubs. - Site is not within a GSCA regulated area under the Regulation 151/06, Development,	Site is within close proximity to existing residential dwelling and contains some minor vegetation. Site is not within a GSCA regulated area under the Regulation 151/06, Development,
	Development, Interference with Wetlands and Alteration to Shorelines and Watercourses.	Development, Interference with Wetlands and Alteration to Shorelines and Watercourses.	151/06, Development, Interference with Wetlands and Alteration to Shorelines and Watercourses.		Interference with Wetlands and Alteration to Shorelines and Watercourses.
Sub-Rating Environmental Technical	Low	Low	Medium	High	High
rechnical	- SPS required to service future South Lands and development south of Elm St and west of	- SPS required to service future South Lands and development south of Elm St and west of	- SPS required to service future South Lands and development south of Elm St and west of	- SPS required to service future South Lands and development south of Elm St and west of	- SPS required to service future South Lands and development south of Elm St and west of
	Berford St (common to all alternatives). - Site supports future infrastructure plans to service developments in Southwest Wiarton and minimizes extension of wastewater collection system compared to Alternatives 2 and 3.	Berford St (common to all alternatives). - Site supports future infrastructure plans to service developments in Southwest Wiarton and minimizes extension of wastewater collection system compared to Alternatives 2 and 3.	Berford St (common to all alternatives). - Site supports future infrastructure plans to service developments in Southwest Wiarton and minimizes extension of wastewater collection system compared to Alternatives 2 and 3.	Berford St (common to all alternatives). - Site supports future infrastructure plans to service developments in Southwest Wiarton but requires greater extension of trunk wastewater collection system compared to Alternatives 1a, 1b	Berford St (common to all alternatives). - Site supports future infrastructure plans to service developments in Southwest Wiarton but requires greater extension of trunk wastewater collection system compared to Alternatives 1a, 1b,
	Access to all to all the side feature and sight of course December 1	Acceptable will be all file Oracle in fature and it consists with all file Oracle	Access to the cell by all the eff file Object to the central design and the central design at the central design and the central design at the central des	and 1c. - Access to site will be off Elm Street via future road / easement south of Elm Street.	1c, and 2. - Access to site will be off Elm Street via future road / easement south of Elm Street.
	Access to site will be via future road right of way on Dawson Street extension. Site is strategically located to collect west area and South Lands flow, minimizing conveyance.	Access to site will be off Elm Street via future road / easement south of Elm Street. Site is strategically located to collect west area and South Lands flow, minimizing conveyance.	 Access to site will be off Elm Street via future road / easement south of Elm Street. Site is strategically located to collect west area and South Lands flow, minimizing conveyance 	- Site requires gravity sewer on Elm Street to convey west area flows to SPS#3; requires more	- Site requires gravity sewer on Elm Street to convey west area flows to SPS#3; requires more
	upgrades compared to Alternatives 2 and 3. Site is located within Phase II designated lands.	upgrades compared to Alternatives 2 and 3. Site is located <u>within Phase I</u> designated lands. Site is located closer to imminent development than Alternative 1a.	upgrades compared to Alternatives 2 and 3. Site is located within Phase I designated lands. Site is located closer to imminent development than Alternative 1a.	conveyance upgrades than Alternatives 1a, 1b and 1c. Site is located within Phase I lands.	conveyance upgrades than Alternatives 1a, 1b and 1c. Site is located within Phase II lands.
	- Local topography is at approximately 199-200 m in elevation.	- Local topography is at approximately 199-200 m in elevation.	- Local topography is at approximately 199 m in elevation.	- Local topography is at approximately 199 m in elevation.	 Local topography is at approximately 198 m in elevation, the lowest point of all the site alternatives.
	- Site requires a shorter forcemain route than Alternatives 2 and 3.	- Site requires a shorter forcemain route than Alternatives 2 and 3.	- Site requires a shorter forcemain route than Alternatives 2 and 3.	- Site requires a shorter forcemain route than Alternative 3 but longer than Alternatives 1a, 1b and 1c.	d - Site requires a longer forcemain route than all site alternatives.
Sub-Rating Technical Socio / Cultural	Medium	High	High	Low	Low
Socio / Cultural	- Existing land use is zoned residential. Municipality has identified site land as Phase II growth	- Existing land use is zoned residential. Municipality has identified site land as Phase I growth area. Site will require landuse planning approvals.	- Existing land use is zoned industrial. Municipality has identified site land as Phase I growth area. Site will require landuse planning approvals.	- Existing land use is zoned industrial. Municipality has identified site land as Phase I growth	- Existing land use is zoned industrial. Municipality has identified site land as Phase II growth
	area. Site will require landuse planning approvals. - Some potential visual impact caused by SPS#3. Opportunity to mitigate impacts through integrated community design (common to all alternatives).	- Some potential visual impact caused by SPS#3. Opportunity to mitigate impacts through integrated community design (common to all alternatives).	area. Sine win require randuse plantining approvals. - Some potential visual impact caused by SPS#3. Opportunity to mitigate impacts through integrated community design (common to all alternatives).	area. Site will require landuse planning approvals. - Some potential visual impact caused by SPS#3. Opportunity to mitigate impacts through integrated community design (common to all alternatives).	area. Site will require landuse planning approvals. - Some potential visual impact caused by SPS#3. Opportunity to mitigate impacts through integrated community design (common to all alternatives).
	- Potential noise, dust and traffic impacts due to construction on Elm Street and future road right	- Potential noise, dust and traffic impacts due to construction on Elm Street.	- Potential noise, dust and traffic impacts due to construction on Elm Street.	- Potential noise, dust and traffic impacts due to construction on Elm Street.	- Potential noise, dust and traffic impacts due to construction on Elm Street.
	of way on Dawson Street. - Access off Elm Street minimizes impacts as it does not carry heavy traffic (common to all alternatives).	- Access off Elm Street minimizes impacts as it does not carry heavy traffic (common to all alternatives).	- Access off Elm Street minimizes impacts as it does not carry heavy traffic (common to all alternatives).	- Access off Elm Street minimizes impacts as it does not carry heavy traffic (common to all alternatives).	- Access off Elm Street minimizes impacts as it does not carry heavy traffic (common to all alternatives).
	- Site is located on a vacant lot in a low density area and is <u>not adjacent to existing dwellings</u> . Minor potential for socio/economic or odour impacts associated with new pumping station in the	- Site is located on a vacant lot in a low density area and is <u>not adjacent to existing dwellings</u> . Minor potential for socio/economic or odour impacts associated with new pumping station in the	- Site is within <u>close proximity to an existing dwelling</u> . Significant potential for visual, socio/economic and odour impacts to adjacent property owner(s).	- Site is located on a vacant lot in a low density area and is <u>not adjacent to existing dwellings.</u> Minor potential for socio/economic or odour impacts associated with new pumping station in the	Site is located within <u>close proximity to an existing (residential) dwelling</u> . There is potential for visual, socio/economic and odour impacts to adjacent property owner(s).
	area.	area.	sectoristing and sector impacts to adjacon property critically.	area.	visual, socioleconomic and dood impacts to adjacent property owner(s).
Sub-Rating Socio / Cultural	area. High	area. High	Low	Medium	Low
Sub-Rating Socio / Cultural Financial	area. High	area. High	Low	area. Medium	Low
=	- Lower construction and life cycle cost due to shorter length of forcemain compared to Alternatives 2 and 3. Cost savings are likely to outweight any additional permitting / approval requirements.	area. High - Lower construction and life cycle cost due to shorter length of forcemain compared to Alternatives 2 and 3. Cost savings are likely to outweight any additional permitting / approval requirements.	- Lower construction and life cycle cost due to shorter length of forcemain compared to Alternatives 2 and 3. Cost savings are likely to outweight any additional permitting / approval requirements.	- Lower construction and life cycle cost due to shorter length of forcemain compared to Alternatives 3 but greater cost compared to Alternatives 1a, 1b and 1c.	- Greater construction and life cycle cost due to longer length of forcemain compared to Alternatives 1a, 1b, 1c and 2.
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Financial FINANCIAL COST Sub-Rating Financial Legal / Jurisdictional Sub-Rating Legal / Jurisdictional	- Lower construction and life cycle cost due to shorter length of forcemain compared to Alternatives 2 and 3. Cost savings are likely to outweight any additional permitting / approval requirements. - Opportunity to share costs with development community (common to all alternatives). - High - Site rests on unopened road allowance. New infrastructure is planned on future road right of way on Dawson Street extension. - Site not currently owned by Municipality. 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Financial FinANCIAL COST Sub-Rating Financial Legal / Jurisdictional Sub-Rating Legal / Jurisdictional	- Lower construction and life cycle cost due to shorter length of forcemain compared to Alternatives 2 and 3. Cost savings are likely to outweight any additional permitting / approval requirements. - Opportunity to share costs with development community (common to all alternatives). - High - Site rests on unopened road allowance. New infrastructure is planned on future road right of way on Dawson Street extension. - Site not currently owned by Municipality. 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Low - Site is strategically located to service South Lands development and collect flows from west area, which minimizes conveyance upgrades required compared to Alternatives 2 and 3. - Site is located north of proposed South Lands development, <u>outside of Phase I lands</u> (within	High - Lower construction and life cycle cost due to shorter length of forcemain compared to Alternatives 2 and 3. Cost savings are likely to outweight any additional permitting / approval requirements. - Opportunity to share costs with development community (common to all alternatives).	Low - Lower construction and life cycle cost due to shorter length of forcemain compared to Alternatives 2 and 3. Cost savings are likely to outwelght any additional permitting / approval requirements. - Opportunity to share costs with development community (common to all alternatives). High - Site does not lie within an existing road allowance / easement. - Site not currently owned by Municipality. 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Financial FINANCIAL COST Sub-Rating Financial Legal / Jurisdictional Sub-Rating Legal / Jurisdictional KEY ISSUES / CONSTRAINTS	High	## High - Lower construction and life cycle cost due to shorter length of forcemain compared to Alternatives 2 and 3. Cost savings are likely to outweight any additional permitting / approval requirements. - Opportunity to share costs with development community (common to all alternatives). ### High - Site does not lie within an existing road allowance / easement. - Site not currently owned by Municipality. 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Attachment 4 - Preferred Wastewater Servicing Strat (Plan & Profile M		
	Attachment 4 - Preferrec	







PROJECT DESCRIPTION:

MAP REF:

WIARTON WATER, WASTEWATER AND STORMWATER MASTER SERVICING PLAN PROJECT TRACKING AND COSTING SHEET

Town of SOUTH BRUCE PENINSULA 2021-2026

PROJECT NO.: PROJECT NAME:

Wiarton South Lands Sewage Pumping Station (SPS#3)

Sewage Pumping Station intended to convey existing west area & future South Lands development flows (134 L/s)

214128-WW-14

PROPOSED SIZE: 11.58 ML/d 134.00 L/s

CAPITAL BUDGET YEAR:

VERSION: 1.0 DATE UPDATED:

UPDATED BY: LB

CLASS EA REQUIREMENTS: Schedule B

COST ESTIMATION SPREADSHEET

COST ESTIMATION SPREADSHEET						
COMPONENT	RATE	UNIT	ESTIMATED QUANTITY	COST PER UNIT	SUB-TOTAL	COMMENTS
Construction Cost	(%)		QUANTITY			
i. Greenfield Wastewater Pumping Station		L/s	134	\$16,736	\$2 242 624	To convey future South Lands & existing west area
ii. Wastewater Pumping Station Expansion		L/s	134	\$4,184	\$2,242,024	To convey fatare count Eurido & existing west area
iii. Wastewater Treatment Pre Treatment (headworks)		ML/D		\$380,202	\$0	
iv. Primary Treatment		ML/D		\$61,783	\$0	
v. Secondary Treatment		ML/D		\$261,389	\$0	
vi. Thickening/dewatering/storage/unloading	1	ML/D		\$70,835	\$0	
vii. Incineration	+	ML/D		\$190,101	\$0	
viii.Disinfection/de-chlorination	+	ML/D		\$11,881	\$0	
ix. Outfall	-	LM	-	\$7,604	\$0	
x. Wastewater Storage	-	LM	-	\$7,604	\$0	
xi. Extra Factor for Rock Excavation	+	2		\$453	80	
xii. Endangered Species	+	m ²		\$453	\$0	
		ls .			\$0	
xiii. Value Engineering		ls			\$0	
xiv. Other Construction Costs					\$0	
Construction Sub-Total Cost					\$2,242,624	
Construction Contingency	0%				\$0	
Construction Total		1		•	\$2,242,624	
Geotechnical Requirements	_					
i. Geotechnical/Hydrogeological/Materials	2%				\$44,852	
Geotechnical Sub-Total Cost					\$44,852	
Permit/Approvals Requirements						
i. Engineering Fees	2%				\$45,000	Allowance for potential extra permitting requirements due to potential construction within GSCA regulation limits.
ii. Other					\$0	
iii. Other					\$0	
Permit/Approval Requirements Sub-Total		I .	1		\$45,000	
The second secon					+10,000	
Sub-Total Base Costs	•	ļ			\$2,332,476	
					4 2,002,110	
Consultant Engineering						
i. Study	1.4%				\$30,500	
ii. Design	4.8%			1	\$106,749	
iii. Construction Administration/Inspection	4.1%			1	\$91,499	
Consultant Engineering Sub-Total	10%				\$228,748	
Consultant Engineering Gub-Fotal	10 /6				\$220,140	
In-House Fees	+					
i. Design Fees	3.4%		-		\$76,249	
ii. Construction Fees iii. Other	3.4% 0.0%				\$76,249 \$0	
In-House Fees Sub-Total						
III-nouse rees sub-rotal	7%				\$152,498	
Burdent Continues						
Project Contingency	4001		+		****	
Project Contingency	10%				\$224,262	
Project Contingency Sub-Total					\$224,262	
New Before debte 1107	 	 	+	1		
Non-Refundable HST						
Non-Refundable HST Study	1.76%	 	+	1	\$39,470	
Non-Refundable HST Design	1.76%				\$39,470	
Non-Refundable HST Construction	1.76%		1	1	\$39,470	
Non-Refundable HST Sub-Total	_				\$118,411	
	ļ		1			
Property Requirements	1		1			
i. Land Acquisition Cost						Land expected to be provided by developer.
ii. Easement					\$0	
iii. Other					\$0	
Property Requirements Sub-Total					\$0	To be confirmed.
Total (2015 Dollars)	•				\$3,056,396	Rounded to nearest \$1,000
Other Estimate						
Chosen Estimate					\$3,056,396	Master Plan 2015 Estimate