

Summary of Capital Costs – Based on Pricing Estimates for 2010 – All Costs Exclude HST

Sauble Beach Wastewater Project

October 1, 2010

OS-05-142-11-OS

	Sewer Collection System	Pumping Stations	Force mains	Treatment Plant and Outfall	Engineering	Hydro One Install Cost	Land Costs	Other (Legal, Planning & Geotechnical)	5% Contingency	Total	No. of Lots	Average Cost Per Lot (before \$6,240,000 Grant)	Average Cost Per Lot (after \$6,240,000 Grant)
Option 1¹	\$3,671,000	\$1,500,000	\$977,000	\$5,034,000 and \$85,000	\$866,000	\$80,000	\$450,000	\$83,000	---	\$12,736,000	303	\$42,033/ea	\$21,440/ea
Option 2²	\$10,381,000	\$1,800,000	\$977,000	\$8,000,000 and \$100,000	\$1,200,000	\$80,000	\$450,000	\$110,000	\$1,155,000	\$24,253,000	710	\$34,200/ea	\$25,400/ea
Option 3³	\$24,100,000	\$2,250,000	\$1,350,000	\$10,300,000 and \$880,000	\$1,800,000	\$80,000	\$450,000	\$140,000	\$2,068,000	\$43,418,000	1,505	\$28,900/ea	\$24,700/ea
Option 4⁴	\$37,157,000	\$4,700,000	\$2,100,000	\$13,000,000 and \$1,000,000	\$2,300,000	\$80,000	\$450,000	\$170,000	\$3,048,000	\$64,005,000	2,300	\$27,800/ea	\$25,100/ea
Option 5⁵	\$40,700,000	\$5,100,000	\$2,500,000	\$13,700,000 and \$1,000,000	\$2,500,000	\$80,000	\$450,000	\$190,000	\$3,311,000	\$69,500,000	2,510	\$27,700/ea	\$25,200/ea
Option 5A	\$38,000,000	\$5,750,000	\$3,160,000	\$11,700,000 and \$2,900,000 ⁶	\$2,500,000	\$570,000	\$840,000	\$940,000 ⁷	\$3,320,000	\$69,660,000	2,486	\$28,000/ea	\$25,500/ea

¹ As tendered in December, 2009 and reported to Council in February, 2010. Treatment plant location at Municipal Road property.

² Option 2 as per Option 1 but larger collection area. Major pump station at existing location. Treatment plant location at Municipal Road property. Outfall to existing location.

³ Treatment plant assumed to be located at Bruce County Forest site approximately 1 km north of Sixth Street North on west side of Sauble Falls Parkway. Effluent discharge to be at boat launch site near mouth of Sauble River. Outfall is 3,600 m of 18" PVC. One major pump station located at Lakeshore and Sixth Street North. Legal/planning costs assumed same for all Options with additional geotechnical added.

⁴ Option 4 same as Option 3 but larger plant and 20" outfall pipe. Outfall and main pumping station strategy the same as Option 3. Three (3) additional, smaller pumping stations and force mains required for Fedy/Winburk and Clarence Ave/Graham Crescent areas. Additional remote pumping stations may be required. Confirmation required. Additional \$2,200,000 assumed for four (4) extra pumping stations and \$750,000 required for extra force mains.

⁵ Option 5 same as Option 4 though additional pumping station and force mains assumed. Add \$800,000 total. Add \$700,000 extra for larger plant.

⁶ Premium price for marine effluent pipe. Marine effluent pipe may be 24" or 27" in diameter due to thick walled polyethylene pipe normally used for marine outfalls.

⁷ Includes \$750,000 for Estimated First Nations Costs

General Notes - Sewer collection system costs based on Harold Sutherland Construction unit prices of January 2010 tender for Option 1 plus 20% safety factor. Same for force main costs.
 - Treatment plant costs and pumping station costs based on Allen-Hastings prices received for January 2010 tender for Option 1 plus 10% safety factor.
 - Costs above do not include cost to install sewer lateral (or grinder pump system) on private property.
 - Number of lots above include trailer parks but only one lot per trailer park.

Costs for Options 1 to 5 are unchanged since July, 2010 meeting

**Capital Cost Breakdown - Preliminary, Preferred Option Based on Wastewater Collection Option 5A
Water and Sewage Works Study - Addendum No.3
Town of South Bruce Peninsula**

October 4, 2010

105142

Sewer Collection System	
Cost of Tendered Sutherlands Contract Excluding Force mains, Culverts, etc. (Includes All Sanitary Lateral Costs, Manhole Costs, Lump Sum Costs, Insurance and Bonding Costs)	\$3,678,808
Length of Sanitary Sewer in Sutherlands Contract (m)	6,805
Average Cost per Metre of Sanitary Sewer in Sutherlands Contract	\$541
Total Length of Sanitary in Option 5A (Not Including Deferred Areas) (m)	58,540
Total Estimated Cost for Sanitary Option 5A (Using Sutherlands Contract Unit Cost)	\$31,646,939
Total Estimated Cost for Sanitary Option 5A with 20% Contingency	\$37,976,327
Pumping Stations	
Two (2) Main Pumping Stations	\$2,250,000
Seven (7) Smaller Pumping Stations	\$3,500,000
Total Estimated Cost for Pumping Stations	\$5,750,000
Force mains	
Cost of Tendered Sutherlands Contract with Force mains, Air Release Chambers Only	\$871,200
Length of Force mains in Sutherlands Contract (m)	2,816
Cost per Metre of Force mains/Air Release Chambers in Sutherlands Contract	\$309
Total Estimated Length of Force mains in Option 5A (m)	8,500
Total Estimated Cost for Force mains Option 5A (Using Sutherlands Contract Unit Cost)	\$2,629,688
Total Estimated Cost for Force mains Option 5A with 20% Contingency	\$3,155,625
Treatment Plant and Outfall	
Wastewater Treatment Plant (Secondary Treatment with no Filtration, UV Disinfection)	\$11,700,000
Outfall Pipe Length Extending from Shore into Lake Huron (m)	1,200
Cost per Metre of Outfall Pipe from Shore into Lake Huron	\$1,300
Cost for Outfall Pipe from Shore into Lake Huron	\$1,560,000
Length of Outfall Pipe from Shore to Wastewater Treatment Plant (m)	2,700
Cost per Metre of Outfall Pipe from Shore to Wastewater Treatment Plant	\$500
Cost for Outfall Pipe from Shore to Wastewater Treatment Plant	\$1,350,000
Total Outfall Pipe Cost	\$2,910,000
Total Cost for Treatment Plant and Outfall Pipe	\$14,610,000
Engineering	
Total Estimated Engineering Costs (lump sum estimate)	\$2,500,000
Hydro One Install Cost	
Wastewater Treatment Plant Three Phase Hydro Supply (lump sum estimate)	\$75,000
Pumping Station on Fifth St N and Second Ave N Three Phase Hydro Supply (lump sum estimate)	\$200,000
Pumping Station on D-Line Three Phase Hydro Supply (lump sum estimate)	\$35,000
Pumping Station near Silver Lake on Graham Crescent Three Phase Hydro Supply (lump sum estimate)	\$200,000
Single Phase Hydro Supply for All Six Other Pumping Stations	\$60,000
Total Hydro One Install Cost	\$570,000
Land Costs	
Purchase of Property on Municipal Road	\$450,000
Area of County Land Required for Wastewater Treatment Plant (ha)	16.0
Area of County Land Required for Pumping Station on Sauble Falls Road (Northernmost Station) (ha)	1.0
Total Area of Land Required from County (ha)	17.0
Estimated Cost per ha of Land from County	\$5,000
Estimated County Land Cost	\$85,000
Lump Sum for Other Land Requirements for Three (3) Pumping Stations	\$300,000
Total Estimated Land Costs	\$835,000
Other Costs (Legal, Planning, Geotechnical, First Nations)	
Legal Costs	\$30,000
Planning Costs	\$40,000
Geotechnical Costs	\$120,000
First Nations Costs	\$750,000
Total Estimated Other Costs	\$940,000
Subtotal	\$66,336,952
5% Contingency	\$3,316,848
Total Project Cost (Including 5% Contingency)	\$69,653,799

Summary of Estimated Annual Operating Costs – 2010 Unit Costs

Sauble Beach Wastewater Project

OS-05-142-11-OS

October 8, 2010

	Number of Lots*	Manpower	Management	Chemical	Energy	Sludge	Equipment, Sampling, Insurance, Etc.	Subtotal	Average Subtotal Cost per Lot	Reserve Fund @ 1.5% of Capital Cost	Total Annual Cost	Average Total Annual Cost Per Lot	20 Year Average Total Cost Capital Plus Operations (No Interest)
Option 1	303	1.0 person at \$70,000 per year or \$70,000 per year	0.25 persons per year at \$100,000 per year or \$25,000 per year	\$7,000	\$70,000	\$8,000	\$20,000	\$200,000	\$660/yr	\$174,000/yr	\$374,000/yr	\$1,230/yr	\$46,000
Option 2	710	1.2 persons at \$70,000 per year or \$84,000 per year	0.35 persons per year at \$100,000 per year or \$35,000 per year	\$16,000	\$150,000	\$17,000	\$25,000	\$327,000	\$460/yr	\$319,000/yr	\$646,000	\$910/yr	\$43,600
Option 3	2,302	1.6 persons at \$70,000 per year or \$112,000	0.6 persons per year at \$100,000 per year, or \$60,000 per year	\$43,000	\$410,000	\$50,000	\$35,000	\$710,000	\$310/yr	\$583,000/yr	\$1,293,000	\$560/yr	\$35,900
Option 4	2,950	2.2 persons at \$70,000 per year or \$154,000 per year	0.75 persons per year at \$100,000 per year, or \$75,000 per year	\$68,000	\$630,000	\$71,000	\$40,000	\$1,038,000	\$350/yr	\$869,000/yr	\$1,907,000	\$650/yr	\$38,100
Option 5/5A	3,160	2.4 persons at \$70,000 per year or \$170,000 per year	0.8 persons per year at \$100,000 per year, or \$80,000 per year	\$73,000	\$690,000	\$78,000	\$43,000	\$1,134,000	\$360/yr	\$945,000/yr	\$2,079,000	\$660/yr	\$38,400

Notes: Manpower and management costs as above based on additional manpower requirements given operating authority staff already in Sauble area running municipal water systems. As such, some cost efficiency for manpower assumed.

Option 3 – Includes 1,505 sewer lots plus 527 equivalent trailer sites (1,580 trailer sites total – 3:1 ratio proposed – to be confirmed)

Option 4 – Includes 2,300 sewer lots plus 650 equivalent trailer sites (1,950 trailer sites total – 3:1 ratio proposed – to be confirmed)

Option 5/5A – Includes 2,510 sewer lots plus 650 equivalent trailer sites (1,950 trailer sites total – 3:1 ratio proposed – to be confirmed). Note - Additional equivalent residential campsites for Sauble Falls Park not included in count of 650 equivalent trailer sites.

Additional commercial/institutional equivalent connections not included in Number of Lots above and need to be confirmed.

Sewage Flow Estimates

**Servicing Conditions Based on Genivar Design of October 2009 for Option 1
and Grand Bend and Wasaga Beach Sewage Flows**

October 8, 2010

OS-05-142-11-OS

	Option 1	Option 2	Option 3	Option 4	Option 5/5A
Number of Lots	303	710	1,505	2,300	2,510
No. of Equivalent Residential Connections	312	850	2,333	3,640	3,913
Average Flow per Equivalent Connection	0.875 m ³ /d	0.75 m ³ /d	0.75 m ³ /d	0.75 m ³ /d	0.75 m ³ /d
Average Day Flow	273 m ³ /d	640 m ³ /d	1,750 m ³ /d	2,730 m ³ /d	2,940 m ³ /d
Maximum Average Day Flow During Busy Summer Period	587 m ³ /d (2.15 times annual average)	1,220 m ³ /d (1.9 times annual average)	2,630 m ³ /d (1.5 times annual average)	3,550 m ³ /d (1.3 times annual average)	3,820 m ³ /d (1.3 times annual average)
Peak Flow Factor for Average Flow During Summer	11.0 times	6.0 times	4.5 times	4.0 times	4.0 times
Peak Flow On Long Summer Week	75 L/s	85 L/s	140 L/s	165 L/s	180 L/s

Notes Option 1 sewage flows unchanged from original 2009 design. Average summer flow and peak flow likely conservative (overestimated) based on analysis of Grand Bend and Wasaga Beach sewage flows.

Number of lots above approximate only based on current Bruce County lot fabric detail. For options 2 and 3, equivalent residential units based on 10% increase for additional commercial/institutional equivalent connections and 10% future growth factor (total of 20% extra). Add 527 equivalent trailer park sites for Option 3.

For Options 4, 5 and 5A, equivalent residential units based on 10% increase for additional commercial/institutional equivalent connections and 20% future growth factor (30% extra). Add 650 equivalent trailer park sites for Options 4, 5 and 5A.

Grand Bend average day sewage flows in summer 1.2 to 1.9 times the annual average day flow for 2006, 2007 and 2008. No instantaneous peak flow data available. Number of connections not available. Annual flow is 750 to 850 m³/day.

Wasaga Beach average day sewage flows in summer 1.1 to 1.25 times the annual average day flow. Peak daily flow 1.3 to 2.5 times maximum, summer average day flow. Annual average day flow is 5,000 to 6,000 m³/day for 2007, 2008 and 2009. Number of connections is approximately 10,300. Average day flow per connection is approximately 0.53 m³/day.

Summary of E.Coli Information

Proposed Sauble Beach Wastewater Treatment Plant

October 4, 2010

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Sampling Location	Dates	Geometric Mean Cfu/100 mL
Inshore Sauble Beach (Grey Bruce Health Unit)	2009 Summer months only 13 sample events 2010 Summer months only 14 sample events	10-74 13-2,802
Sauble River at Boat Launch and Sauble Falls	2006 to 2010 Summer months only 8 samples	32
Sauble River at Jewel bridge and County Road 8 bridge	2006 to 2010 Summer months only 8 samples	68
Seepages across beach, Main Street to Sauble River	September, 2010 27 samples over 3 days (Sept. 22, 27 & 30, 2010)	350, 22 and 32 (respectively, for Sept. 22, 27 and 30, 2010)
Average values for wastewater plant (Wiarlon, Port Elgin and Southampton)	2008 and 2009 156 samples	2-13

Summary of Effluent Quality Data

Local Wastewater Treatment Plant

Proposed Sauble Beach Wastewater Treatment Plant

2009

October 4, 2010

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	E.Coli*	Phosphorus	Ammonia	Nitrate	Biochemical Oxygen Demand	Suspended Solids
Wiaarton lagoon system with effluent filtration and UV disinfection (approx. 26 effluent samples)	2 cfu/100 mL	0.14 mg/L	3.7 mg/L	N/A	3.2 mg/L	7.5 mg/L
Southampton secondary, activated sludge plant with UV disinfection (approx. 26 effluent samples). No filtration	8 cfu/100 mL	0.25 mg/L	0.2 mg/L	17.3	3.2 mg/L	9.5 mg/L
Port Elgin secondary, activated sludge plant with UV disinfection (approx. 26 effluent samples). No filtration.	3 cfu/100 mL	0.24 mg/L	1.55 mg/L	11	3.1 mg/L	7.4 mg/L

2008

	E.Coli*	Phosphorus	Ammonia	Nitrate	Biochemical Oxygen Demand	Suspended Solids
Wiaarton lagoon system with filtration and UV disinfection (approx. 26 effluent samples)	2 cfu/100 mL	0.12 mg/L	3.7 mg/L	0.9	4.2 mg/L	7.7 mg/L
Southampton secondary, activated sludge plant with UV disinfection (approx. 26 effluent samples). No filtration.	13 cfu/100 mL	0.25 mg/L	1.51 mg/L	12.0	2.8 mg/L	6.8 mg/L
Port Elgin secondary, activated sludge plant with UV disinfection (approx. 26 effluent samples). No filtration.	12 cfu/100 mL	0.32 mg/L	3.7 mg/L	18.0	6.3 mg/L	6.6 mg/L

* Annual Geometric Mean

N/A – Not Available

Table 1 - Evaluation of Alternative Solutions
Water and Sewage Works Study - Addendum No. 3
Town of South Bruce Peninsula

ALTERNATIVE	Capital Cost	Operation and Reserve Fund Cost	NATURAL ENVIRONMENT IMPACTS	SOCIAL IMPACTS	ECONOMIC IMPACTS
<p><u>Option #1</u></p> <ul style="list-style-type: none"> 303 existing lots 6,805 m of sanitary sewer two (2) pumping stations wastewater treatment plant serviced area consists primarily of Development Control Area (DCA) 	<p>\$12,736,000 total cost \$42,033 per lot \$21,440 per lot with grant*</p>	<p>\$374,000/year</p>	<ul style="list-style-type: none"> Temporary environmental disturbances may result from initial construction phases. Potential environmental impact from wastewater effluent discharge resulting from malfunctioning equipment and failure of redundancy at wastewater treatment plant Elimination of malfunctioning or inadequate private septic tanks could improve subsurface water quality in service area. Removal of trees, at treatment plant site, may cause loss of habitat for migratory birds (dependent on final site). Minimal protection of in-shore water quality with small sewer service area. 	<ul style="list-style-type: none"> Would allow for residential, commercial and institutional growth in core area only. Should assist in providing additional protection for sandpoint well sources for core area only. Temporary roadway disturbances during construction Temporary increase in noise activity during construction Sauble Beach may be viewed as socially and environmentally responsible/progressive, though small sewer service area limits potential. 	<ul style="list-style-type: none"> Residential, commercial and institutional growth may improve economy for core area only, including providing additional employment opportunities. Potential for property values to increase, but in core sewer service area only. Connection cost may be a financial hardship for households on a minimal fixed income. High cost per connection for maintenance/reserve fund with small system. Additional potential for severable lots in small area only.
<p><u>Option #2</u></p> <ul style="list-style-type: none"> 710 existing lots 15,965 m of sanitary sewer two (2) pumping stations wastewater treatment plant serviced area consists of Option 1 area plus area north to Fourth St. N and south to Ninth St. S 	<p>\$24,253,000 total cost \$34,200 per lot \$25,400 per lot with grant*</p>	<p>\$646,000/year</p>	<ul style="list-style-type: none"> Temporary environmental disturbances may result from initial construction phases. Potential environmental impact from wastewater effluent discharge resulting from malfunctioning equipment and failure of redundancy at wastewater treatment plant Elimination of malfunctioning or improperly installed private septic tanks could improve subsurface water quality in adjacent areas. Removal of trees, at treatment plant site, may cause loss of habitat for migratory birds (dependent on final site). Minimal protection of in-shore water quality with small sewer service area. 	<ul style="list-style-type: none"> Would allow for residential, commercial and institutional growth in relatively small area only. Should assist in providing additional protection for sandpoint well sources for relatively small area only. Temporary roadway disturbances during construction. Temporary increase in noise activity during construction. Sauble Beach may be viewed as socially and environmentally responsible/progressive, though small sewer service area limits potential. 	<ul style="list-style-type: none"> Residential, commercial and institutional growth may improve economy for small area, including providing additional employment opportunities. Potential for property values to increase, but in relatively small sewer service area only. Connection cost may be a financial hardship for households on a minimal fixed income. High cost per connection for maintenance/reserve fund with small system. Additional potential for severable lots in small area only.
<p><u>Option #3</u></p> <ul style="list-style-type: none"> 1,505 existing lots 32,845 m of sanitary sewer two (2) pumping stations wastewater treatment plant certain areas will require servicing by grinder pumps serviced area consists of Option 2 area in addition to areas north of Sauble Falls Road and most areas west of Sauble Falls Parkway. Also includes Carsons Campground, Woodland Park, and Sauble Falls Tent and Trailer Camp. Also includes D-Line/Main Street intersection 	<p>\$43,418,000 total cost \$28,900 per lot \$24,700 per lot with grant*</p>	<p>\$1,293,000/year</p>	<ul style="list-style-type: none"> Temporary environmental disturbances may result from initial construction phases. Potential environmental impact from wastewater effluent discharge resulting from malfunctioning equipment and failure of redundancy at wastewater treatment plant Elimination of malfunctioning or improperly installed private septic tanks could improve subsurface water quality in adjacent areas. Removal of trees, at treatment plant site, may cause loss of habitat for migratory birds (dependent on final site). Increased protection of in-shore water quality with larger sewer service area. 	<ul style="list-style-type: none"> Would allow for residential, commercial and institutional growth in much larger area. Should assist in providing additional protection from sandpoint well sources for overall larger service area. Temporary roadway disturbances during construction Temporary increase in noise activity from construction Sauble Beach may be viewed as socially and environmentally responsible/progressive, with larger sewer service area. 	<ul style="list-style-type: none"> Residential, commercial and institutional growth may improve economy for larger area, including providing additional employment opportunities. Potential for property values to increase for larger sewer service area. Connection cost may be a financial hardship for households on a minimal fixed income. Lower cost per connection for maintenance/reserve fund with larger system. Additional potential for severable lots in larger area.

ALTERNATIVE	Capital Cost	Operation and Reserve Fund Cost	NATURAL ENVIRONMENT IMPACTS	SOCIAL IMPACTS	ECONOMIC IMPACTS
<p>Option #4</p> <ul style="list-style-type: none"> 2,300 existing lots 53,705 m of sanitary sewer two (2) main pumping stations with three (3) or more additional pumping stations required (to be confirmed) wastewater treatment plant Certain areas will require servicing by grinder pumps serviced area consists of Option 3 plus residential areas near Silver Lake and areas east of Sauble Falls Parkway in Fedy Drive and Jewel Bridge areas. Also includes Main St. to Municipal Road, Winding River Campground and Sauble Beach Resort Camp. 	<p>\$64,005,000 total cost</p> <p>\$27,800 per lot</p> <p>\$25,100 per lot with grant*</p>	\$1,907,000/year	<ul style="list-style-type: none"> Temporary environmental disturbances may result from initial construction phases. Potential environmental impact from wastewater effluent discharge resulting from malfunctioning equipment and failure of redundancy at wastewater treatment plant Elimination of malfunctioning or improperly installed private septic tanks could improve subsurface water quality in adjacent areas. Removal of trees, at treatment plant site, may cause loss of habitat for migratory birds (dependent on final site). Increased protection of in-shore water quality with larger sewer service area. 	<ul style="list-style-type: none"> Would allow for residential, commercial and institutional growth in much larger area. Should assist in providing additional protection for sandpoint well sources for much larger area. Temporary roadway disturbances during construction Temporary increase in noise activity during construction Sauble Beach may be viewed as socially and environmentally responsible/progressive with larger sewer service area. 	<ul style="list-style-type: none"> Residential, commercial and institutional growth may improve economy for larger area, including providing additional employment opportunities. Potential for property values to increase for larger sewer service area. Connection cost may be a financial hardship for households on a minimal fixed income. Lower cost per connection for maintenance/reserve fund with larger system. Additional potential for severable lots in larger area.
<p>Option #5</p> <ul style="list-style-type: none"> 2,510 existing lots 59,845 m of sanitary sewer two (2) main pumping stations with three (3) or more additional pumping stations required (to be confirmed) wastewater treatment plant certain areas will require servicing by grinder pumps serviced area consists of Option 4 area plus area east of Silver Lake to Municipal Board and along Sauble Falls Parkway 	<p>\$69,500,000 total cost</p> <p>\$27,700 per lot</p> <p>\$25,200 per lot with grant*</p>	\$2,079,000/year	<ul style="list-style-type: none"> Temporary environmental disturbances may result from initial construction phases. Potential environmental impact from wastewater effluent discharge resulting from malfunctioning equipment and failure of redundancy at wastewater treatment plant Elimination of malfunctioning or improperly installed private septic tanks could improve subsurface water quality in adjacent areas. Removal of trees, at treatment plant site, may cause loss of habitat for migratory birds (dependent on final site). Increased protection of in-shore water quality with larger sewer service area. 	<ul style="list-style-type: none"> Would allow for residential, commercial and institutional growth in much larger area. Should assist in providing additional protection for sandpoint well sources for core area only in large area. Temporary roadway disturbances during construction Temporary increase in noise activity during construction Sauble Beach may be viewed as socially and environmentally responsible/progressive with larger sewer service area. 	<ul style="list-style-type: none"> Residential, commercial and institutional growth may improve economy for larger area, including providing additional employment opportunities. Potential for property values to increase for larger sewer service area. Connection cost may be a financial hardship for households on a minimal fixed income. High cost per connection for maintenance/reserve fund with larger system. Additional potential for severable lots in larger area.
<p>Option #5A</p> <ul style="list-style-type: none"> 2,486 existing lots 58,540 m of sanitary sewer Two (2) min. pumping stations with six (6) additional pumping stations required Wastewater treatment plant Certain areas will require servicing by grinder pumps serviced area consists of Option 5 area with deferred areas east of Silver Lake Subdivision and north along Sauble Falls Parkway Outfall to Lake Huron (1st option) 	<p>\$69,660,000 total cost</p> <p>\$28,000 per lot</p> <p>\$25,500 per lot with grant*</p>	\$2,079,000/year**	<ul style="list-style-type: none"> Temporary environmental disturbances may result from initial construction phases. Potential environmental impact from wastewater effluent discharge resulting from malfunctioning equipment and failure of redundancy at wastewater treatment plant Elimination of malfunctioning or improperly installed private septic tanks could improve subsurface water quality in adjacent areas. Removal of trees, at treatment plant site, may cause loss of habitat for migratory birds (dependent on final site). Increased protection of in-shore water quality with larger sewer service area. 	<ul style="list-style-type: none"> Would allow for residential, commercial and institutional growth in much larger area. Should assist in providing additional protection for sandpoint well sources in large area. Temporary roadway disturbances during construction Temporary increase in noise activity during construction Sauble Beach may be viewed as socially and environmentally responsible/progressive with larger sewer service area. 	<ul style="list-style-type: none"> Residential, commercial and institutional growth may improve economy for larger area, including providing additional employment opportunities. Potential for property values to increase for larger sewer service area. Connection cost may be a financial hardship for households on a minimal fixed income. High cost per connection for maintenance/reserve fund with larger system. Additional potential for severable lots in larger area.
<p>Option #6</p> <p>Do Nothing</p>	\$0	\$0	<ul style="list-style-type: none"> Lack of sewers may contribute to contamination of sandpoint well sources for drinking water Potential for poor inshore water quality along beach without sewers 	<ul style="list-style-type: none"> Lack of sewers may hamper residential, commercial and institutional growth. Lack of sewers may hamper long term job creation. 	<ul style="list-style-type: none"> Tourism may decrease if pollution concerns become more frequent without sewers. Potential for stagnating real estate values if pollution concerns increase without sewers.

* Based on available grant of \$6,240,000.00

** Costs could reduce by \$30,000 to \$60,000/year if no filtration required with Lake Huron outfall

Summary of Comment Sheets Received Following July 10, 2010 Public Meeting
Water and Sewage Works Study
Addendum Process No. 3

File OS-05-142-11-OS

September 7, 2010

All persons submitting comment sheets, as received to date, have been only entitled one count (For, Against or Undecided), even if the author of the comment sheets submitted multiple comment sheets. Multiple comment sheets from singular addresses have been included provided a person submitted a separate comment sheet.

A total of 280 comment sheets (after multiple comment sheets were deducted) have been received to date and contribute to the following summary.

Comment sheets were categorized as either:

- For
- Against
- Undecided

Undecided comment sheets include those comment sheets that did not clearly express support for or against the installation of sewers in Sauble Beach.

The results are as follows:

- For: 166
- Against: 75
- Undecided: 39

For each category, frequently expressed points of concern have also be examined and counted.

For

Of the 166 "for" communal sewer system votes, there were 97 comment sheets that explicitly expressed a preferred servicing option of those given (1 through 5). They are as follows:

1. Option 1: 6
2. Option 2: 0
3. Option 3: 31
4. Option 4: 6
5. Option 5: 54

An additional 45 comment sheets expressed other servicing option preferences including first and second choices. The commonly expressed options are as follows:

- Option 1 completed now, with expansion to Option 3 later: 1
- Option 3 completed now, with expansion to Option 4 or 5 later: 3
- Option 3 preferred: 16
- Option 3 as second preference: 4
- Option 4 preferred: 10
- Option 4 as second preference: 2
- Option 5 preferred: 15
- Option 5 as second preference: 8
- Option 1 or 2 as second preference: 1
- Option 3, 4 or 5: 15

Of those in favour of a sewage system, some comment sheets also expressed interest in sewage treatment plant location.

Votes For: Site 1: 1
 Site 2: 0
 Site 3: 24
 Site 3 preferred, Site 2 second preference: 11

Votes Against: Site 1: 36
 Site 2: 0
 Site 3: 0

The following are the common concerns amongst those in favour of the communal sewage system:

- Concern that project need is inadequate or unclear: 1
- Request septic system inspections: 7
- Concern regarding cost and/or payment plans: 27
- Concern regarding proposed pump station at 6th Street North and Lakeshore Avenue: 4
- Discharge into the Sauble River: 2
- Plan favours campground/business and developers: 6
- Potential effect on groundwater supply and quality: 3
- Potential effect on dune ecosystem: 1
- More study is required to determine effects of implementation: 3
- Dialogue/involvement with First Nations is necessary: 10
- Call for referendum: 1

Against

Of the 75 comment sheets in opposition to the proposed communal sewer system, the frequently discussed reasons for concern are as follows:

- Concern regarding cost: 54
- Concern regarding accuracy of cost estimates: 14
- Concern regarding discharge into the Sauble River/Lake Huron: 20
- Plan favours development, campgrounds and/or businesses: 10
- Mandatory connection: 7
- Feel pollution is not an issue in Sauble Beach and/or implementation of sewer system with no reduced pollution: 6
- Unclear need/goal for the sewer system: 27
- More study is required to determine if there is a need and/or effects of sewer system implementation: 7
- Prefers implementation of septic system monitoring program: 30
- Call for referendum: 7
- Call for provision of additional alternate options: 17
- Environmental concerns (dune ecosystem, sensitive species, etc.): 10
- Call for First Nations involvement: 2
- Should project proceed, no to sewage treatment site #1: 1
- Should project proceed, prefer larger servicing area than that provided by Option #1: 1

Undecided

Of the 39 "undecided" comment sheets, several indicated the following preferred servicing options:

- Option 1: 4
- Option 2: 0
- Option 3: 0


- Option 4: 1
- Option 5: 0
- Option 1 or 2 only: 2

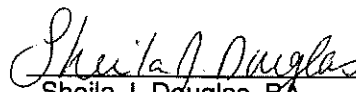
Common concerns regarding the sewer system expressed in comment sheets as "undecided" are as follows:

- Concern regarding cost: 23
- Concern regarding accuracy of cost estimates: 2
- More study to determine need and effects of implementation: 8
- Question project need and/or goal: 13
- Discharge of treated effluent into the Sauble River: 10
- Proposed Sixth Street North and Lake Shore Street pumping station: 2
- Groundwater supply and quality: 2
- Health and preservation of dune ecosystem: 2
- Other environmental impacts (i.e. pharmaceutical and emissions): 3
- Sewage treatment odour: 3
- Plans favour developers, campgrounds and/or business: 6
- Call for additional options for pollution prevention/control: 3
- Concern that leachate from private systems is not the cause of water pollution: 5
- Call for referendum: 4
- Request dialogue with and involvement from the First Nations: 4
- Prefer septic system inspection either to determine project need or in place of the communal wastewater system: 10
- Should project proceed, does not want river and/or lake discharge: 9
- Should project proceed, does not want sewage treatment plant site #1: 1
- Should project proceed, does not want sewage treatment plant site #3: 1
- Should project proceed, prefers sewage treatment plant site #1: 1
- Should project proceed, prefers sewage treatment plant site #2: 1
- Should project proceed, prefers sewage treatment plant site #3: 1
- Should project proceed, prefer servicing Option 1: 4
- Should project proceed, prefer servicing Option 4: 1
- Should project proceed, prefer servicing Option 3 to 5: 1

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