

APPENDIX G

Infrastructure Charge Calculations

Summary - Infrastructure Charges

Projection : Residential and Non-residential Units

Year	Population Increase	Area (ha)		No. of Units	
		Res.	Non-Res.	Res.	Non-Res.
2017	894	35.76	34.38	286	69
2027	1056	42.24	40.62	338	81

Wastewater

Year out of Red ==> 2024

Outstanding Amount ==> \$112,595

Residential lots	8 units/ha
Non-Residential lots	2 units/ha
Infrastructure Charge	
Residential (3/4" connection)	\$4,954 \$/lot
Non Residential (1" Connection)	\$8,808 \$/lot
Infrastructure charge increase	3% per annum
% Inflation rate per year	6%

WW - Iteration Results

Residential lots	Non-Residential lots	Grants Infusion	Residential (3/4" connection)	Non Residential (1" Connection)	Infrastructure charge increase	% Inflation rate per year	Year out of Red (Target Year 2019)	Outstanding Amount
units/ha	units/ha		\$/lot	\$/lot	per annum			
8	2	0%	\$1,500	\$1,500	3%	6%	beyond 2027	(\$4,539,366)
8	2	0%	\$1,500	\$2,670	3%	6%	beyond 2027	(\$4,169,850)
8	2	0%	\$2,524	\$4,486	3%	6%	beyond 2027	(\$2,250,942)
8	2	0%	\$3,500	\$6,230	3%	6%	2024	(\$417,838)
8	2	0%	\$4,954	\$8,808	3%	6%	2022	\$112,595
8	2	58%	\$1,500	\$2,670	3%	6%	beyond 2027	(\$305,226)
8	2	58%	\$1,800	\$3,200	3%	6%	2026	\$102,366
8	2	29%	\$3,275	\$5,823	3%	6%	2024	\$218,129



Appendix G :Water Infrastructure Cost

Case 2: Lot numbers based on Population Projection

Residential lots	8 units/ha
Non-Residential lots	2 units/ha
Infrastructure Charge:	
Residential (3/4" connection)	\$3,275 \$/lot
Non Residential (1" Connection)	\$5,823 \$/lot
Infrastructure charge increase	3% per annum
% Inflation rate per year	6%

Projection : Residential and Non-residential Units

Year	Population Increase	Area (ha)		No. of Units	
		Res.	Non-Res.	Res.	Non-Res.
2017	894	35.76	34.38	286	69
2027	1056	42.24	40.62	338	81

Capital Investment Required

Year	Capital Cost (Current \$)	Funding	Water (Residual)	Total Current	Capital Cost (Future) ¹
2008	(759,200)	0%	(759,200)	(759,200)	(804,752)
2012	(162,500)	0%	(162,500)	(162,500)	(205,153)
2017	0	0%	0	0	0
Total					(1,009,905)

Notes:

- 1 Cost Inflated at a rate of 6% per annum
- 2 Infrastructure cost increased at 3% per annum. Development rate assumed constant
- 3 Capital Cost include only Aquatera and Town of Sexsmith cost, excludes developer costs
- 4 Captial Cost does not include the Water Treatment Plant Upgrade



Appendix G :Water Infrastructure Cost

Case 2: Lot numbers based on Population Projection

Capital Cost and Revenue

Year	Investment	Outstanding Amount (previous)	Total	Cumulative Amount with interest	Infrastructure Charge Per Lot ²		Total Revenue	Outstanding Amount
					Residential (\$/lot)	Non-Residential (\$/lot)		
2007								
2008		\$0	\$0	\$0				
2009	(\$804,752)	\$0	(\$804,752)	(\$853,037)	\$3,275	\$5,823	\$133,736	(\$719,302)
2010		(\$719,302)	(\$719,302)	(\$762,460)	\$3,373	\$5,998	\$137,748	(\$624,712)
2011		(\$624,712)	(\$624,712)	(\$662,195)	\$3,474	\$6,178	\$141,880	(\$520,315)
2012	(\$205,153)	(\$520,315)	(\$725,467)	(\$768,995)	\$3,579	\$6,363	\$146,136	(\$622,859)
2013		(\$622,859)	(\$622,859)	(\$660,230)	\$3,686	\$6,554	\$150,521	(\$509,710)
2014		(\$509,710)	(\$509,710)	(\$540,293)	\$3,797	\$6,750	\$155,036	(\$385,256)
2015		(\$385,256)	(\$385,256)	(\$408,372)	\$3,911	\$6,953	\$159,687	(\$248,685)
2016		(\$248,685)	(\$248,685)	(\$263,606)	\$4,028	\$7,162	\$164,478	(\$99,128)
2017	\$0	(\$99,128)	(\$99,128)	(\$105,076)	\$4,149	\$7,376	\$169,412	\$64,337
2018		\$64,337	\$64,337	\$68,197	\$4,273	\$7,598	\$174,495	\$242,691
2019		\$242,691	\$242,691	\$257,253	\$4,401	\$7,826	\$212,298	\$469,551
2020		\$469,551	\$469,551	\$497,724	\$4,533	\$8,060	\$218,667	\$716,390
2021		\$716,390	\$716,390	\$759,374	\$4,669	\$8,302	\$225,227	\$984,600
2022		\$984,600	\$984,600	\$1,043,676	\$4,809	\$8,551	\$231,984	\$1,275,660
2023		\$1,275,660	\$1,275,660	\$1,352,200	\$4,954	\$8,808	\$238,943	\$1,591,143
2024		\$1,591,143	\$1,591,143	\$1,686,611	\$5,102	\$9,072	\$246,111	\$1,932,722
2025		\$1,932,722	\$1,932,722	\$2,048,686	\$5,255	\$9,344	\$253,495	\$2,302,180
2026		\$2,302,180	\$2,302,180	\$2,440,311	\$5,413	\$9,625	\$261,099	\$2,701,411
2027		\$2,701,411	\$2,701,411	\$2,863,495	\$5,575	\$9,913	\$268,932	\$3,132,428

Required Collectable Dollars

\$6,601	\$/ha	\$2,672	\$/Acre
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Appendix G :Wastewater Infrastructure Cost

Case 2: Lot numbers based on Population Projection

Residential lots	8 units/ha
Non-Residential lots	2 units/ha
Infrastructure Charge	
Residential (3/4" connection)	\$4,954 \$/lot
Non Residential (1" Connection)	\$8,808 \$/lot
Infrastructure charge increase	3% per annum
% Inflation rate per year	6%

Case 1: Infill to Full Capacity

Projection : Residential and Non-residential Units

Year	Population Increase	Area (ha)		No. of Units	
		Res.	Non-Res.	Res.	Non-Res.
2017	894	35.76	34.38	286	69
2027	1056	42.24	40.62	338	81

Capital Investment Required

Year	Sewage Collection system	Sewage Treatment System	Funding ⁴	Sewage Treatment (Residual)	Total Current	Total Future ¹
2010	(100,000)		0%	0	(100,000)	(112,360)
2012	0	(1,960,000)	0%	(1,960,000)	(1,960,000)	(2,622,922)
2017	0	0	0%	0	0	0
Total						(2,735,282)

Notes:

- 1 Cost Inflated at a rate of 6% per annum
- 2 Infrastructure cost increased at 3% per annum. Development rate assumed constant
- 3 Capital Cost include only Aquatera and Town of Sexsmith cost , excludes developer costs
- 4 Potential Funding available from AMWWP and other programs



Appendix G :Wastewater Infrastructure Cost

Case 2: Lot numbers based on Population Projection

Capital Cost and Revenue

Year	Investment	Outstanding Amount (previous)	Total	Cumulative Amount with interest	Infrastructure Charge Per Lot ²		Total Revenue	Outstanding Amount
					Residential (\$/lot)	Non-Residential (\$/lot)		
2007		\$0						
2008		\$0	\$0	\$0				
2009		\$0	\$0	\$0	\$4,954	\$8,808	\$202,296	\$202,296
2010	(\$112,360)	\$202,296	\$89,936	\$95,332	\$5,103	\$9,072	\$208,365	\$303,697
2011		\$303,697	\$303,697	\$321,919	\$5,256	\$9,344	\$214,616	\$536,535
2012	(\$2,622,922)	\$536,535	(\$2,086,388)	(\$2,211,571)	\$5,413	\$9,625	\$221,054	(\$1,990,517)
2013		(\$1,990,517)	(\$1,990,517)	(\$2,109,948)	\$5,576	\$9,913	\$227,686	(\$1,882,262)
2014		(\$1,882,262)	(\$1,882,262)	(\$1,995,197)	\$5,743	\$10,211	\$234,516	(\$1,760,681)
2015		(\$1,760,681)	(\$1,760,681)	(\$1,866,322)	\$5,915	\$10,517	\$241,552	(\$1,624,770)
2016		(\$1,624,770)	(\$1,624,770)	(\$1,722,256)	\$6,093	\$10,833	\$248,799	(\$1,473,457)
2017	\$0	(\$1,473,457)	(\$1,473,457)	(\$1,561,865)	\$6,276	\$11,158	\$256,262	(\$1,305,602)
2018		(\$1,305,602)	(\$1,305,602)	(\$1,383,938)	\$6,464	\$11,492	\$311,780	(\$1,072,158)
2019		(\$1,072,158)	(\$1,072,158)	(\$1,136,488)	\$6,658	\$11,837	\$321,134	(\$815,354)
2020		(\$815,354)	(\$815,354)	(\$864,275)	\$6,857	\$12,192	\$330,768	(\$533,508)
2021		(\$533,508)	(\$533,508)	(\$565,518)	\$7,063	\$12,558	\$340,691	(\$224,827)
2022		(\$224,827)	(\$224,827)	(\$238,317)	\$7,275	\$12,935	\$350,911	\$112,595
2023		\$112,595	\$112,595	\$119,350	\$7,493	\$13,323	\$361,439	\$480,789
2024		\$480,789	\$480,789	\$509,636	\$7,718	\$13,723	\$372,282	\$881,918
2025		\$881,918	\$881,918	\$934,833	\$7,950	\$14,134	\$383,450	\$1,318,284
2026		\$1,318,284	\$1,318,284	\$1,397,381	\$8,188	\$14,558	\$394,954	\$1,792,335
2027		\$1,792,335	\$1,792,335	\$1,899,875	\$8,434	\$14,995	\$406,803	\$2,306,678

Required Collectable Dollars

\$17,878	\$/ha	\$7,238	\$/Acre
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