

Fiscal Impact Study

Lakeport Beach

Township of Alnwick/Haldimand, Northumberland County

November 2023



Fiscal Impact Study

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Township of Alnwick/Haldimand, Northumberland County

Prepared for:

Landlab



Keleher Planning & Economic Consulting Inc.

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Milton ON, L9T 0L8

November 2023

EXECUTIVE SUMMARY

Keleher Planning & Economic Consulting Inc. (KPEC) was retained by Landlab to review the fiscal impacts from the development proposal known as Lakeport Beach, in the Township of Alnwick/Haldimand, in the County of Northumberland.

Fiscal Impacts to Township

Comparing the incremental annual revenues with incremental annual expenditures resulting from development at build-out, depending on the development scenario, results in an annual fiscal surplus for the Township of \$484,600 to \$488,700, or \$280-\$296 per capita.

This estimate is based on the following estimated incremental annual revenues and expenditures related to the development at build-out, depending on the development scenario:

- Annual property tax revenues to the Township of \$1.7-\$1.8 million
- Annual non-tax revenues of \$83,000 to \$88,800
- Annual operating costs for community services of \$1.0-\$1.1 million
- Annual operating costs and lifecycle costs for development-related and community-wide growth-related installed infrastructure of \$277,300 to \$289,600.

Fiscal Impacts to County

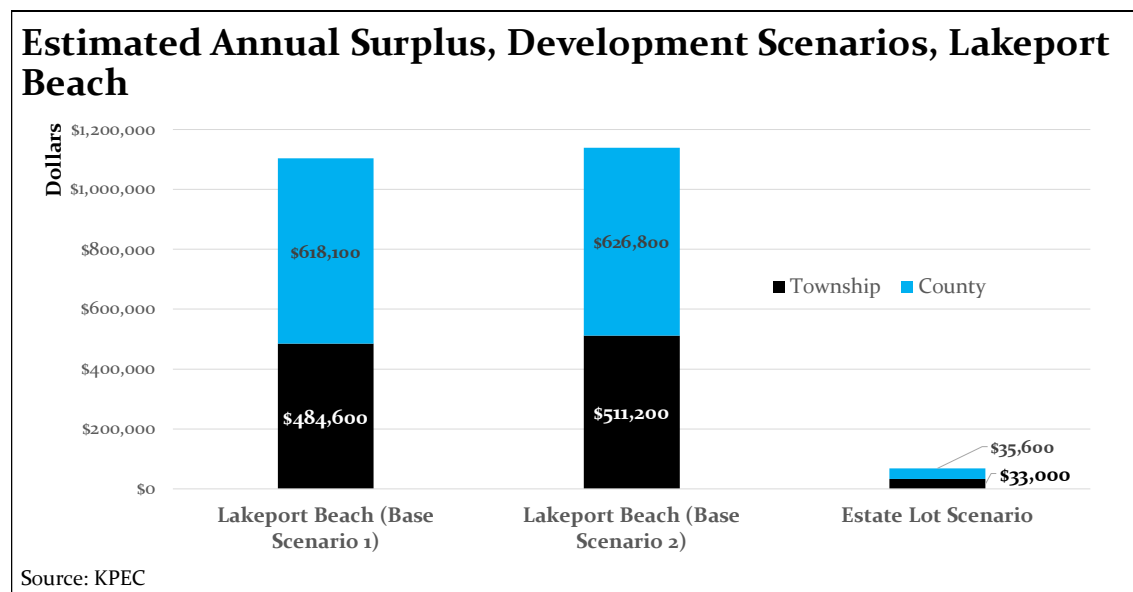
Comparing the incremental annual revenues with incremental annual expenditures resulting from development at build-out, depending on the development scenario, results in an annual fiscal surplus for the County of \$542,900 to \$570,100, or \$323-\$348 per capita.

This estimate is based on the following estimated incremental annual revenues and expenditures related to the development at build-out, depending on the development scenario:

- Annual property tax revenues to the County of \$1.5-\$1.6 million
- Annual non-tax revenues of \$38,800 to \$41,400
- Annual operating costs for community services of \$853,100 to \$909,200
- Annual operating costs and lifecycle costs for development-related and community-wide growth-related installed infrastructure of \$73,900 to \$77,900.

For comparison purposes, the study also reviews the estimated fiscal impact to the County and Township of the lower-density estate lot scenario. It is estimated that the estate lot scenario will generate significantly worse fiscal results for the Township and County, as summarized in the figure below.

Figure ES- 1



Operating and Lifecycle Costs

Lakeport Beach is estimated to contribute roughly 26% of the County's current annual lifecycle funding requirements for planned new growth-infrastructure.

The water and wastewater system constructed for Lakeport Beach will be a communal system, with installation costs funded entirely by the developer. Once in operation, only the users of the system will be responsible for funding the operation, maintenance and replacement costs, with no costs accruing to the Township or County.

Based on the Fiscal Impact Study done in November 2021 for Lakeport Beach, which relied on the same underlying water/wastewater system, the annual operating and lifecycle costs (in 2019\$ as per the November 2021 report) for water and wastewater infrastructure installed is estimated to be \$826,100.

When these annual costs of \$826,100 are divided by the number of dwelling units in the Lakeport Beach plan, the costs per unit amount to approximately \$1,033 per year. This means that the average monthly water/sewer bill for each household in the Lakeport Beach development will be approximately \$86 per month.

Additional Revenue Implications

Based on the findings of the development generating an annual surplus for the Township and County at build-out, the estimated surplus could be used to mitigate future property tax increases, increase contributions to a tax rate stabilization reserve fund, expand municipal services, fund backlogged state of good repair works, or some combination thereof.

Summary of Economic Benefits

It is estimated that the construction of Lakeport Beach will generate substantial economic benefits for the Township and County, including nearly 2,100 person-years of employment, including \$97 million in wages for those employed in the construction of the development, with an overall economic impact of \$429 million in Gross Output and \$205 million in GDP.

The construction sector is the largest employment sector in the Township, employing 13.4% of Township residents as of the 2021 Census. The Lakeport Beach project would thus positively impact the largest job-creating sector in Alnwick/Haldimand. Comparatively, the sectors of agriculture, forestry, fishing and hunting together provide only 4% of the jobs held by Township residents.

Once completed, it is estimated that the non-residential space would accommodate between 72 to 243 jobs, and the residents of Lakeport Beach are expected to spend \$34-\$38 million annually in local stores, businesses, and service providers.

Figure ES- 2

Type of Economic Benefit	Estimated Benefit
Construction Jobs	2,080 person-years of employment
Construction Income	\$97 million
Gross Output	\$429 million
Gross Domestic Product (GDP)	\$205 million
Permanent Jobs	72-243 jobs
Annual Retail Spending	\$34.0 million to \$37.5 million

Other Benefits – Diversifying the Township and County’s Aging Population

The share of older population in the County and Township has continued to increase over the 2016-2021 period, and the Township’s share of 56% of adults over the age of 45 is significantly higher than the Ontario-wide average of 45.6%. An older and aging

population makes it difficult to fill key community positions (doctors, nurses) due to the disproportionate portion of the County's residents being above typical working age.



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1. INTRODUCTION

Keleher Planning & Economic Consulting Inc. (KPEC) was retained by Landlab to model and study the fiscal impacts of a proposed development on lands in the Township of Alnwick/Haldimand, in Northumberland County, on the finances of the Township and County.

1.1. Subject Site

The 200-acre subject site is located in the Township of Alnwick/Haldimand, in Northumberland County.

Figure 1

Overview of Subject Site and Proposed Development Plan



Source: Landlab

1.2. Overview of Development

The proposed development would, depending on the development scenario, include either 762 residential dwelling units and 43,325 square feet of commercial uses (Scenario 1), or 722 residential units and 145,701 square feet of non-residential uses,



including 9,200 square feet of commercial uses and 136,501 square feet of hotel space (Scenario 2). It is estimated that the commercial/hotel space in the two scenarios would generate between 72 and 243 jobs.

Based on projected future average household sizes for new dwelling units as estimated in Northumberland County's 2020 Development Charge Background Study, the estimated population in the new dwelling units is estimated to range between 1,503 persons (Scenario 2) and 1,566 persons (Scenario 1).

In both scenarios, the range of residential units includes a mix of single-detached units, senior cottages (detached and attached), townhomes, and apartment units.

Figure 2

Summary of Proposed Development, Lakeport Beach						
	Scenario 1			Scenario 2		
Residential Units	Units	PPU	Estimated Population	Units	PPU	Estimated Population
Single-Detached Units	209	2.589	541	209	2.589	541
Seniors Housing Units	47	2.022	95	47	2.022	95
Semi-Detached / Townhomes	298	2.022	603	298	2.022	603
Apartments	208	1.573	327	168	1.573	264
Total	762		1,566	722		1,503
Non-Residential Uses	GFA (m2)	GFA (ft2)	Jobs (600sf/job)	GFA (m2)	GFA (ft2)	Jobs (600sf/job)
Retail	4,025	43,325	72	855	9,200	15
Hotel	-	-	-	12,681	136,501	228
Total	4,025	43,325	72	13,536	145,701	243

Source: KPEC based on plans provided by client, Northumberland County 2020 DC Study

1.3. Approach to the Study

This fiscal impact study includes an analysis of the following elements:

- Cost and timing of local municipal capital infrastructure required to service the proposed development;
- Assessment of the DC eligibility of capital infrastructure needs;
- Calculation of the development charges payable on the proposed development;
- Estimation of the projected incremental assessment value and associated incremental property tax and non-tax revenues that would be generated;



- Estimation of the incremental municipal operating costs, which may include an estimate of lifecycle costs associated with installed infrastructure, and other growth-related needs;
- Calculation of the expected annual marginal fiscal surplus or deficit generated by development and put the results into context for the Township and County's finances.



2. CAPITAL WORKS AND FUNDING SOURCES

This section of the report provides analysis of the identified capital needs associated with the proposed development, assesses whether the works are local works or eligible for recovery from development charges, and estimates the potential development charge revenues generated by the development to fund DC eligible capital needs.

2.1. Capital Works

2.1.1. Water and Wastewater

The proposal includes plans for communal servicing, including an on-site water treatment system, and a sanitary sewer system based on either surface disposal or subsurface disposal.

All capital costs will be the responsibility of the developer and all associated operating and lifecycle costs will be the responsibility of the property owners within the development. In total, the capital costs are estimated to range between \$19 million and \$29 million, depending on the wastewater servicing scenario.

Figure 3

Estimated Capital Cost of On-Site Servicing			
Water	Cost Range		
	Low	High	
Water Treatment System	\$ 3,120,000	\$ 3,720,000	
Water Reservoir and Booster Pumping Station	\$ 3,600,000	\$ 4,800,000	
Watermain	\$ 1,200,000	\$ 1,800,000	
Inlet Structure	\$ 1,200,000	\$ 1,800,000	
Other (Site Preparation, etc.)	\$ 600,000	\$ 1,200,000	
Subtotal Water	\$ 9,720,000	\$ 13,320,000	
Wastewater (Scenario 1 - Surface Disposal)			
Sanitary Collection System	\$ 1,200,000	\$ 1,800,000	
Flow Equalization Tank and Treatment System	\$ 7,920,000	\$ 9,120,000	
Forcemain and Outlet Structure	\$ 1,200,000	\$ 1,800,000	
Other (Site Preparation, etc.)	\$ 600,000	\$ 1,200,000	
Subtotal Wastewater (Scenario 1)	\$ 10,920,000	\$ 13,920,000	
Wastewater (Scenario 2 - Subsurface Disposal)			
Sanitary Collection System	\$ 6,000,000	\$ 9,600,000	
Flow Equalization Tank and Treatment System	\$ 1,200,000	\$ 1,800,000	
Forcemain and Outlet Structure	\$ 1,800,000	\$ 3,000,000	
Other (Site Preparation, etc.)	\$ 600,000	\$ 1,200,000	
Subtotal Wastewater (Scenario 2)	\$ 9,600,000	\$ 15,600,000	
Total Costs - W&WW - Scenario 1	\$ 20,640,000	\$ 27,240,000	
Total Costs - W&WW - Scenario 2	\$ 19,320,000	\$ 28,920,000	

Source: WSP Canada



The water system would take water directly from Lake Ontario (surface water), and then treat it via a communal water treatment plant with intake from Lake Ontario and distributed to users via a communal distribution network. The wastewater system will be a stand-alone system with no connections to nearby wastewater systems.

There are two options for the wastewater system – Scenario 1 would involve surface disposal, which would allow for a phased construction of the treatment plant as new homes are built. Scenario 2 would involve subsurface disposal, which would require 2 hectares of land for the leaching bed, which would impact the amount of land available on-site for development and other community uses (parks, etc.).

Both the water and wastewater system's capital and operating costs will be borne by Landlab and will result in no costs to the Township or County's existing ratepayers.

2.1.2. Roads

Based on work undertaken by WSP Canada, no changes to the existing road network are recommended, even with the addition of site-generated traffic on area roads. The development will include internal roads to be built by the developer, with operating and maintenance costs funded by property owners within Lakeport Beach. In addition, the development will require construction of a 5.0-kilometre road segment to be assumed by the Township (or 10.0 lane kms). Like the roads in the development, the 5.0-km road segment will be constructed by the developer, and for the purposes of this analysis assumed to be operated and maintained by the Township.

2.2. Capital Revenues

2.2.1. Development Charges – Township of Alnwick/Haldimand

Based on the Township's DC rates in effect as of late 2023, the development would generate \$7.6 to \$7.9 million in DC revenues for the Township, though the Water DC rates may be exempted if the development does not utilize municipal water services.



Figure 4

Estimate of DC Revenues, Lakeport Beach, Township of Alnwick/Haldimand									
	Scenario 1				Scenario 2				
	Single-Detached / Semi-Detached	Townhouse	Apartment	Total	Single-Detached / Semi-Detached	Townhouse	Apartment	Total	
Units	256	298	208	762	256	298	168	722	
DC Rates by Service	Single-Detached	Townhouse	Apartment		Single-Detached	Townhouse	Apartment		
Emergency Measures	\$ 2.03	\$ 2.03	\$ 2.03						
Fire Services	\$ 1,987.91	\$ 1,987.91	\$ 1,987.91						
General Government	\$ 507.22	\$ 507.22	\$ 507.22						
Indoor Recreation	\$ 1,140.90	\$ 1,140.90	\$ 1,140.90						
Library	\$ 254.10	\$ 254.10	\$ 254.10						
Other Transportation	\$ 1,547.06	\$ 1,547.06	\$ 1,547.06						
Roads	\$ 4,725.95	\$ 4,725.95	\$ 4,725.95						
Water	\$ 31.64	\$ 31.64	\$ 31.64						
Cemeteries	\$ 9.19	\$ 9.19	\$ 9.19						
Total Town-Wide	\$ 10,206.00	\$ 10,206.00	\$ 10,206.00						
DC Revenues by Service	Single-Detached	Townhouse	Apartment	Total	Single-Detached	Townhouse	Apartment	Total	
Emergency Measures	\$ 520	\$ 605	\$ 422	\$ 1,547	\$ 520	\$ 605	\$ 341	\$ 1,466	
Fire Services	\$ 508,905	\$ 592,397	\$ 413,485	\$ 1,514,787	\$ 508,905	\$ 592,397	\$ 333,969	\$ 1,435,271	
General Government	\$ 129,848	\$ 151,152	\$ 105,502	\$ 386,502	\$ 129,848	\$ 151,152	\$ 85,213	\$ 366,213	
Indoor Recreation	\$ 292,070	\$ 339,988	\$ 237,307	\$ 869,366	\$ 292,070	\$ 339,988	\$ 191,671	\$ 823,730	
Library	\$ 65,050	\$ 75,722	\$ 52,853	\$ 193,624	\$ 65,050	\$ 75,722	\$ 42,689	\$ 183,460	
Other Transportation	\$ 396,047	\$ 461,024	\$ 321,788	\$ 1,178,860	\$ 396,047	\$ 461,024	\$ 259,906	\$ 1,116,977	
Roads	\$ 1,209,843	\$ 1,408,333	\$ 982,998	\$ 3,601,174	\$ 1,209,843	\$ 1,408,333	\$ 793,960	\$ 3,412,136	
Water	\$ 8,100	\$ 9,429	\$ 6,581	\$ 24,110	\$ 8,100	\$ 9,429	\$ 5,316	\$ 22,844	
Cemeteries	\$ 2,353	\$ 2,739	\$ 1,912	\$ 7,003	\$ 2,353	\$ 2,739	\$ 1,544	\$ 6,635	
Total Town-Wide	\$ 2,612,736	\$ 3,041,388	\$ 2,122,848	\$ 7,776,972	\$ 2,612,736	\$ 3,041,388	\$ 1,714,608	\$ 7,368,732	
Non-Residential	GFA:	43,325			GFA:	145,701			
	DC Rate:	\$ 1.68			DC Rate:	\$ 1.68			
	DC Revenues:	\$ 72,786			DC Revenues:	\$ 244,777			
Total DC Revenues				\$ 7,849,758				\$ 7,613,509	

Source: KPEC based on DC Rates for Township of Alnwick/Haldimand, effective as of mid-2023

2.2.2. Development Charges – Northumberland County

Based on the County's DC rates as effective January 1, 2023, the proposed development would generate \$1.9 to \$2.0 million in DC revenues for the County, which can be used to build community infrastructure required by the subject development, and includes \$1.3 million for roads, \$214,000 to \$225,000 for Community Housing (though this will be ineligible upon the County's next DC by-law as per Bill 23), \$181,000 to \$183,000 for Paramedic Services, among other revenues.



Figure 5

Estimate of DC Revenues, Lakeport Beach, Northumberland County									
	Scenario 1				Scenario 2				
	Single-Detached	Townhouse	Apartment	Total	Single-Detached	Townhouse	Apartment	Total	
Units	256	298	208	762	256	298	168	722	
DC Rates by Service	Single-Detached	Townhouse	Apartment (2BR+)	Apartment (BACH+1BR)					
Roads and Related	\$ 2,100	\$ 1,640	\$ 1,394	\$ 1,061					
County-Wide Studies	\$ 45	\$ 35	\$ 28	\$ 21					
Area-Specific Studies	\$ 1	\$ 241	\$ 181	\$ 138					
Homes for the Aged	\$ 309	\$ 74	\$ -	\$ -					
Paramedic Services	\$ 95	\$ 494	\$ 57	\$ 43					
Community Housing	\$ 632	\$ 29	\$ 263	\$ 200					
Waste Diversion - Facilities	\$ 37	\$ 55	\$ 23	\$ 17					
Waste Diversion - Curbside Collection	\$ 70	\$ 1	\$ 42	\$ 32					
Total Township DC Rates	\$ 3,289	\$ 2,569	\$ 1,988	\$ 1,512					
DC Revenues by Service	Single-Detached	Townhouse	Apartment	Total					
Roads and Related	\$ 537,600	\$ 488,720	\$ 289,952	\$ 1,316,272	\$ 537,600	\$ 488,720	\$ 234,192	\$ 1,260,512	
County-Wide Studies	\$ 11,520	\$ 10,430	\$ 5,824	\$ 27,774	\$ 11,520	\$ 10,430	\$ 4,704	\$ 26,654	
Area-Specific Studies	\$ 256	\$ 71,818	\$ 37,648	\$ 109,722	\$ 256	\$ 71,818	\$ 30,408	\$ 102,482	
Homes for the Aged	\$ 79,104	\$ 22,052	\$ -	\$ 101,156	\$ 79,104	\$ 22,052	\$ -	\$ 101,156	
Paramedic Services	\$ 24,320	\$ 147,212	\$ 11,856	\$ 183,388	\$ 24,320	\$ 147,212	\$ 9,576	\$ 181,108	
Community Housing	\$ 161,792	\$ 8,642	\$ 54,704	\$ 225,138	\$ 161,792	\$ 8,642	\$ 44,184	\$ 214,618	
Waste Diversion - Facilities	\$ 9,472	\$ 16,390	\$ 4,784	\$ 30,646	\$ 9,472	\$ 16,390	\$ 3,864	\$ 29,726	
Waste Diversion - Curbside Collection	\$ 17,920	\$ 298	\$ 8,736	\$ 26,954	\$ 17,920	\$ 298	\$ 7,056	\$ 25,274	
Total Town-Wide DC Revenues	\$ 841,984	\$ 765,562	\$ 413,504	\$ 2,021,050	\$ 841,984	\$ 765,562	\$ 333,984	\$ 1,941,530	
Non-Residential	GFA:	43,325			GFA:	145,701			
	DC Rate:	\$ 1.87			DC Rate:	\$ 1.87			
	DC Revenues:	\$ 81,018			DC Revenues:	\$ 272,460			
Total DC Revenues				\$ 2,102,068				\$ 2,213,990	

Source: Town of BWG, DC Rates Effective January 1, 2023



3. ON-GOING INCREMENTAL REVENUES AND EXPENDITURES

This section of the report provides an overview of modelling that estimates the incremental annual revenues and costs associated with development of the subject lands, including increased property tax revenue, non-tax revenues, operating costs, and lifecycle costs associated with installed infrastructure.

3.1. On-Going Revenues

3.1.1. Property Taxes

Based on the Town's 2021 property tax rates (so as to be consistent with the most recent available version of the Town's Financial Information Return data), it is estimated that the proposed development would generate \$311 million to \$318 million in assessment value, and approximately \$3.7 million to \$3.8 million per year in annual property taxes for the Township, County and education, combined.

Figure 6

Estimated Annual Property Tax Revenues, Lakeport Beach						
Residential Units	Scenario 1			Scenario 2		
	Units	Estimated Per Unit Assessment Value	Estimated Assessment Value	Units	Estimated Per Unit Assessment Value	Estimated Assessment Value
Single-Detached Units	209	\$ 464,000	\$ 96,976,000	209	\$ 464,000	\$ 96,976,000
Seniors Housing Units	47	\$ 464,000	\$ 21,808,000	47	\$ 464,000	\$ 21,808,000
Semi-Detached / Townhomes	298	\$ 464,000	\$ 138,272,000	298	\$ 464,000	\$ 138,272,000
Apartments	208	\$ 230,000	\$ 47,840,000	168	\$ 230,000	\$ 38,640,000
Total	762		\$ 304,896,000	722		\$ 295,696,000
Residential Tax Rate & Revenues						
	Annual Tax			Annual Tax		
	Tax Rate (2021)	Revenues		Tax Rate (2021)	Revenues	
Township	0.546385%	\$ 1,665,906		0.546385%	\$ 1,615,639	
County	0.478717%	\$ 1,459,589		0.478717%	\$ 1,415,547	
Education	0.153000%	\$ 466,491		0.153000%	\$ 452,415	
Total	1.178102%	\$ 3,591,986		1.178102%	\$ 3,483,600	
Non-Residential						
GFA	43,325			145,701		
Assessment per SF	\$ 150.00			\$ 150.00		
Estimated Assessment Value	\$ 6,498,792			\$ 21,855,109		
Commercial Tax Rate (CT/Township)	0.819577%			0.819577%		
Commercial Tax Rate (CT/County)	0.718076%			0.718076%		
Estimated Non-Res Tax Revenues	Township	\$ 53,263			\$ 179,119	
	County	\$ 46,666			\$ 156,936	
Total Property Tax Revenue						
Township		\$ 1,719,169			\$ 1,794,758	
County		\$ 1,506,255			\$ 1,572,483	

Source: KPEC based on 2021 Tax Rates for Township and County

Over a 10-year period, assuming that property taxes increase at-pace with inflation, the total tax revenue generated for the Township and County would be \$17.1-\$17.9 million,



and \$15.0-\$15.7 million, respectively. Over a 20-year period, the Township would receive approximately \$34.3-\$35.9 million, while the County would receive \$30.1-\$31.5 million.

3.1.2. Non-Tax Revenues (Township and County)

Based on data on current annual non-tax revenues from Township/County residents and businesses and assumed growth factors that attempt to proxy the extent to which existing per capita revenues can be expected to increase proportionately or increase slower or faster due to growth, it is estimated that the development would generate approximately \$51 per capita for the Township and \$24 per capita for the County in non-tax revenues.

Figure 7

Estimated Annual Incremental Non-Tax Revenues Generated for Township from Lakeport Beach				
	Licences, Permits, Rents	Fines and Penalties	Gaming and Casino Revenues	Total
Revenues	\$ 322,232	\$ 206,137	n.a.	\$ 528,369
Less: Building Permit Revenues	\$ 7,345	\$ -	\$ -	\$ 7,345
Net Non-Tax Revenues	\$ 314,887	\$ 206,137	n.a.	\$ 521,024
Growth Factor	95%	95%	95%	
Growth-Related Non-Tax Revenues	\$ 299,143	\$ 195,830	n.a.	\$ 494,973
Residential Share	74%	74%	74%	
Residential GR NTR	\$ 222,290	\$ 145,519	n.a.	\$ 367,809
Per Capita	\$ 30.74	\$ 20.12	n.a.	\$ 50.87
Non-Residential Share	26%	26%	26%	
Non-Residential GR NTR	\$ 76,853	\$ 50,311	n.a.	\$ 127,164
Per Employee	\$ 30.74	\$ 20.12	n.a.	\$ 50.87

Source: KPEC based on Financial Information Return data



Figure 8

Estimated Annual Incremental Non-Tax Revenues Generated for County from Lakeport Beach				
	Licences, Permits, Rents	Fines and Penalties	Gaming and Casino Revenues	Total
Revenues	\$ 2,639,463	\$ 921,002	n.a.	\$ 3,560,465
Less: Building Permit Revenues	\$ 642,876	\$ -	\$ -	\$ 642,876
Net Non-Tax Revenues	\$ 1,996,587	\$ 921,002	n.a.	\$ 2,917,589
Growth Factor	95%	95%	95%	
Growth-Related Non-Tax Revenues	\$ 1,896,758	\$ 874,952	n.a.	\$ 2,771,710
Residential Share	73%	73%	73%	
Residential GR NTR	\$ 1,388,595	\$ 640,542	n.a.	\$ 2,029,137
Per Capita	\$ 16.22	\$ 7.48	n.a.	\$ 23.71
Non-Residential Share	27%	27%	27%	
Non-Residential GR NTR	\$ 508,163	\$ 234,410	n.a.	\$ 742,572
Per Employee	\$ 16.22	\$ 7.48	n.a.	\$ 23.71
Source: KPEC based on Financial Information Return data				

3.1.3. Water/Sewer Rate Revenues

The subject development will not generate water or sewer rate revenues as the development will be on communal on-site services.

3.2. Incremental On-Going Expenditures

3.2.1. Incremental Per Capita Expenditures

In estimating the impact of the development on the finances of the Township and County's, it is important to estimate the extent to which the additional population will generate needs for additional services and cause the municipalities to incur incremental operating costs.

This modelling is based on the Township and County's 2021 Financial Information Return operating cost data (Schedule 40), broken out into 70 different spending categories, with deductions to annual operating costs to account for amortization expense, external transfers, interest on long-term debt, and revenues generated for each of the 70 categories from user fees and service charges. The outcome of deducting the various adjustments from gross operating expenditures is "net operating expenditures".



Figure 9

Summary of Modelling - Estimated Net Annual Incremental Operating Costs					
	Residential		Non-Residential		
	Township	County	Township	County	
Scenario 1					
Anticipated Incremental Per Capita Increase to Operating Costs	\$	636.24	\$	613.62	\$ 520.79
Estimated Population/Jobs		1,566		72	
Estimated Incremental Operating Costs	\$	996,271	\$	44,309	\$ 37,606
Scenario 2					
Anticipated Incremental Per Capita Increase to Operating Costs	\$	636.24	\$	613.62	\$ 520.79
Estimated Population/Jobs		1,503		243	
Estimated Incremental Operating Costs	\$	956,239	\$	149,009	\$ 126,466
Source: KPEC based on Financial Information Returns					

Each estimate of net operating expenditures is then adjusted for the estimated extent to which the net operating expenditures per capita can be expected to change due to the development of the subject development. For example, certain services are unlikely to require a 1:1 increase with existing service levels, such as municipal government, the Town's planning department, etc., and those have been assumed to grow at 25% of the existing per capita service level, due to the efficiencies anticipated in many municipal services as municipalities grow. In other instances, the existing net operating expenditures per capita are assumed to increase at a near proportionate pace and are assigned a Growth Factor of 95%.

Detailed tables showing the calculations are presented in Appendix A.

3.2.2. Direct Incremental Maintenance and Lifecycle Costs of Installed Infrastructure

Based on calculated 2021 Financial Information Return data submitted by the Township to the Ministry of Municipal Affairs and Housing, benchmarks were created to establish assumptions for annual operating costs and lifecycle costs per km of installed infrastructure. The roads required for Lakeport Beach will be internal roads, with only 5.0 km (10.0 lane km) assumed to be the responsibility of the Township. All other roads internal to Lakeport Beach would be maintained through condominium contributions.

At the established benchmarks, each Scenario would see roughly \$35,500 in annual operating costs and \$12,400 in annual lifecycle costs associated with the incremental costs associated with operating and maintaining an additional 10 lane km of road, assuming that the new roadways would be the responsibility of the Township. Even with the additional operating and lifecycle costs, based on the comparison of all



incremental revenues and costs to be incurred or accrued by the Township, as summarized in Chapter 4 of this report, the subject development would still generate a significant annual surplus for the Township.

3.2.3. Indirect Incremental Maintenance and Lifecycle Costs of Town-Wide DC Eligible Infrastructure

Based on estimated lifecycle costs associated with broader growth-related infrastructure needs in the County as set out in the County's 2020 DC Study, the fiscal impact model incorporates the subject development's share of these future annual lifecycle costs.

The annual lifecycle costs to the County for all capital works in the 2020 DC Study necessary to fund all on-going costs associated with growth-related infrastructure amounts to \$526,400 per year, of which \$412,200 is attributed to the residential sector, which based on the amount of growth forecast in the 2022 DC Study (within various horizons) amounts to \$45.37 per capita. For the costs attributed to the non-residential sector (\$114,200), the incremental cost increase would amount to \$39.89 per employee.

Figure 10

Estimated Indirect Lifecycle Costs, Lakeport Beach						
	Gross Population in New Units		Employment			
2020-2029	8,048		2,537			
2020-2031	9,416		2,929			
	Annual Lifecycle Contribution (DC Study)		Forecast Period	Annual Lifecycle Contributions (Residential)		
				Res. Share	ALCs	ALCs per Capita
Roads & Related	\$	420,876	2020-2031	77%	\$ 324,075	\$ 34.42
Homes for the Aged	\$	25,543	2020-2029	76%	\$ 19,413	\$ 2.41
Paramedic Services	\$	44,569	2020-2029	76%	\$ 33,872	\$ 4.21
Community Housing	\$	33,179	2020-2029	100%	\$ 33,179	\$ 4.12
Waste Diversion	\$	2,214	2020-2029	76%	\$ 1,683	\$ 0.21
Total	\$	526,381			\$ 412,221	\$ 45.37
				Annual Lifecycle Contributions (Non-Residential)		
				Res. Share	ALCs	ALCs per Capita
Roads & Related				23%	\$ 96,801	\$ 33.05
Homes for the Aged				24%	\$ 6,130	\$ 2.42
Paramedic Services				24%	\$ 10,697	\$ 4.22
Community Housing				0%	\$ -	\$ -
Waste Diversion				24%	\$ 531	\$ 0.21
Total					\$ 114,160	\$ 39.89

Source: KPEC based on Northumberland County 2020 DC Study

Source: KPEC based on Northumberland County 2020 DC Study



The Township's most recent DC background study cannot be found, however, based on the ratio of the Township's DC rates per single-detached unit (\$10,206) to the County's DC rates (\$3,289 per SDU) of 3.1-to-1, this ratio will be applied to provide a rough estimate for purposes of this study.



4. CONCLUSIONS

4.1. Estimated Net Annual Fiscal Impact

Comparing the incremental annual revenues with incremental annual expenditures resulting from development of Lakeport Beach, at build-out, results in an annual fiscal surplus to the Township of \$484,600 to \$488,700, depending on the scenario, with the per capita impacts ranging from \$280 to \$296 per person/job.

The net annual fiscal surplus to the County ranges from \$618,100 to \$626,800, with the impacts ranging from \$359 to \$377 per person/job.

Figure 11

Estimated Annual Incremental Net Fiscal Impact, Lakeport Beach, Township of Alnwick/Haldimand and Northumberland County									
	Scenario 1				Scenario 2				
Population	1,566 persons				1,503 persons				
Units	762 units				722 units				
Employment	72 jobs				243 jobs				
Persons per Unit (Average)	2.05 persons per unit				2.08 persons per unit				
TOWNSHIP OF ALNWK/HALDIMAND									
	Residential		Non-Residential		Residential		Non-Residential		
Incremental Revenues	Amount	Per Capita	Amount	Per Capita	Amount	Per Capita	Amount	Per Capita	
Property Tax Revenues	\$ 1,665,906	\$ 1,063.88	\$ 53,263	\$ 737.62	\$ 1,615,639	\$ 1,074.97	\$ 179,119	\$ 737.62	
Non-Tax Revenues	\$ 79,649	\$ 50.87	\$ 3,673	\$ 50.87	\$ 76,449	\$ 50.87	\$ 12,352	\$ 50.87	
Water / Sewer Rate Revenues	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Total Incremental Revenues	\$ 1,745,555	\$ 1,114.75	\$ 56,936	\$ 788.48	\$ 1,692,087	\$ 1,080.60	\$ 191,471	\$ 788.48	
Incremental Expenditures									
Per Capita Operating Costs	\$ 996,271	\$ 636.24	\$ 44,309	\$ 613.62	\$ 956,239	\$ 636.24	\$ 149,009	\$ 613.62	
Infrastructure - Operating Costs	\$ 33,968	\$ 21.69	\$ 1,566	\$ 21.69	\$ 30,592	\$ 20.35	\$ 4,943	\$ 20.35	
Infrastructure - Lifecycle Costs	\$ 11,875	\$ 7.58	\$ 548	\$ 7.58	\$ 10,694	\$ 7.12	\$ 1,728	\$ 7.12	
Share of Twp-Wide Infrastructure - Lifecycle Costs	\$ 220,454	\$ 140.79	\$ 8,938	\$ 123.79	\$ 211,596	\$ 140.79	\$ 30,059	\$ 123.79	
Total Incremental Expenditures	\$ 1,262,568	\$ 806.30	\$ 55,361	\$ 766.68	\$ 1,209,121	\$ 804.50	\$ 185,739	\$ 764.88	
Net Annual Fiscal Impact	\$ 482,987	\$ 308.45	\$ 1,574	\$ 21.80	\$ 482,967	\$ 276.11	\$ 5,733	\$ 23.61	
Total Fiscal Impact - Township (Annual)	\$ 484,562	\$ 295.81			\$ 488,699	\$ 279.93			
NORTHUMBERLAND COUNTY									
Incremental Revenues									
Property Tax Revenues	\$ 1,459,589	\$ 932.12	\$ 46,666	\$ 646.27	\$ 1,415,547	\$ 941.84	\$ 156,936	\$ 646.27	
Non-Tax Revenues	\$ 37,120	\$ 23.71	\$ 1,712	\$ 23.71	\$ 35,628	\$ 23.71	\$ 5,756	\$ 23.71	
Water / Sewer Rate Revenues	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Total Incremental Revenues	\$ 1,496,709	\$ 955.83	\$ 48,378	\$ 669.97	\$ 1,451,175	\$ 926.75	\$ 162,693	\$ 669.97	
Incremental Expenditures									
Per Capita Operating Costs	\$ 815,496	\$ 520.79	\$ 37,606	\$ 520.79	\$ 782,728	\$ 520.79	\$ 126,466	\$ 520.79	
Infrastructure - Operating Costs	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Infrastructure - Lifecycle Costs	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Share of County-Wide Infrastructure - Lifecycle Costs	\$ 71,044	\$ 45.37	\$ 2,881	\$ 39.89	\$ 68,189	\$ 45.37	\$ 9,687	\$ 39.89	
Total Incremental Expenditures	\$ 886,540	\$ 566.16	\$ 40,486	\$ 560.68	\$ 850,917	\$ 566.16	\$ 136,153	\$ 560.68	
Net Annual Fiscal Impact	\$ 610,169	\$ 389.67	\$ 7,892	\$ 109.29	\$ 600,258	\$ 360.59	\$ 26,539	\$ 109.29	
Total Fiscal Impact - County (Annual)	\$ 618,060	\$ 377.31			\$ 626,797	\$ 359.03			
Source: KPEC based on Financial Information Return data, information from Township of Alnwick/Haldimand and Northumberland County									

Source: KPEC based on Financial Information Return data, information from Township of Alnwick/Haldimand and Northumberland County

As a caveat, the true net annual fiscal impact can vary from the estimates presented in this study, depending on numerous variables that may deviate from the assumptions made in this report, including actual timing of development, infrastructure costs, changes in property tax rates, assessment values, among many other inputs. Therefore, the fiscal impact analysis is best used on a 'directional' basis to give an indication of the



likely orientation of fiscal impact (positive vs. negative) as well as providing a rough indication to decision-makers regarding the potential scale of impact.

While the results summarized in the figure above are the estimated annual incremental revenues and costs that the Township/County would accrue or incur each year from build-out onward, during the development process, the interim fiscal impacts will depend on the pace of development, and the ability of the capital works (both internal and external) to be constructed and put into operation in a timely manner. However, the operating and maintenance costs associated with community services and needed infrastructure will include a variety of 'fixed' costs that will be incurred whether development happens or not, and 'variable' costs that will depend on need generated by persons living in the community.

4.2. Context Regarding Scale of Estimated Fiscal Impact

The incremental \$1.8-\$1.9 million in Township revenues represents approximately 18.8%-19.7% of current annual revenues, while the incremental \$1.3-\$1.4 million in annual Township expenditures represents 13.6%-14.2% of current annual expenditures. The annual surplus represents 5.0%-5.3% of both annual Township revenues and expenditures.

The incremental \$1.5-\$1.6 million in County revenues represents 1.2% of annual revenues, while the incremental \$927,000 to \$987,100 in annual County expenditures each represent approximately 0.8%-0.9% of current annual expenditures. The annual surplus represents 0.5% and 0.6% of current annual County revenues and expenditures, respectively.



Figure 12

Illustration of Scale of Incremental Revenues/Expenditures and Annual Net Fiscal Impact					
TOWNSHIP		Scenario 1		Scenario 2	
		Incremental - Proposed Development	Incremental as % of 2021 Actual	Incremental - Proposed Development	Incremental as % of 2021 Actual
Incremental as % of Existing Annuals	2021 Actual				
Annual Revenues	\$ 9,576,710	\$ 1,802,491	18.8%	\$ 1,883,559	19.7%
Annual Expenditures	\$ 9,694,047	\$ 1,317,929	13.6%	\$ 1,394,859	14.4%
Net Fiscal Impact as % of Existing Annuals					
Estimated Annual Net Fiscal Impact		\$ 484,562		\$ 488,699	
as % of 2021 Revenues		5.1%		5.1%	
as % of 2021 Expenditures		5.0%		5.0%	
COUNTY		Scenario 1		Scenario 2	
		Incremental - Proposed Development	Incremental as % of 2021 Actual	Incremental - Proposed Development	Incremental as % of 2021 Actual
Incremental as % of Existing Annuals	2021 Actual				
Annual Revenues	\$ 127,771,346	\$ 1,545,087	1.2%	\$ 1,613,868	1.3%
Annual Expenditures	\$ 109,246,238	\$ 927,026	0.8%	\$ 987,071	0.9%
Net Fiscal Impact as % of Existing Annuals					
Estimated Annual Net Fiscal Impact		\$ 618,060		\$ 626,797	
as % of 2021 Revenues		0.5%		0.5%	
as % of 2021 Expenditures		0.6%		0.6%	

Source: KPEC based on Town of Alnwick/Halifax and Northumberland County Financial Information Returns

4.3. Usage of Estimated Annual Fiscal Surplus

Should the proposed development generate an annual surplus, it could be used to mitigate future property tax increases, increase contributions to a tax rate stabilization reserve fund, expand municipal services, fund backlogged state of good repair works, or some combination thereof.

The above fiscal impact does not account for any differential that may result from the capital revenues generated through development charges with the amount of DCs necessary to be spent for municipality-wide growth-related infrastructure needs of the proposed development.

4.4. Fulfilling Objectives of County's 2023-2027 Community Strategic Plan

Northumberland County's 2023-2027 Community Strategic Plan ("CSP") provides the principal guidance for the County in aligning day-to-day actions with the County's mission, vision and values, as well as Council's direction and other community priorities. Among the 'pillars' of the CSP and their associated guiding principles, goals and actions are:



- The pillar to “Ignite Economic Opportunity”, includes the action to attract talent – lead innovative strategies to attract talent that Northumberland’s economy requires, particularly in key sectors such as advanced manufacturing, agriculture and health care – the Township is in need of population growth and given the advanced average age of Township residents, there is an emerging need for housing suitable for young professionals to settle and occupy professional positions (doctors, nurses, etc.)
- The pillar to “Foster a Thriving Community”, includes the action to increase development of affordable housing – the estimated annual fiscal surplus can help the County fund, finance or incentivize the development of affordable housing;
- The pillar to “Propel Sustainable Growth”, includes the action to build and maintain infrastructure – ensure growth is funded and managed in a way that is sustainable. The estimated net annual fiscal surplus associated with Lakeport Beach will generate annual revenues that exceed annual costs, with the estimated annual surplus enabling the Township and County to expand services without increasing burden on taxpayers, or increasing maintenance activities related to existing infrastructure, particularly that that may be in poor condition.

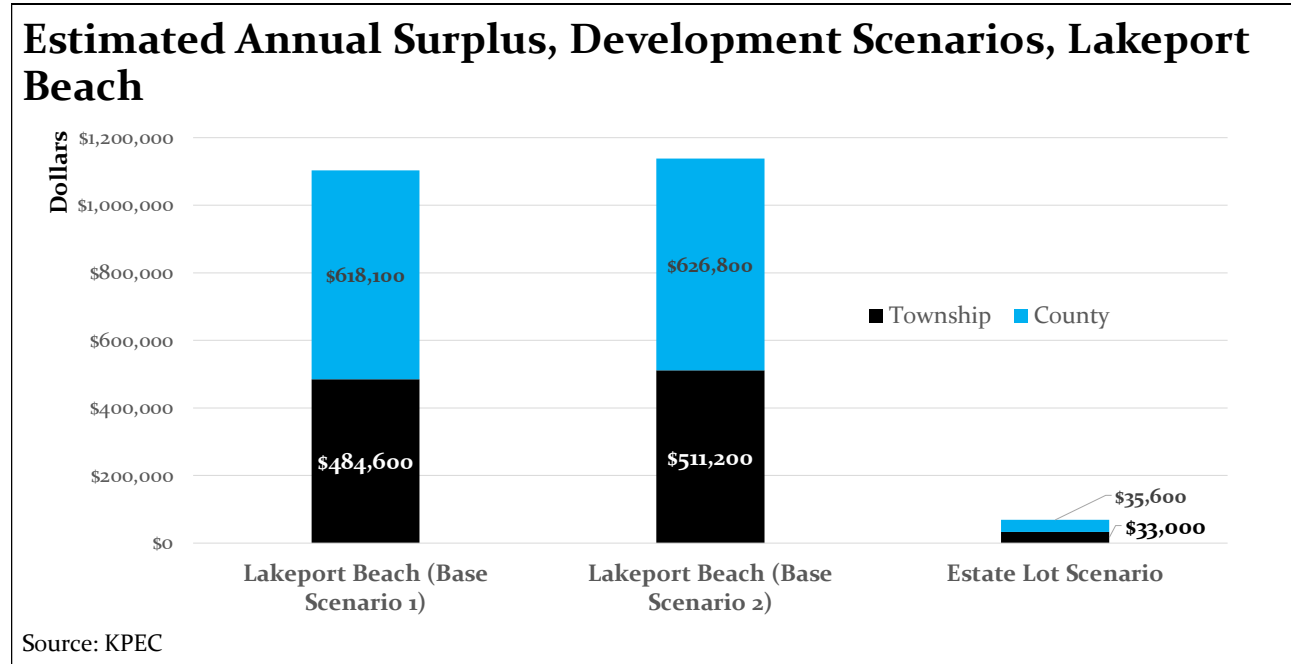
The development, which will consist of a mix of single-detached units, seniors cottages, townhomes and apartments, will improve the diversity of and quantity of housing options in the Township and County, where in the case of the County, consists of 79% single-detached homes, and rental vacancy rates as of 2022 were 1%.

4.5. Benefits of Lakeport Beach over Estate Lot Development

For illustration purposes, an alternate analysis was undertaken based on the 68-unit subdivision previously submitted to the Township. It would include 68 single-family homes on large lots, serviced by well and septic rather than communal servicing, and 2.5 km (5.0 lane km) of municipal roads.



Figure 13



The lower-density estate lot scenario will generate significantly worse fiscal results for the Township and County, as property tax revenues will decrease proportionately with the reduced amount of development, while certain costs will remain fixed (or not change proportionately) but spread across fewer residential units available to fund those costs.



5. ECONOMIC BENEFITS

Based on the analysis of economic benefits presented in a prior version of this report submitted to the Township and County dated November 22, 2021, the following are the economic benefits that the proposed development would generate for the Township and County, updated to reflect the revised plan (but all in 2021\$), where applicable.

Type of Economic Benefit	Estimated Benefit
Construction Jobs	2,080 person-years of employment
Construction Income	\$97 million
Gross Output	\$429 million
Gross Domestic Product (GDP)	\$205 million
Permanent Jobs	72-243 jobs
Annual Retail Spending	\$34.0 million to \$37.5 million

According to the 2021 Census, among jobs held by Township residents, the key economic sectors in the Township are industries such as Construction (13.4% of jobs), Manufacturing (13.2%), Retail (11.2%), Health Care (10.5%) and Education (6.8%). Comparatively, the sectors of Agriculture, Forestry, Fishing and Hunting combine to provide only 4% of the jobs held by Township residents.

5.1. Utilizing Available School Capacity

Based on the local school board's November 2021 EDC Study and pupil yield factors for various unit types, it is estimated that the Lakeport Beach development would generate upwards of:

- Public Elementary: 83 pupils;
- Catholic Elementary: 32 pupils;
- Public Secondary: 45 pupils
- Catholic Secondary: 18 pupils.

The number of pupils estimated above is the amount generated through build-out of Scenario 1. The numbers of pupils for Scenario 2 are marginally less for each type of panel (elementary or secondary) and school board.



Figure 14

Estimated Pupil Generation, Elementary/Secondary, Lakeport Beach					
		Pupil Yield Factors			
		Elementary		Secondary	
		Public Board	Catholic Board	Public Board	Catholic Board
Single-Detached	209	0.208	0.059	0.079	0.031
Townhouses	298	0.105	0.056	0.078	0.032
Apartments	208	0.040	0.012	0.023	0.010
Seniors	47	-	-	-	-
		Estimated Pupil Generation			
		Elementary		Secondary	
		Public Board	Catholic Board	Public Board	Catholic Board
Single-Detached		43	12	17	6
Townhouses		31	17	23	10
Apartments		8	2	5	2
Seniors		-	-	-	-
Total		83	32	45	18
Source: KPEC based on Kawartha Pine Ridge District School Board (KPRDSB) and Peterborough Victoria Northumberland and Clarington Catholic District School Board, EDC Study, (November 15, 2021)					

As detailed in the November 2021 Altus Group report submitted to the Township and County, of the nearest schools serving each panel within each school board, three of the four schools are operating below capacity. In particular, the Public Elementary school was utilizing roughly only half of its full capacity. The nearest Catholic Elementary school (St. Mary's) was above capacity, however the other four elementary schools that direct pupils to St. Mary Catholic SS are below capacity, suggesting that over the long-term boundary adjustment could present itself as an option to alleviate any potential¹ accommodation pressures due to build-out of Lakeport Beach.

5.2. Aging Population in Township and County

The November 2021 Altus report noted that the Township and County had significantly older populations than the Ontario-wide average, with implications for the ability of the Township and County to adequately fill key jobs within the community due to a disproportionate portion of the labour force above typical working age.

The below updates the analysis presented in the Altus report with 2021 Census population data by age group that had not been released at the time that report was

¹ But in my opinion, unlikely given potential impact that 32 new pupils could have when spread across 10 schooling years (3.2 kids per grade), only realized once the development is built-out.



written. The share of older population in the County and Township has continued to increase over the 2016-2021 period.

Figure 15

% of Population Aged 45 or Older	County	Township	Ontario
2001	43.5%	41.1%	
2016	58.0%	55.0%	45.0%
2021	58.3%	56.0%	45.6%

A significant proportion of the population in the County and Township is also already older than working age, with 29.1% of the County aged 65+, compared to 18.5% across Ontario as a whole, each as of the 2021 Census. The Township's share of persons aged 65+ was 23.2% significantly above Provincial average.



APPENDIX A:

Figure A- 1

Estimate of Net Incremental Annual Operating Costs (Excluding Hard Services)												
Ainwick/Haldimand Township												
LINE	Less:						Proportionate Increase Related to Growth		Residential / Non-Residential Allocation			
	Total Expenditures	Amortization	User Rates and Service Charges	External Transfers	Interest on Long Term Debt	Net Expenditures	Growth Factor	Net Growth-Related Expenditures	Res Share	Residential NGRE	Non-Res Share	Non-Res NGRE
General government												
0240 Governance	\$ 170,890	\$ 17,791	\$ -	\$ 28,300	\$ -	\$ 124,799	75%	\$ 93,599	74%	\$ 69,553	26%	\$ 24,047
0250 Corporate Management	\$ 444,629	\$ 32,786	\$ -	\$ -	\$ -	\$ 411,843	75%	\$ 308,882	74%	\$ 229,527	26%	\$ 79,355
0260 Program Support	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	75%	\$ -	74%	\$ -	26%	\$ -
0299 Subtotal	\$ 615,519	\$ 50,577	\$ -	\$ 28,300	\$ -	\$ 536,642		\$ 402,482		\$ 299,080		\$ 103,402
Protection services												
0410 Fire	\$ 1,058,924	\$ 199,346	\$ 105,518	\$ -	\$ 52,315	\$ 701,745	95%	\$ 666,658	74%	\$ 495,386	26%	\$ 171,272
0420 Police	\$ 1,178,405	\$ -	\$ 895	\$ -	\$ -	\$ 1,177,510	95%	\$ 1,118,635	74%	\$ 831,245	26%	\$ 287,389
0421 Court Security	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
0422 Prisoner Transportation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
0430 Conservation authority	\$ 140,974	\$ -	\$ -	\$ 121,555	\$ -	\$ 19,419	100%	\$ 19,419	74%	\$ 14,430	26%	\$ 4,989
0440 Protective inspection and control	\$ 49,231	\$ 7,003	\$ 8,216	\$ 1,969	\$ -	\$ 32,043	95%	\$ 30,441	74%	\$ 22,620	26%	\$ 7,821
0445 Building permit and inspection services	\$ 282,581	\$ -	\$ 7,345	\$ -	\$ -	\$ 275,236	95%	\$ 261,474	74%	\$ 194,299	26%	\$ 67,176
0450 Emergency measures	\$ 23,753	\$ -	\$ -	\$ -	\$ -	\$ 23,753	95%	\$ 22,565	74%	\$ 16,768	26%	\$ 5,797
0460 Provincial Offences Act (POA)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
0498 Other	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
0499 Subtotal	\$ 2,733,868	\$ 206,349	\$ 121,974	\$ 123,524	\$ 52,315	\$ 2,229,706		\$ 2,119,192		\$ 1,574,748		\$ 544,443
Transportation services												
0611 Roads - Paved	\$ 3,811,841	\$ 1,870,047	\$ 18,585	\$ -	\$ 1,618	\$ 1,921,591	95%	\$ 1,825,511	74%	\$ 1,356,518	26%	\$ 468,994
0612 Roads - Unpaved	\$ 267,461	\$ 29,793	\$ -	\$ -	\$ -	\$ 237,668	95%	\$ 225,785	74%	\$ 167,778	26%	\$ 58,007
0613 Roads - Bridges and Culverts	\$ 135,094	\$ 54,089	\$ -	\$ -	\$ -	\$ 81,005	95%	\$ 76,955	74%	\$ 57,184	26%	\$ 19,771
0614 Roads - Traffic Operations & Roadside	\$ 28,914	\$ -	\$ -	\$ -	\$ -	\$ 28,914	95%	\$ 27,468	74%	\$ 20,411	26%	\$ 7,057
0621 Winter Control - Except sidewalks, Parking Lots	\$ 373,609	\$ -	\$ -	\$ -	\$ -	\$ 373,609	95%	\$ 354,929	74%	\$ 263,744	26%	\$ 91,185
0622 Winter Control - Sidewalks, Parking Lots Only	\$ 811	\$ 811	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
0631 Transit - Conventional	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
0632 Transit - Disabled & special needs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
0640 Parking	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
0650 Street lighting	\$ 26,155	\$ 6,808	\$ -	\$ -	\$ -	\$ 19,347	95%	\$ 18,380	74%	\$ 13,658	26%	\$ 4,722
0660 Air transportation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
0698 Other	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
0699 Subtotal	\$ 4,643,885	\$ 1,961,548	\$ 18,585	\$ -	\$ 1,618	\$ 2,662,134		\$ 2,529,027		\$ 1,879,293		\$ 649,735
Environmental services												
0821 Urban storm sewer system	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
0822 Rural storm sewer system	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
0840 Solid waste collection	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
0850 Solid waste disposal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
0860 Waste diversion	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
0898 Other	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
0899 Subtotal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -		\$ -		\$ -
Health services												
1010 Public health services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
1020 Hospitals	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
1030 Ambulance services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
1035 Ambulance dispatch	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
1040 Cemeteries	\$ 23,629	\$ -	\$ -	\$ -	\$ -	\$ 23,629	95%	\$ 22,448	74%	\$ 16,681	26%	\$ 5,767
1098 Other	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
1099 Subtotal	\$ 23,629	\$ -	\$ -	\$ -	\$ -	\$ 23,629		\$ 22,448		\$ 16,681		\$ 5,767
Social and family services												
1210 General assistance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
1220 Assistance to aged persons	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
1230 Child care	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
1298 Other	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
1299 Subtotal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -		\$ -		\$ -
Social Housing												
1410 Public Housing	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
1420 Non-Profit/Cooperative Housing	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
1430 Rent Supplement Programs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
1497 Other	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
1498 Other	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	74%	\$ -	26%	\$ -
1499 Subtotal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -		\$ -		\$ -
Recreation and cultural services												
1610 Parks	\$ 158,475	\$ 8,579	\$ 1,000	\$ -	\$ -	\$ 148,896	95%	\$ 141,451	95%	\$ 134,379	26%	\$ 36,340
1620 Recreation programs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	95%	\$ -	26%	\$ -
1631 Rec. Fac. - Golf Crs, Marina, Ski Hill	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	95%	\$ -	26%	\$ -
1634 Rec. Fac. - All Other	\$ 551,326	\$ 72,548	\$ 75,011	\$ -	\$ -	\$ 403,767	95%	\$ 383,579	95%	\$ 364,400	26%	\$ 98,546
1640 Libraries	\$ 317,480	\$ 36,312	\$ 4,911	\$ -	\$ 744	\$ 275,513	95%	\$ 261,737	95%	\$ 248,650	26%	\$ 67,243
1645 Museums	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	95%	\$ -	26%	\$ -
1650 Cultural services	\$ 3,831	\$ -	\$ -	\$ -	\$ -	\$ 3,831	95%	\$ 3,639	95%	\$ 3,457	26%	\$ 935
1698 Other	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	95%	\$ -	26%	\$ -
1699 Subtotal	\$ 1,031,112	\$ 117,439	\$ 80,922	\$ -	\$ 744	\$ 832,007		\$ 790,407		\$ 750,886		\$ 203,064
Planning and development												
1810 Planning and zoning	\$ 209,469	\$ -	\$ 66,000	\$ -	\$ -	\$ 143,469	75%	\$ 107,602	74%	\$ 79,958	26%	\$ 27,644
1820 Commercial and Industrial	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	75%	\$ -	74%	\$ -	26%	\$ -
1830 Residential development	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	75%	\$ -	100%	\$ -	26%	\$ -
1840 Agriculture and reforestation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	75%	\$ -	74%	\$ -	26%	\$ -
1850 Tile drainage/shoreline assistance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	75%	\$ -	74%	\$ -	26%	\$ -
1898 Other	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	75%	\$ -	74%	\$ -	26%	\$ -
1899 Subtotal	\$ 209,469	\$ -	\$ 66,000	\$ -	\$ -	\$ 143,469		\$ 107,602		\$ 79,958		\$ 27,644
1910 Other	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	75%	\$ -	74%	\$ -	26%	\$ -
9910 TOTAL	\$ 9,257,482	\$ 2,335,913	\$ 287,481	\$ 151,824	\$ 54,677	\$ 6,427,587		\$ 5,971,156		\$ 4,600,645		\$ 1,534,055
										\$ 636.24		\$ 613.62



Figure A- 2

Estimate of Net Incremental Annual Operating Costs (Excluding Hard Services)													
Northumberland County													
LINE		Less:						Proportionate Increase Related to Growth		Residential / Non-Residential Allocation			
		Total Expenditures	Amortization	User Rates and Service Charges	External Transfers	Interest on Long Term Debt	Net Expenditures	Growth Factor	Net Growth-Related Expenditures	Res Share	Residential NGRE	Non-Res Share	Non-Res NGRE
General government													
0240	Governance	\$ 373,009	\$ 5,300	\$ -	\$ -	\$ -	\$ 367,709	75%	\$ 275,782	73%	\$ 201,897	27%	\$ 73,885
0250	Corporate Management	\$ 5,670,675	\$ -	\$ -	\$ -	\$ -	\$ 5,670,675	75%	\$ 4,253,006	73%	\$ 3,113,578	27%	\$ 1,139,429
0260	Program Support	\$ 990,889	\$ 830,401	\$ -	\$ -	\$ 160,488	\$ -	75%	\$ -	73%	\$ -	27%	\$ -
0299	Subtotal	\$ 7,034,573	\$ 835,701	\$ -	\$ -	\$ 160,488	\$ 6,038,384		\$ 4,528,788		\$ 3,315,474		\$ 1,213,314
Protection services													
0410	Fire	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
0420	Police	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
0421	Court Security	\$ 581,527	\$ -	\$ -	\$ -	\$ -	\$ 581,527	95%	\$ 552,451	73%	\$ 404,443	27%	\$ 148,008
0422	Prisoner Transportation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
0430	Conservation authority	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	100%	\$ -	73%	\$ -	27%	\$ -
0440	Protective inspection and control	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
0445	Building permit and inspection services	\$ 346,178	\$ 3,063	\$ 642,876	\$ -	\$ -	\$ 299,761	95%	\$ 284,773	73%	\$ 208,479	27%	\$ 76,294
0450	Emergency measures	\$ 1,226,143	\$ 4,681	\$ 39,337	\$ -	\$ -	\$ 1,182,125	95%	\$ 1,123,019	73%	\$ 822,149	27%	\$ 300,869
0460	Provincial Offences Act (POA)	\$ 1,530,211	\$ -	\$ -	\$ -	\$ -	\$ 1,530,211	95%	\$ 1,453,700	73%	\$ 1,064,238	27%	\$ 389,463
0498	Other	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
0499	Subtotal	\$ 3,684,059	\$ 7,744	\$ 682,213	\$ -	\$ -	\$ 2,994,102		\$ 2,844,397		\$ 2,082,351		\$ 762,046
Transportation services													
0611	Roads - Paved	\$ 15,616,558	\$ 5,414,598	\$ 327,300	\$ -	\$ -	\$ 9,874,660	95%	\$ 9,380,927	73%	\$ 6,867,670	27%	\$ 2,513,257
0612	Roads - Unpaved	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
0613	Roads - Bridges and Culverts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
0614	Roads - Traffic Operations & Roadside	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
0621	Winter Control - Except sidewalks, Parking Lots	\$ 2,028,757	\$ -	\$ -	\$ -	\$ -	\$ 2,028,757	95%	\$ 1,927,319	73%	\$ 1,410,968	27%	\$ 516,351
0622	Winter Control - Sidewalks, Parking Lots Only	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
0631	Transit - Conventional	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
0632	Transit - Disabled & special needs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
0640	Parking	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
0650	Street lighting	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
0660	Air transportation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
0698	Other	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
0699	Subtotal	\$ 17,645,315	\$ 5,414,598	\$ 327,300	\$ -	\$ -	\$ 11,903,417		\$ 11,308,246		\$ 8,278,639		\$ 3,029,608
Environmental services													
0821	Urban storm sewer system	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
0822	Rural storm sewer system	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
0840	Solid waste collection	\$ 5,439,882	\$ -	\$ 3,569,548	\$ -	\$ -	\$ 1,870,334	95%	\$ 1,776,817	73%	\$ 1,300,788	27%	\$ 476,030
0850	Solid waste disposal	\$ 2,085,980	\$ 759,829	\$ 2,164,486	\$ -	\$ 132,748	\$ 971,083	95%	\$ 922,529	73%	\$ 675,373	27%	\$ 247,156
0860	Waste diversion	\$ 3,633,113	\$ 286,332	\$ 1,565,730	\$ -	\$ -	\$ 1,781,051	95%	\$ 1,691,998	73%	\$ 1,238,693	27%	\$ 453,306
0898	Other	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
0899	Subtotal	\$ 11,158,975	\$ 1,046,161	\$ 7,299,764	\$ -	\$ 132,748	\$ 2,680,302		\$ 2,546,287		\$ 1,864,108		\$ 682,179
Health services													
1010	Public health services	\$ 2,534,698	\$ -	\$ -	\$ 2,534,698	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
1020	Hospitals	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
1030	Ambulance services	\$ 14,835,862	\$ 652,616	\$ 384,479	\$ -	\$ 11,333	\$ 13,787,434	95%	\$ 13,098,062	73%	\$ 9,588,943	27%	\$ 3,509,120
1035	Ambulance dispatch	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
1040	Cemeteries	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
1098	Other	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
1099	Subtotal	\$ 17,370,560	\$ 652,616	\$ 384,479	\$ 2,534,698	\$ 11,333	\$ 13,787,434		\$ 13,098,062		\$ 9,588,943		\$ 3,509,120
Social and family services													
1210	General assistance	\$ 8,243,565	\$ 9,653	\$ 24,469	\$ 4,501,110	\$ -	\$ 3,708,333	95%	\$ 3,522,916	73%	\$ 2,579,087	27%	\$ 943,829
1220	Assistance to aged persons	\$ 18,560,179	\$ 120,494	\$ 3,203,036	\$ -	\$ 20,482	\$ 15,216,167	95%	\$ 14,455,359	73%	\$ 10,582,604	27%	\$ 3,872,755
1230	Child care	\$ 8,908,361	\$ -	\$ 350	\$ 7,421,692	\$ -	\$ 1,486,319	95%	\$ 1,412,003	73%	\$ 1,033,711	27%	\$ 378,292
1298	Other	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
1299	Subtotal	\$ 35,712,105	\$ 130,147	\$ 3,227,855	\$ 11,922,802	\$ 20,482	\$ 20,410,819		\$ 19,390,278		\$ 14,195,402		\$ 5,194,876
Social Housing													
1410	Public Housing	\$ 9,364,940	\$ 903,747	\$ 102,161	\$ 3,325,301	\$ -	\$ 5,033,731	95%	\$ 4,782,044	73%	\$ 3,500,880	27%	\$ 1,281,164
1420	Non-Profit/Cooperative Housing	\$ 2,726,987	\$ -	\$ -	\$ 2,715,666	\$ -	\$ 11,321	95%	\$ 10,755	73%	\$ 7,874	27%	\$ 2,881
1430	Rent Supplement Programs	\$ 998,589	\$ -	\$ -	\$ 927,862	\$ -	\$ 70,727	95%	\$ 67,191	73%	\$ 49,190	27%	\$ 18,001
1497	Other	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
1498	Other	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	73%	\$ -	27%	\$ -
1499	Subtotal	\$ 13,090,516	\$ 903,747	\$ 102,161	\$ 6,968,829	\$ -	\$ 5,115,779		\$ 4,859,990		\$ 3,557,944		\$ 1,302,047
Recreation and cultural services													
1610	Parks	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	95%	\$ -	27%	\$ -
1620	Recreation programs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	95%	\$ -	27%	\$ -
1631	Rec. Fac. - Golf Crs, Marina, Ski Hill	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	95%	\$ -	27%	\$ -
1634	Rec. Fac. - All Other	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	95%	\$ -	27%	\$ -
1640	Libraries	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	95%	\$ -	27%	\$ -
1645	Museums	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	95%	\$ -	27%	\$ -
1650	Cultural services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	95%	\$ -	27%	\$ -
1698	Other	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	95%	\$ -	95%	\$ -	27%	\$ -
1699	Subtotal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -		\$ -		\$ -
Planning and development													
1810	Planning and zoning	\$ 348,031	\$ -	\$ 108,041	\$ -	\$ -	\$ 239,990	75%	\$ 179,993	73%	\$ 131,770	27%	\$ 48,222
1820	Commercial and Industrial	\$ 2,563,946	\$ 64,548	\$ 2,058	\$ 139,420	\$ -	\$ 2,357,920	75%	\$ 1,768,440	73%	\$ 1,294,655	27%	\$ 473,785
1830	Residential development	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	75%	\$ -	100%	\$ -	27%	\$ -
1840	Agriculture and reforestation	\$ 638,158	\$ 12,496	\$ 126,772	\$ 8,000	\$ -	\$ 490,890	75%	\$ 368,168	73%	\$ 269,531	27%	\$ 98,636
1850	Tile drainage/shoreline assistance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	75%	\$ -	73%	\$ -	27%	\$ -
1898	Other	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	75%	\$ -	73%	\$ -	27%	\$ -
1899	Subtotal	\$ 3,550,135	\$ 77,044	\$ 236,871	\$ 147,420	\$ -	\$ 3,088,800		\$ 2,316,600		\$ 1,695,957		\$ 620,643
1910	Other	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	75%	\$ -	73%	\$ -	27%	\$ -
9910	TOTAL	\$ 109,246,238	\$ 9,067,758	\$ 12,260,643	\$ 21,573,749	\$ 325,051	\$ 66,019,037		\$ 60,892,648		\$ 44,578,816		\$ 16,313,832
										\$ 520.79		\$ 520.79	



Figure A- 3

Estimated Annual Operating and Lifecycle Costs of Installed Infrastructure Required by Development						
	Estimated Annual Operating Costs - Installed			Estimated Annual Lifecycle Costs		
	Operating Cost Benchmark	Units in Plan	Annual Operating Costs	Lifecycle Cost Benchmark	Units in Plan	Annual Operating Costs
Scenario 1						
Roads - Internal	\$3,553	10.0	\$35,534	\$1,242	10.0	\$12,422
	<i>\$ / lane km</i>	<i>lane km</i>		<i>\$ / lane km</i>	<i>lane km</i>	
Roads - External	\$3,553	0.0	\$0	\$1,242	0.0	\$0
Water Distribution	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Water Treatment	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Sewage Collection	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Sewage Treatment	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total			\$35,534			\$12,422
Residential Share	1,566	95.6%	\$33,968	1,566	95.6%	\$11,875
Non-Residential Share	72	4.4%	\$1,566	72	4.4%	\$548
Scenario 2						
Roads - Internal	\$3,553	10.0	\$35,534	\$1,242	10.0	\$12,422
	<i>\$ / lane km</i>	<i>lane km</i>		<i>\$ / lane km</i>	<i>lane km</i>	
Roads - External	\$3,553	0.0	\$0	\$1,242	0.0	\$0
Water Distribution	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Water Treatment	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Sewage Collection	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Sewage Treatment	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total			\$35,534			\$12,422
Residential Share	1,503	86.1%	\$30,592	1,503	86.1%	\$10,694
Non-Residential Share	243	13.9%	\$4,943	243	13.9%	\$1,728

Source: KPEC based on Financial Information Return data