

# DEVELOPMENT CHARGES BACKGROUND STUDY

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Municipality of North Perth

Version for Public Consultation

**HEMSON** Consulting Ltd.

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## EXECUTIVE SUMMARY

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### A. PURPOSE OF 2019 DEVELOPMENT CHARGES (DC) BACKGROUND STUDY

#### 1. Legislative Context

The Municipality of North Perth 2019 Development Charges (DC) Background Study is presented as part of the process to lead to the approval of a new development charges by-law in compliance with the *Development Charges Act, 1997* (DCA). The study is prepared in accordance with the DCA and associated Regulations, including the amendments that came into force on January 1, 2016.

#### 2. Key Steps in Determining Future Development-Related Projects

In accordance with the DCA and associated regulation, several key steps are required to calculate development charges. This includes preparing a development forecast, establishing historical service levels, determining the increase in need for services arising from development and appropriate shares of costs, attribution to development types (i.e. residential and non-residential) and the final adjustment to the calculated rate of a cash flow analysis.

#### 3. DC Eligible and Ineligible Costs

Development charges are intended to be used to pay for the initial round of capital costs needed to service new development over an identified planning period. This is based on the overlaying principle that “growth pays for growth”. However, the DCA and associated regulation includes several statutory adjustments and deductions that prevent these costs from fully being recovered by growth. Such adjustments include, but are not limited to: ineligible costs, including operating and maintenance costs; ineligible services, including tourism facilities, parkland acquisition, etc.; deductions for costs that exceed historical service level caps; and statutory exemptions for specific uses (i.e. industrial expansions).

#### 4. The Development-Related Capital Forecast is Subject to Change

It is recommended that Council adopt the development-related capital forecast developed for the purposes of the 2019 DC Background Study. However, it is recognized that the DC Study is a point-in-time analysis and there may be changes to project timing, scope and costs through the Municipality’s normal annual budget process.

## B. DEVELOPMENT FORECAST

### 1. Residential and Non-Residential

The table below provides a summary of the anticipated Municipality-wide residential and non-residential growth over the 2019-2028 and to 2041. The Municipal-wide development forecast is further discussed in Appendix A.

Municipality-wide Development Forecast	2018 Estimate	10-Year Planning Period 2019 - 2028		Long-Term Planning Period 2019 - 2041	
		Growth	Total at 2028	Growth	Total at 2041
<b>Residential</b>					
Total Occupied Dwellings	5,389	1,114	6,503	1,671	7,060
Total Population					
Census	13,718	2,536	16,254	3,682	17,400
<i>Population In New Dwellings</i>		<i>2,791</i>		<i>4,061</i>	
<b>Non-Residential</b>					
Employment	7,013	851	7,864	1,417	8,430
Non-Residential Building Space (sq.m.)		66,323		110,099	

## C. CONSIDERATION OF AREA RATING

Based on discussions with staff, and the analysis of the delivery of services, it is proposed that the Municipality continue to levy area-specific development charges for Water, Wastewater, and Stormwater Management Services. In addition, a new area-specific charge is proposed to recover for engineering related infrastructure costs associated with servicing the Northeast Master Plan area. These services have specific benefitting areas, while all other services are deemed Municipal-wide services.

The table below summarizes the development forecasts for the area-specific services.

Area-Specific Forecasts for each Service Area (2019-2041)				
Service Area	Households	Population in new Units	Employment	Gross floor Area (m <sup>2</sup> )
Water Services (Listowel, Atwood and Wallace Ward)	1,620	3,877	1,368	108,328
Wastewater Services (Listowel, and Atwood)	1,618	3,871	1,368	108,328
Stormwater Services (Listowel, Southeast Drainage Area)	569	1,377	178	13,798
Engineering Services (Northeast Master Plan)	280	676	263	20,435

#### D. COST OF GROWTH ANALYSIS

An overview of the long-term capital and operating costs for the capital facilities and infrastructure to be included in the Development Charges By-law is provided in this Study. This examination is required as one of the provisions of the DCA. Additional details on the long-term capital and operating impact analysis is found in Appendix G. By 2028 the Municipality's net operating costs for tax supported assets are estimated to increase by approximately \$1.74 million.

A key function of the Asset Management Plan is to demonstrate that all assets proposed to be funded under the Development Charges By-law are financially sustainable over their full life cycle. The Municipality will need to fund an additional \$379,800 per annum by 2029, in order to properly fund the full life cycle costs of the new ten-year assets supported under the 2019 Development Charges By-law. In addition, the Municipality will need to fund \$377,300 per year by 2042 in order to fund the Engineered Services assets supported under the 2019 Development Charges By-law.

E. 2019 DEVELOPMENT CHARGES BY-LAW PROVIDED UNDER SEPARATE COVER

The proposed draft by-law will be made available, under separate cover, a minimum of two weeks in advance of the statutory public meeting.

# I INTRODUCTION

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The *Development Charges Act, 1997 (DCA)* and its associated Ontario Regulation 82/98 (O. Reg. 82/98) allow municipalities in Ontario to recover development-related capital costs from new development. The Municipality of North Perth 2019 Development Charges (DC) Background Study is presented as part of a process to establish a development charges by-law that complies with this legislation.

The Municipality of North Perth is experiencing development that will increase the demand on all Municipal services. The Municipality wishes to implement development charges to fund development-related capital projects so that development continues to be serviced in a fiscally responsible manner.

When a development charges by-law is proposed, the DCA and O. Reg. 82/98 require that a development charges background study be prepared in support of the proposed charges with reference to:

- A forecast of the amount, type and location of development anticipated in the Municipality;
- The average capital service levels provided in the Municipality over the ten-year period immediately preceding the preparation of the background study;
- A review of future capital projects, including an analysis of gross expenditures, funding sources, and net expenditures incurred, or to be incurred, by the Municipality or its local boards to provide for the expected development, including the determination of the development and non-development-related components of the capital projects;
- An asset management plan that demonstrates that all assets are financially sustainable over their full life cycle; and
- An examination of the long-term capital and operating costs resulting from the infrastructure required for each service to which the development charges relate.

This study identifies the net capital costs attributable to development that is forecast to occur in the Municipality. The costs are apportioned to types of development (residential and non-residential) in a manner that reflects the increase in the need for each service attributable to each type of development. The study therefore calculates development charges for each type of development.



The DCA provides for a period of public review and comment regarding the calculated development charges. This process includes considering and responding to comments received by members of the public about the calculated charges. Following completion of this process, and in accordance with the DCA and Council's review of this study, it is intended that Council will pass a new development charges by-law for the Municipality.

The remainder of this study sets out the information and analysis upon which the calculated development charges are based.

## **II THE METHODOLOGY USES A MUNICIPAL-WIDE AND AREA-SPECIFIC APPROACH TO ALIGN DEVELOPMENT-RELATED COSTS AND BENEFITS**

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Several key steps are required when calculating any development charge. However, specific circumstances arise in each municipality, which must be reflected in the calculation. In this study, therefore, we have tailored our approach to the Municipality of North Perth's unique circumstances. The approach to calculating development charges provides a reasonable alignment of development-related costs with the development that necessitates them. This study uses a Municipal-wide approach in the cost recovery calculations for general, protection and services related to a highway, while using an area-specific approach for engineered services of water, wastewater and stormwater. The Background Study provides an update to the historical service levels and the cost of providing future development-related capital infrastructure.

### **A. BOTH MUNICIPAL-WIDE AND AREA-SPECIFIC DEVELOPMENT CHARGES ARE PROPOSED**

North Perth provides a range of services to the community it serves and has a sizeable inventory of facilities, land, infrastructure, vehicles and equipment. The DCA provides the Municipality with flexibility when defining services that will be included in the development charges by-laws, provided the other provisions of the Act and Regulations are met. The DCA also permits the Municipality to designate, in its by-laws, the areas within which the development charges shall be imposed. The charges may apply to all lands in the Municipality or to other designated development areas as specified in the by-laws.

#### **1. Services Based on a Municipal-Wide Approach**

For most services, a range of capital infrastructure is available throughout the Municipality. All residents and employees have access to this infrastructure. As new development occurs, new infrastructure will need to be added so that overall service levels in the Municipality are maintained. A widely accepted method of sharing the development-related capital costs for these services is to apportion them over all new development anticipated in the Municipality.

The following services are included in the Municipal-wide development charges calculations:

- Library Services
- Fire Services
- Police Services
- Child Care Services
- Administration Services
- Indoor Recreation Services
- Outdoor Recreation Services
- Public Works: Buildings & Fleet
- Roads and Related

These services form a reasonable basis in which to plan and administer the Municipal-wide development charges. It is noted that the analysis of each of these services examines the individual capital facilities and equipment that constitute it. The resulting development charges for these services would be imposed against all development anywhere in the Municipality.

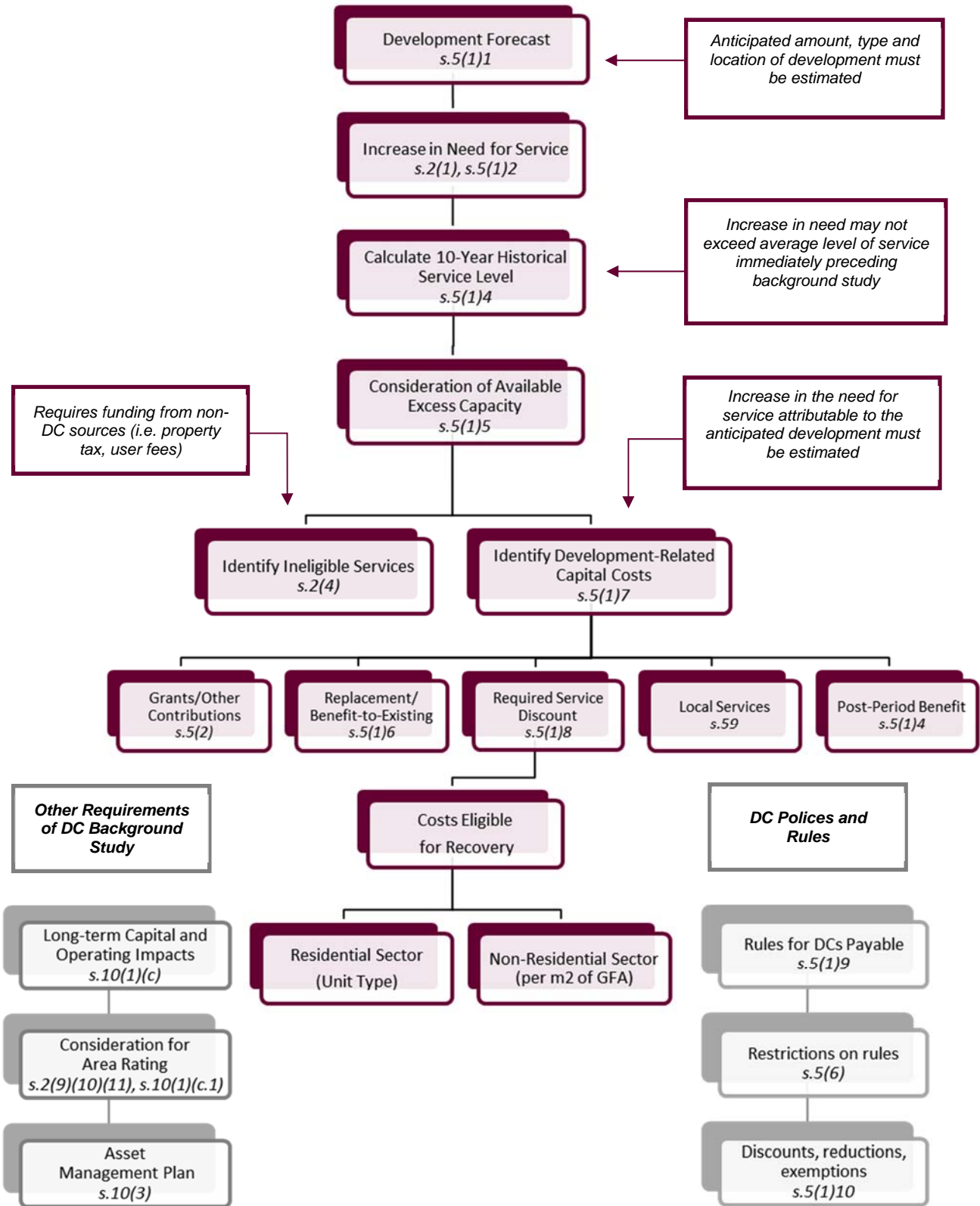
## **2. Services Based on an Area-Specific Approach**

For some services, the need for and benefits of development-related capital works is more localized. For such services, an alternative “area-specific” approach to calculating development charges is used. Area-specific charges have been calculated for water services, wastewater services, and stormwater management services. This approach is consistent with the Municipality’s existing development charge structure for such services. In addition, a new area-specific charge is proposed to recover for engineering related infrastructure costs associated with servicing the Northeast Master Plan area.

### **B. KEY STEPS WHEN DETERMINING DEVELOPMENT CHARGES FOR FUTURE DEVELOPMENT-RELATED PROJECTS**

Several key steps are required when calculating development charges for future development-related projects. These are summarized in Figure 1 and discussed further in the following sections.

**Figure 1: Overview of Development Charges Calculation**



## 1. Development Forecast

The first step in the methodology requires that a development forecast be prepared for the ten-year study period from 2019 to 2028 and the long-term period to 2041. The forecast of future residential and non-residential development used in this study was prepared by Hemson in consultation with Municipality of North Perth staff. The ongoing Perth County Official Plan Update has informed the forecast.

For the residential portion of the forecast, the forecast includes an estimate of population and dwelling units by type on a Municipal-wide basis. The non-residential portion of the forecast estimates the amount of building space to be developed in the Municipality over the planning periods. The forecast is based on the projected increase in employment levels and the anticipated amount of new building space required to accommodate it.

## 2. Service Categories and Historical Service Levels

The DCA states that the increase in the need for service attributable to anticipated development:

... must not include an increase that would result in the level of service exceeding the average level of that service provided in the Municipality over the 10-year period immediately preceding the preparation of the background study...(s. 5. (1) 4.)

Historical ten-year average service levels thus form the basis for the development charges calculation. A review of the Municipality's capital service levels for buildings, land, vehicles, equipment and others has therefore been prepared as a reference to determine the portion of future capital projects that may be included in the development charges calculation. The historical service levels used in this study have been calculated based on the period from 2009 to 2018.

In accordance with the provisions of the DCA, for the engineered services of water, wastewater and stormwater management, historical service levels are less applicable and reference is made to the Municipality's engineering standards as well as Provincial health or environmental legislation.

## 3. Development-Related Capital Forecast and Analysis of Net Capital Costs to Be Included in the Development Charges

A development-related capital forecast has been prepared by Municipal staff as part of this study. The forecast identifies development-related projects and their gross and net costs, after allowing for capital grants, subsidies or other contributions as required by the DCA s.5.(2). The capital forecast provides another foundation upon which development charges are based. The DCA requires that the increase in the need for service attributable to the anticipated development may include an increase:

... only if the council of the municipality has indicated that it intends to ensure that such an increase in need will be met. (s. 5. (1) 3.)

S. 5. (1) 4. and s. 5. (2). require that the development charges be calculated on the lesser of the historical ten-year average service levels or the service levels embodied in the future plans of the Municipality. The development-related capital forecast prepared for this study ensures that development charges are only imposed to help pay for projects that have been or are intended to be purchased or built in order to accommodate future anticipated development. It is not sufficient in the calculation of development charges merely to have had the service in the past. There must also be a demonstrated commitment to continue to emplace facilities or infrastructure in the future. In this regard, Ontario Regulation 82/98, s. 3 states that:

For the purposes of paragraph 3 of subsection 5 (1) of the Act, the council of a municipality has indicated that it intends to ensure that an increase in the need for service will be met if the increase in service forms part of an Official Plan, capital forecast or similar expression of the intention of the council and the plan, forecast or similar expression of the intention of the council has been approved by the council.

For some projects in the development-related capital forecast, a portion of the project may confer benefits to existing residents. As required by the DCA, s. 5. (1) 6., these portions of projects and associated net costs are to be a funding responsibility of the Municipality from non-development charges sources. The amount of financing for such non-growth shares is also identified as part of the preparation of the development-related capital forecast.

There is also a requirement in the DCA to reduce the applicable development charges by the amount of any “uncommitted excess capacity” that is available for a service. Such capacity is available to partially meet future servicing requirements. Adjustments are made in the analysis to meet this requirement of the Act.

Finally, when calculating development charges, the development-related net capital costs must be reduced by ten per cent for all services except transit, engineered services and protection services such as fire, police, and services related to a highway. (DCA, s. 5. (1) 8). The ten per cent discount is applied to the other services, and the resulting financing responsibility from non-development charges sources is identified.

#### **4. Attribution to Types of Development**

The next step in the determination of development charges is the allocation of the development-related net capital costs between the residential and the non-residential sectors. In the Municipality of North Perth, the allocation is based on the projected changes in population and employment over the planning periods. For some services, the entire charge is attributed to the residential sector because that is where the demand for the service is rooted.

The residential component of the development charges is applied to different housing types based on average occupancy factors. The non-residential component is applied on the basis of gross building space in square metres.

#### **5. Final Adjustment**

The final determination of the development charges results from adjustments made to development-related net capital costs for each service and sector, resulting from a cash flow analysis that takes account of the timing of projects and receipt of development charges. Interest earnings or borrowing costs are therefore accounted for in the calculation as allowed under the DCA.

### III DEVELOPMENT FORECAST

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The DCA requires the Municipality to estimate “the anticipated amount, type and location of development” for which development charges may be imposed. The development forecast must cover both residential and non-residential development and be specific enough with regards to quantum, type, location and timing of development to allow the Municipality to prepare a reasonable development-related capital program. Appendix A contains additional materials related to the development forecast and the Municipality’s demographics. Both the residential and non-residential forecast is largely based upon the figures from the ongoing County of Perth Official Plan update.

The residential forecast incorporates 2016 Census and historical residential permit data. The forecast shows that the number of dwelling units will increase by approximately 1,110 between 2019 and 2028 with an accompanying population of 2,790 persons. From 2019 to 2041 a total of 1,670 new units are anticipated, which will result in the addition of 4,060 residents.

The non-residential portion of the forecast is largely based upon the employment figures from the County of Perth Official Plan. The forecast is for approximately 66,320 square metres of new non-residential gross floor area (GFA) to be added in the Municipality between 2019 and 2028. During the period 2019 to 2041, GFA is projected to increase by approximately 110,100 square metres.

Table 1 provides a summary of the Municipal-wide residential and non-residential development forecast used in this analysis.



TABLE 1

**MUNICIPALITY OF NORTH PERTH  
SUMMARY OF RESIDENTIAL AND NON-RESIDENTIAL  
DEVELOPMENT FORECAST**

Municipality-wide Development Forecast	2018 Estimate	10-Year Planning Period 2019 - 2028		Long-Term Planning Period 2019 - 2041	
		Growth	Total at 2028	Growth	Total at 2041
<b>Residential</b>					
Total Occupied Dwellings	5,389	1,114	6,503	1,671	7,060
Total Population					
Census	13,718	2,536	16,254	3,682	17,400
<i>Population In New Dwellings</i>		<i>2,791</i>		<i>4,061</i>	
<b>Non-Residential</b>					
Employment	7,013	851	7,864	1,417	8,430
Non-Residential Building Space (sq.m.)		66,323		110,099	

## **IV HISTORICAL CAPITAL SERVICE LEVELS**

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The DCA and O. Reg. 82/98 require that the development charges be set at a level no higher than the average service level provided in the Municipality over the ten-year period immediately preceding the preparation of the Background Study, on a service-by-service basis.

For general services the legislative requirement is met by documenting service levels for the preceding ten years: in this case, for the period from 2009 to 2018. Typically, service levels for non-engineered services are measured as a ratio of inputs per capita or inputs per population and employment. For engineered services such as Water and Wastewater, engineering standards are used in lieu of inputs per capita.

O. Reg. 82/98 requires that, when defining and determining historical service levels, both the quantity and quality of service be taken into consideration. In most cases, the service levels are initially established in quantitative terms. For example, service levels for buildings are presented in terms of square feet per unit. The qualitative aspect is introduced by consideration of the monetary value of a facility or service. In the case of buildings, for example, the cost would be shown in terms of dollars per square foot to replace or construct a facility of the same quality. This approach helps to ensure that the development-related capital facilities that are to be charged to new development reflect not only the quantity (number and size) but also the quality (value or cost) of services provided by the Municipality in the past. Both the quantitative and qualitative aspects of service levels used in the current analysis are based on information provided by Municipal staff. This information is generally based on historical records and the Municipality's and surrounding municipalities' experience with costs to acquire or construct similar facilities, equipment and infrastructure.

Table 2 summarizes service levels for all services included in the development charges calculations. Appendices B, C and D provide detailed historical inventory data upon which the calculation of service levels is based.

TABLE 2

**MUNICIPALITY OF NORTH PERTH  
SUMMARY OF AVERAGE HISTORIC SERVICE LEVELS 2009-2018**

Service	2009 - 2018 Service Level Indicator
<b>1.0 LIBRARY SERVICES</b>	<b>\$468.13 per capita</b>
Buildings	\$305.72 per capita
Land	\$37.79 per capita
Materials	\$124.62 per capita
<b>2.0 FIRE PROTECTION SERVICES</b>	<b>\$635.11 per pop &amp; emp</b>
Buildings	\$287.07 per pop & emp
Land	\$51.70 per pop & emp
Vehicles	\$231.00 per pop & emp
Equipment And Gear	\$65.34 per pop & emp
<b>3.0 POLICE SERVICES</b>	<b>\$43.61 per pop &amp; emp</b>
Buildings	\$43.61 per pop & empl
<b>4.0 INDOOR RECREATION SERVICES</b>	<b>\$2,505.09 per capita</b>
Buildings	\$2,176.71 per capita
Land	\$279.40 per capita
Equipment	\$48.98 per capita
<b>5.0 OUTDOOR RECREATION SERVICES</b>	<b>\$2,107.04 per capita</b>
Parkland Development	\$465.35 per capita
Parkland Amenities	\$1,583.43 per capita
Parkland Trails	\$7.89 per capita
Vehicles & Equipment	\$50.37 per capita
<b>6.0 CHILD CARE SERVICES</b>	<b>\$77.54 per capita</b>
Buildings	\$72.16 per capita
Land	\$0.00 per capita
Equipment	\$5.38 per capita
<b>7.0 PUBLIC WORKS</b>	<b>\$831.07 per pop &amp; emp</b>
Buildings	\$295.87 per pop & emp
Land	\$159.78 per pop & emp
Vehicles	\$375.42 per pop & emp
<b>8.0 ROADS</b>	<b>\$14,042.63 per pop &amp; emp</b>
Roads	\$14,042.63 per pop & emp

## **V DEVELOPMENT-RELATED CAPITAL FORECAST**

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The DCA requires that the Council of a municipality express its intent to provide future capital facilities at the level incorporated in the development charges calculation. As noted above in Section II, Ontario Regulation 82/98, *s. 3* states that:

For the purposes of paragraph 3 of subsection 5 (1) of the Act, the council of a municipality has indicated that it intends to ensure that an increase in the need for service will be met if the increase in service forms part of an official plan, capital forecast or similar expression of the intention of the council and the plan, forecast or similar expression of the intention of the council has been approved by the council.

### **A. DEVELOPMENT-RELATED CAPITAL FORECAST IS PROVIDED FOR COUNCIL'S APPROVAL**

Based on the development forecast summarized in Section III and detailed in Appendix A, Municipality staff, in collaboration with Hemson, has identified a development-related capital forecast that sets out projects required to service anticipated development. For general services the capital forecast covers the ten-year period from mid-year 2019 to mid-year 2028. As permitted by the DCA *s. 5(1) 4*, development charges for the Engineered services are based on a longer planning horizon to 2041.

One of the recommendations contained in this background study is for Council to adopt the development-related capital forecast created for the purposes of the development charges calculation. It is assumed that future capital budgets and forecasts will continue to bring forward the capital projects presented herein as they will be needed to service anticipated development in the Municipality. However, it is acknowledged that changes to the forecast presented here may occur through the Municipality's normal capital budget process.

### **B. THE DEVELOPMENT-RELATED CAPITAL FORECAST FOR GENERAL SERVICES**

A summary of the development-related capital forecast for general services, covering a 10-year period, is presented in Table 3. The table shows that the gross cost of the Municipality's 2019-2028 capital forecast is estimated to be \$35.51 million. \$1.83 million in grants and subsidies are expected; as a result, the net municipal cost of the capital program is \$33.68 million.

Of this net municipal cost, approximately 70 per cent, or \$23.65 million, is related to capital works for Indoor Recreation. This capital program includes for Phases 2 and 3 of the Steve Kerr Recreation Complex.

The next largest capital program belongs to Fire Protection Services. The program provides funding for a new facility as well as new vehicles and equipment. The total capital program amounts to \$2.73 million, or 8 per cent.

The capital forecast associated with Public Works envisions a centralized public works facility. The total municipal cost of the Public Works capital program is \$2.44 million, or 7 per cent of the total net municipal cost.

The capital program associated with Library Services amounts to \$2.23 million, or 7 per cent of the total municipal cost, and provides for the relocation and expansion of two library branches.

The Outdoor Recreation capital program includes provisions parkland and trail development. The total cost of the Outdoor Recreation capital program is \$2.06 million or 6 per cent of the total.

The portion of the Municipality's program that relates to the provision of development-related studies is referred to as Administration Services and amounts to \$464,000.

The Police Services capital program includes debt recovery for \$81,700.

The capital program for Child Care Services provides for the recovery of a negative reserve fund balance for \$26,900.

The capital forecast incorporates those projects identified to be related to development anticipated in the next ten years. It is not implied that all of these costs are to be recovered from new development by way of development charges. Portions of the capital forecast may be related to replacement of existing facilities, shares of projects that benefit the existing population or development anticipated to occur beyond the 2019-2028 planning period. In addition to these reductions, the amounts shown in Table 3 have not been reduced by ten per cent for various general services as required by s. 5 (1) of the DCA.

After these reductions, the remaining development-related capital costs are brought forward to the development charges calculation. Further details on the capital

forecasts for each individual service category are available in Appendices B, C and D (as it relates to Public Works: Buildings and Fleet).

### C. THE DEVELOPMENT-RELATED CAPITAL FORECAST FOR ENGINEERED SERVICES

Table 4 also provides the development-related capital recoveries for the engineered services of Roads and Related, Water Services, Wastewater Services and Stormwater Management Services between 2019 and 2041. It should be noted that the roads and related charge is levied municipal wide, while the other services are levied on an area-specific basis. However, for the purpose of this summary table, all engineered services that benefit development to 2041 are identified.

The total Engineered Services gross capital cost is \$68.69 million, with \$4.89 million in grants and subsidies anticipated to offset the cost of the program. The net municipal cost is \$63.79 million.

The largest portion of the net municipal cost is for Roads and Related, with a cost of \$36.00 million or 56 per cent of the total. This is comprised of road works and intersection projects.

The second largest service is Wastewater Services with a total cost of \$17.60 million. The capital program provides for linear infrastructure and facilities upgrades.

The Water Services capital program makes up 12 per cent or \$7.71 million of the total. The capital program includes linear infrastructure investments, new facilities, and servicing plans.

The Stormwater Management net municipal cost totals \$968,400 or two per cent of the total. The entire capital program is related to the Listowel South East Drainage Area debt recovery.

The Northeast Master Plan area net municipal cost totals \$1.51 million or two per cent of the total.

Details of the engineered services capital programs can be found in Appendices D (as it relates to Roads and Related) and E.

MUNICIPALITY OF NORTH PERTH  
SUMMARY OF DEVELOPMENT-RELATED CAPITAL PROGRAM  
FOR GENERAL SERVICES 2019 - 2028  
(in \$000)

Service	Gross Cost	Grants/ Subsidies	Municipal Cost	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
<b>DISCOUNTED SERVICES</b>													
<b>1.0 LIBRARY SERVICES</b>	<b>\$2,225.0</b>	<b>\$0.0</b>	<b>\$2,225.0</b>	<b>\$35.0</b>	<b>\$972.5</b>	<b>\$35.0</b>	<b>\$35.0</b>	<b>\$35.0</b>	<b>\$35.0</b>	<b>\$972.5</b>	<b>\$35.0</b>	<b>\$35.0</b>	<b>\$35.0</b>
1.1 Buildings, Land and Equipment	\$1,925.0	\$0.0	\$1,925.0	\$5.0	\$942.5	\$5.0	\$5.0	\$5.0	\$5.0	\$942.5	\$5.0	\$5.0	\$5.0
1.2 Materials and Equipment	\$300.0	\$0.0	\$300.0	\$30.0	\$30.0	\$30.0	\$30.0	\$30.0	\$30.0	\$30.0	\$30.0	\$30.0	\$30.0
<b>2.0 INDOOR RECREATION SERVICES</b>	<b>\$23,650.0</b>	<b>\$0.0</b>	<b>\$23,650.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$50.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$8,750.0</b>	<b>\$14,850.0</b>
2.1 Indoor Recreation	\$23,650.0	\$0.0	\$23,650.0	\$0.0	\$0.0	\$0.0	\$0.0	\$50.0	\$0.0	\$0.0	\$0.0	\$8,750.0	\$14,850.0
<b>3.0 OUTDOOR RECREATION SERVICES</b>	<b>\$2,060.0</b>	<b>\$0.0</b>	<b>\$2,060.0</b>	<b>\$82.5</b>	<b>\$107.5</b>	<b>\$82.5</b>	<b>\$522.5</b>	<b>\$82.5</b>	<b>\$82.5</b>	<b>\$557.5</b>	<b>\$82.5</b>	<b>\$82.5</b>	<b>\$377.5</b>
3.1 Park Development	\$1,935.0	\$0.0	\$1,935.0	\$80.0	\$80.0	\$80.0	\$520.0	\$80.0	\$80.0	\$555.0	\$80.0	\$80.0	\$300.0
3.2 Fleet & Equipment	\$50.0	\$0.0	\$50.0	\$2.5	\$27.5	\$2.5	\$2.5	\$2.5	\$2.5	\$2.5	\$2.5	\$2.5	\$2.5
3.3 Studies	\$75.0	\$0.0	\$75.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$75.0
<b>4.0 CHILD CARE SERVICES</b>	<b>\$1,856.9</b>	<b>\$1,830.0</b>	<b>\$26.9</b>	<b>\$26.9</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>
4.1 Recovery of Negative Reserve Fund	\$26.9	\$0.0	\$26.9	\$26.9	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
4.2 Buildings & Equipment	\$1,830.0	\$1,830.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
<b>5.0 ADMINISTRATION SERVICES</b>	<b>\$464.0</b>	<b>\$0.0</b>	<b>\$464.0</b>	<b>\$32.0</b>	<b>\$100.0</b>	<b>\$0.0</b>	<b>\$110.0</b>	<b>\$0.0</b>	<b>\$57.0</b>	<b>\$165.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>
5.1 Studies	\$464.0	\$0.0	\$464.0	\$32.0	\$100.0	\$0.0	\$110.0	\$0.0	\$57.0	\$165.0	\$0.0	\$0.0	\$0.0
<b>PROTECTION SERVICES</b>													
<b>1.0 FIRE PROTECTION SERVICES</b>	<b>\$2,728.8</b>	<b>\$0.0</b>	<b>\$2,728.8</b>	<b>\$62.8</b>	<b>\$19.0</b>	<b>\$89.0</b>	<b>\$19.0</b>	<b>\$84.0</b>	<b>\$739.0</b>	<b>\$84.0</b>	<b>\$19.0</b>	<b>\$1,594.0</b>	<b>\$19.0</b>
1.1 Recovery of Negative Reserve Fund Balance	\$43.8	\$0.0	\$43.8	\$43.8	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
1.2 Buildings, Land & Furnishings	\$1,500.0	\$0.0	\$1,500.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$1,500.0	\$0.0
1.3 Vehicles	\$925.0	\$0.0	\$925.0	\$0.0	\$0.0	\$0.0	\$0.0	\$65.0	\$720.0	\$65.0	\$0.0	\$75.0	\$0.0
1.4 Fire Equipment and Studies	\$260.0	\$0.0	\$260.0	\$19.0	\$19.0	\$89.0	\$19.0	\$19.0	\$19.0	\$19.0	\$19.0	\$19.0	\$19.0
<b>2.0 POLICE SERVICES</b>	<b>\$81.7</b>	<b>\$0.0</b>	<b>\$81.7</b>	<b>\$81.7</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>
2.1 Recovery of Negative Reserve Fund Balance	\$81.7	\$0.0	\$81.7	\$81.7	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
<b>SERVICES RELATED TO A HIGHWAY</b>													
<b>1.0 PUBLIC WORKS</b>	<b>\$2,443.4</b>	<b>\$0.0</b>	<b>\$2,443.4</b>	<b>\$193.4</b>	<b>\$0.0</b>	<b>\$450.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$1,800.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>
2.1 Recovery of Negative Reserve Fund	\$193.4	\$0.0	\$193.4	\$193.4	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
2.2 Buildings	\$1,800.0	\$0.0	\$1,800.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$1,800.0	\$0.0	\$0.0	\$0.0
2.3 Vehicles and Equipment	\$450.0	\$0.0	\$450.0	\$0.0	\$0.0	\$450.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
<b>TOTAL - GENERAL SERVICES</b>	<b>\$35,509.9</b>	<b>\$1,830.0</b>	<b>\$33,679.9</b>	<b>\$514.4</b>	<b>\$1,199.0</b>	<b>\$656.5</b>	<b>\$686.5</b>	<b>\$251.5</b>	<b>\$913.5</b>	<b>\$3,579.0</b>	<b>\$136.5</b>	<b>\$10,461.5</b>	<b>\$15,281.5</b>

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TABLE 4

MUNICIPALITY OF NORTH PERTH  
SUMMARY OF DEVELOPMENT-RELATED CAPITAL PROGRAM  
FOR ENGINEERED SERVICES 2019 - 2041  
(in \$000)

Service	Gross Cost	Grants / Subsidies	Net Municipal Cost	Total Net Capital Program									
				2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
<b>MUNICIPAL-WIDE INFRASTRUCTURE (SERVICES RELATED TO A HIGHWAY)</b>													
<b>1.0 ROADS &amp; RELATED</b>	<b>\$37,002.3</b>	<b>\$999.6</b>	<b>\$36,002.7</b>	<b>\$4,430.1</b>	<b>\$2,974.7</b>	<b>\$4,123.0</b>	<b>\$2,572.8</b>	<b>\$2,272.8</b>	<b>\$1,814.5</b>	<b>\$1,314.5</b>	<b>\$1,047.8</b>	<b>\$1,047.8</b>	<b>\$1,047.8</b>
1.1 Municipal-Wide Roads Projects	\$37,002.3	\$999.6	\$36,002.7	\$4,430.1	\$2,974.7	\$4,123.0	\$2,572.8	\$2,272.8	\$1,814.5	\$1,314.5	\$1,047.8	\$1,047.8	\$1,047.8
<b>AREA-SPECIFIC: LISTOWEL, ATWOOD, WALLACE WARD</b>													
<b>2.0 WATER SERVICES</b>	<b>\$7,706.5</b>	<b>\$0.0</b>	<b>\$7,706.5</b>	<b>\$351.5</b>	<b>\$305.0</b>	<b>\$100.0</b>	<b>\$0.0</b>	<b>\$100.0</b>	<b>\$250.0</b>	<b>\$250.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>
2.1 Linear Infrastructure	\$1,156.5	\$0.0	\$1,156.5	\$351.5	\$305.0	\$0.0	\$0.0	\$0.0	\$250.0	\$250.0	\$0.0	\$0.0	\$0.0
2.2 Water Facilities	\$6,250.0	\$0.0	\$6,250.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
2.3 Studies and Capacity Analyses	\$300.0	\$0.0	\$300.0	\$0.0	\$0.0	\$100.0	\$0.0	\$100.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
<b>AREA-SPECIFIC: LISTOWEL &amp; ATWOOD</b>													
<b>3.0 WASTEWATER SERVICES</b>	<b>\$21,494.8</b>	<b>\$3,895.3</b>	<b>\$17,599.5</b>	<b>\$11,132.6</b>	<b>\$3,040.1</b>	<b>\$2,806.1</b>	<b>\$155.1</b>	<b>\$155.1</b>	<b>\$155.1</b>	<b>\$155.1</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>
3.1 Linear Infrastructure and Pump Station	\$6,188.0	\$0.0	\$6,188.0	\$155.1	\$2,706.1	\$2,706.1	\$155.1	\$155.1	\$155.1	\$155.1	\$0.0	\$0.0	\$0.0
3.2 Facilities	\$14,872.8	\$3,895.3	\$10,977.5	\$10,977.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
3.3 Studies and Capacity Analyses	\$434.0	\$0.0	\$434.0	\$0.0	\$334.0	\$100.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
<b>AREA-SPECIFIC: LISTOWEL SOUTHEAST DRAINAGE AREA</b>													
<b>4.0 STORMWATER</b>	<b>\$968.4</b>	<b>\$0.0</b>	<b>\$968.4</b>	<b>\$42.1</b>	<b>\$42.1</b>	<b>\$42.1</b>	<b>\$42.1</b>	<b>\$42.1</b>	<b>\$42.1</b>	<b>\$42.1</b>	<b>\$42.1</b>	<b>\$42.1</b>	<b>\$42.1</b>
4.1 Stormwater Projects	\$968.4	\$0.0	\$968.4	\$42.1	\$42.1	\$42.1	\$42.1	\$42.1	\$42.1	\$42.1	\$42.1	\$42.1	\$42.1
<b>AREA-SPECIFIC: NORTHEAST MASTER PLAN AREA</b>													
<b>5.0 ENGINEERED INFRASTRUCTURE</b>	<b>\$1,515.4</b>	<b>\$0.0</b>	<b>\$1,515.4</b>	<b>\$252.6</b>	<b>\$252.6</b>	<b>\$252.6</b>	<b>\$252.6</b>	<b>\$252.6</b>	<b>\$252.6</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>
5.1 Engineering Projects	\$1,515.4	\$0.0	\$1,515.4	\$252.6	\$252.6	\$252.6	\$252.6	\$252.6	\$252.6	\$0.0	\$0.0	\$0.0	\$0.0
<b>TOTAL - ENGINEERED SERVICES</b>	<b>\$68,687.3</b>	<b>\$4,894.9</b>	<b>\$63,792.4</b>	<b>\$16,208.9</b>	<b>\$6,614.5</b>	<b>\$7,323.8</b>	<b>\$3,022.6</b>	<b>\$2,822.6</b>	<b>\$2,514.3</b>	<b>\$1,761.7</b>	<b>\$1,089.9</b>	<b>\$1,089.9</b>	<b>\$1,089.9</b>



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TABLE 4

MUNICIPALITY OF NORTH PERTH  
SUMMARY OF DEVELOPMENT-RELATED CAPITAL PROGRAM  
FOR ENGINEERED SERVICES 2019 - 2041  
(in \$000)

Service	Total Net Capital Program												
	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
<b>MUNICIPAL-WIDE INFRASTRUCTURE (SERVICES RELATED TO A HIGHWAY)</b>													
<b>1.0 ROADS &amp; RELATED</b>	\$1,047.8	\$1,047.8	\$1,047.8	\$1,047.8	\$1,047.8	\$1,047.8	\$1,047.8	\$1,003.7	\$1,003.7	\$1,003.7	\$1,003.7	\$1,003.7	\$1,003.7
1.1 Municipal-Wide Roads Projects	\$1,047.8	\$1,047.8	\$1,047.8	\$1,047.8	\$1,047.8	\$1,047.8	\$1,047.8	\$1,003.7	\$1,003.7	\$1,003.7	\$1,003.7	\$1,003.7	\$1,003.7
<b>AREA-SPECIFIC: LISTOWEL, ATWOOD, WALLACE WARD</b>													
<b>2.0 WATER SERVICES</b>	\$0.0	\$0.0	\$100.0	\$0.0	\$0.0	\$0.0	\$0.0	\$1,041.7	\$1,041.7	\$1,041.7	\$1,041.7	\$1,041.7	\$1,041.7
2.1 Linear Infrastructure	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
<b>AREA-SPECIFIC: LISTOWEL &amp; ATWOOD</b>													
<b>3.0 WASTEWATER SERVICES</b>	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
3.1 Linear Infrastructure and Pump Station	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
3.2 Facilities	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
3.3 Studies and Capacity Analyses	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
<b>AREA-SPECIFIC: LISTOWEL SOUTHEAST DRAINAGE AREA</b>													
<b>4.0 STORMWATER</b>	\$42.1	\$42.1	\$42.1	\$42.1	\$42.1	\$42.1	\$42.1	\$42.1	\$42.1	\$42.1	\$42.1	\$42.1	\$42.1
4.1 Stormwater Projects	\$42.1	\$42.1	\$42.1	\$42.1	\$42.1	\$42.1	\$42.1	\$42.1	\$42.1	\$42.1	\$42.1	\$42.1	\$42.1
<b>AREA-SPECIFIC: NORTHEAST MASTER PLAN AREA</b>													
<b>5.0 ENGINEERED INFRASTRUCTURE</b>	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
5.1 Engineering Projects	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
<b>TOTAL - ENGINEERED SERVICES</b>	<b>\$1,089.9</b>	<b>\$1,089.9</b>	<b>\$1,189.9</b>	<b>\$1,089.9</b>	<b>\$1,089.9</b>	<b>\$1,089.9</b>	<b>\$1,089.9</b>	<b>\$2,087.5</b>	<b>\$2,087.5</b>	<b>\$2,087.5</b>	<b>\$2,087.5</b>	<b>\$2,087.5</b>	<b>\$2,087.5</b>

## VI DEVELOPMENT CHARGES ARE CALCULATED IN ACCORDANCE WITH THE *DEVELOPMENT CHARGES ACT*

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This section summarizes the calculation of development charges for each service category and the resulting total development charge by type of development. For all services, the calculation of the “unadjusted” per capita (residential) and per square metre (non-residential) charges is reviewed. Adjustments to these amounts resulting from a cash flow analysis that accounts for interest earnings and borrowing costs are also discussed.

For residential development, an adjusted total per capita amount is applied to different unit types on the basis average occupancy factors. For non-residential development, the calculated development charges rates are based on gross floor area (GFA) of building space.

It is noted that the calculation of the development charges does not include any provision for exemptions required under the DCA, for example, the exemption for enlargements of up to 50 per cent on existing industrial buildings. Such legislated exemptions, or other exemptions, which Council may choose to provide, will result in a loss of development charges revenue for the affected types of development. Any such revenue loss may not be offset, however, by increasing other portions of the calculated charge.

### A. DEVELOPMENT CHARGES CALCULATION

A summary of the “unadjusted” residential and non-residential development charges for the Municipal-wide general services is presented in Table 5. Further details of the calculation for each individual general service category are available in Appendix B, C and D (as it relates to Public Works: Buildings and Fleet).

#### 1. General Services

The capital forecast for Municipal-wide General Services incorporates those projects identified to be related to development anticipated in the ten-year planning period. However, not all of the capital costs are to be recovered from new development by way of development charges. Table 5 shows that, of the \$33.68 million total municipal cost, \$8.46 million relates to replacement of existing capital facilities, or to shares of projects that provide benefit to the existing community. These portions of capital costs

will require funding from other non-development charge sources, such as fundraising and property taxes.

The DCA, *s. 5 (1) 8*, requires that development-related net capital costs for general services be reduced by ten per cent in calculating the applicable development charges for these services. The ten per cent share of development-related net capital costs not included in the development charges calculations must also be funded from non-development charges sources. In total, about \$2.19 million is identified as the required ten per cent reduction.

An additional share of \$1.57 million has been identified as available DC reserves and represents the revenues collected from previous development charges. This portion has been netted out of the capital costs.

Another share of the forecast, \$11.12 million, is either attributable to development beyond the recovery period (and can therefore be recovered under future development charges studies) or represents a service level increase in the Municipality.

The remaining \$10.34 million is carried forward to the development charges calculation. Of the development-related costs, \$9.46 million has been allocated to new residential development, and \$878,100 has been allocated to new non-residential development. This results in an unadjusted development charge of \$3,389.34 per capita and \$13.24 per square metre of non-residential development for the provision of general services.

## 2. Engineered Services

Table 6 presents the calculated residential and non-residential development charges for Engineered Services. It should be noted that the roads and related charge is levied municipal wide, while the other services are levied on an area-specific basis. However, for the purpose of this summary table, all engineered services that benefit development to 2041 are identified.

The table shows that of the total gross cost of the engineered services capital program of \$68.69 million, \$32.89 million is considered to replace existing infrastructure or to benefit the existing population. Contributions from other levels of government total another \$4.89 million. A deduction is also made for the available reserve fund balance of \$514,500, while \$8.50 million will benefit development post-2041 and so may be considered for recovery under future by-laws. The remaining \$21.88 million is carried forward to the development charges calculation. The residential and non-residential share of the capital program for each category is different relative to the benefitting areas, and therefore, the resulting per capita unadjusted charge and the unadjusted non-residential charge per square metre is identified independently in the table.

Full capital program and calculation details regarding engineered services can be found in Appendices D (as it relates to Roads and Related) and E.

MUNICIPALITY OF NORTH PERTH  
SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES  
10-YEAR CAPITAL PROGRAM FOR GENERAL SERVICES

10 Year Growth in Population in New Units	2,791
10 Year Growth in Square Metres	66,323

Service	Development-Related Capital Program (2019 - 2028)						Residential Share		Non-Residential Share	
	Net Municipal Cost (\$000)	Replacement & Benefit to Existing (\$000)	Required Service Discount (\$000)	Available DC Reserves (\$000)	Post-2028 Benefit (\$000)	Total DC Eligible Costs for Recovery (\$000)	%	(\$000)	%	(\$000)
<b>DISCOUNTED SERVICES</b>										
<b>1.0 LIBRARY SERVICES</b>	\$2,225.0	\$797.6	\$142.7	\$309.0	\$0.0	\$975.7	100%	\$975.7	0%	\$0.00
Unadjusted Development Charge Per Capita								\$349.58		
Unadjusted Development Charge Per Sq.M										\$0.00
<b>2.0 INDOOR RECREATION SERVICES</b>	\$23,650.0	\$5,687.5	\$1,796.3	\$695.3	\$11,115.0	\$4,355.9	100%	\$4,355.9	0%	\$0.00
Unadjusted Development Charge Per Capita								\$1,560.71		
Unadjusted Development Charge Per Sq.M										\$0.00
<b>3.0 OUTDOOR RECREATION SERVICES</b>	\$2,060.0	\$18.8	\$204.1	\$367.8	\$0.0	\$1,469.4	100%	\$1,469.4	0%	\$0.00
Unadjusted Development Charge Per Capita								\$526.47		
Unadjusted Development Charge Per Sq.M										\$0.00
<b>4.0 CHILD CARE SERVICES</b>	\$26.9	\$0.0	\$2.7	\$0.0	\$0.0	\$24.2	100%	\$24.2	0%	\$0.00
Unadjusted Development Charge Per Capita								\$8.68		
Unadjusted Development Charge Per Sq.M										\$0.00
<b>5.0 ADMINISTRATION SERVICES</b>	\$464.0	\$35.0	\$42.9	\$199.8	\$0.0	\$186.3	75%	\$139.7	25%	\$46.58
Unadjusted Development Charge Per Capita								\$50.07		
Unadjusted Development Charge Per Sq.M										\$0.70
<b>PROTECTION SERVICES</b>										
<b>1.0 FIRE PROTECTION SERVICES</b>	\$2,728.8	\$576.0	\$0.0	\$0.0	\$1.7	\$2,151.2	75%	\$1,613.4	25%	\$537.79
Unadjusted Development Charge Per Capita								\$578.06		
Unadjusted Development Charge Per Sq.M										\$8.11
<b>2.0 POLICE SERVICES</b>	\$81.7	\$0.0	\$0.0	\$0.0	\$0.0	\$81.7	75%	\$61.3	25%	\$20.42
Unadjusted Development Charge Per Capita								\$21.95		
Unadjusted Development Charge Per Sq.M										\$0.31
<b>SERVICES RELATED TO A HIGHWAY</b>										
<b>1.0 PUBLIC WORKS</b>	\$2,443.4	\$1,350.0	\$0.0	\$0.0	\$0.0	\$1,093.4	75%	\$820.1	25%	\$273.35
Unadjusted Development Charge Per Capita								\$293.82		
Unadjusted Development Charge Per Sq.M										\$4.12
<b>TOTAL 10 YEAR GENERAL SERVICES</b>	<b>\$33,679.9</b>	<b>\$8,464.9</b>	<b>\$2,188.7</b>	<b>\$1,571.8</b>	<b>\$11,116.7</b>	<b>\$10,337.8</b>		<b>\$9,459.6</b>		<b>\$878.1</b>
Unadjusted Development Charge Per Capita								<b>\$3,389.34</b>		
Unadjusted Development Charge Per Sq.M										<b>\$13.24</b>

MUNICIPALITY OF NORTH PERTH  
SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES  
CAPITAL PROGRAM FOR ENGINEERED SERVICES

Service	Development-Related Capital Program to 2041						Residential Share		Non-Residential Share	
	Gross Capital Cost	Grants & Subsidies Contributions	Replacement & Benefit to Existing	Available DC Reserves	Post-Period Benefit	Total DC Eligible Costs for Recovery	%	(\$000)	%	(\$000)
	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)				
<b>MUNICIPAL-WIDE INFRASTRUCTURE (SERVICES RELATED TO A HIGHWAY)</b>										
<b>1.0 ROADS &amp; RELATED</b>	\$37,002.3	\$999.6	\$23,926.1	\$0.0	\$2,566.2	\$9,510.4	72%	\$6,847.5	28%	\$2,662.92
Unadjusted Development Charge Per Capita								\$1,686.16		
Unadjusted Development Charge Per Sq.M										\$24.19
<b>AREA-SPECIFIC: LISTOWEL, ATWOOD, WALLACE WARD</b>										
<b>2.0 WATER SERVICES</b>	\$7,706.5	\$0.0	\$30.5	\$337.7	\$5,937.5	\$1,400.8	74%	\$1,036.6	26%	\$364.21
Unadjusted Development Charge Per Capita								\$267.35		
Unadjusted Development Charge Per Sq.M										\$3.36
<b>AREA-SPECIFIC: LISTOWEL &amp; ATWOOD</b>										
<b>3.0 WASTEWATER SERVICES</b>	\$21,494.8	\$3,895.3	\$8,935.0	\$176.8	\$0.0	\$8,487.7	74%	\$6,280.9	26%	\$2,206.79
Unadjusted Development Charge Per Capita								\$1,622.44		
Unadjusted Development Charge Per Sq.M										\$20.37
<b>AREA-SPECIFIC: LISTOWEL SOUTHEAST DRAINAGE AREA</b>										
<b>4.0 STORMWATER MANAGEMENT SERVICES</b>	\$968.4	\$0.0	\$0.0	\$0.0	\$0.0	\$968.4	89%	\$857.8	11%	\$110.62
Unadjusted Development Charge Per Capita								\$622.91		
Unadjusted Development Charge Per Sq.M										\$8.02
<b>AREA-SPECIFIC: NORTHEAST MASTER PLAN AREA</b>										
<b>5.0 ENGINEERED INFRASTRUCTURE</b>	\$1,515.4	\$0.0	\$0.0	\$0.0	\$0.0	\$1,515.4	72%	\$1,091.1	28%	\$424.30
Unadjusted Development Charge Per Capita								\$1,614.01		
Unadjusted Development Charge Per Sq.M										\$20.76
<b>TOTAL - ENGINEERED SERVICES TO 2041</b>	<b>\$68,687.3</b>	<b>\$4,894.9</b>	<b>\$32,891.5</b>	<b>\$514.5</b>	<b>\$8,503.7</b>	<b>\$21,882.7</b>		<b>\$16,113.8</b>		<b>\$5,768.8</b>

## **B. ADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES RATES**

Final adjustments to the “unadjusted” development charges rates for general and engineered services are made through a cash flow analysis. The analysis, details of which are included in Appendices B through E, considers the borrowing cost and interest earnings associated with the timing of expenditures and development charges receipts for each service category. Table 7 summarizes the results of the cash flow adjustments for the residential development charges rates. The adjusted residential rate is \$5,141 per capita after the cash flow analysis for municipal-wide services.

Persons per unit factors are then applied to the per capita rate to determine the residential rate by unit type. The calculated rates, for municipal-wide services (unserved), by residential unit type range from a high of \$15,318 for a single or semi-detached unit to \$5,572 for an apartment with one or fewer bedrooms. The rate for apartments with two or more bedrooms is \$7,946 and the rate for rows and other multiples is \$8,717. In addition, Special Care units would be subject to a rate of \$5,141.

The non-residential municipal-wide charge is displayed in Table 8. After cash flow consideration, the charge per square metre is \$40.58.

It is noted that all developments are required to pay the municipal-wide charges and the urban service charges are only imposed on developments within the urban serviced areas, southeast drainage area and northeast master plan area. Table 7 and 8 also illustrate the range of area-specific charges that would be imposed on developments within the service areas – these fees would be applied in addition to the municipal-wide charges.

## **C. COMPARISON OF 2019 NEWLY CALCULATED DEVELOPMENT CHARGES WITH CHARGES CURRENTLY IN FORCE IN NORTH PERTH**

Tables 9 and 10 present a comparison of the newly calculated Municipal-wide development charges with currently imposed development charge rates. Table 9 demonstrates that the residential development charge rate for a single or semi-detached unit increases by \$4,481 per unit, or 41 per cent, when compared to the Municipality’s current municipal-wide rate for unserved properties. Table 10 shows that the calculated non-residential charge is an increase of \$40.58 per square meter. Importantly, development charges rates were calculated in the 2014 Background Study for municipal-wide services; however, they were not imposed. Therefore, only area-specific engineered services are currently charged non-residential rates.

MUNICIPALITY OF NORTH PERTH  
DEVELOPMENT CHARGES - MUNICIPAL-WIDE AND AREA-SPECIFIC  
RESIDENTIAL DEVELOPMENT CHARGES

Service	Adjusted Charge After Cashflow Per Capita	Charge By Unit Type (1)				Special Care
		Single & Semi- Detached	Rows & Other Multiples	Apartments 2 Bedrooms +	Apartments Bachelor & 1 Bedroom	
<b>Municipal-Wide Discounted Services</b>						
Library Services	\$ 350.00	\$ 1,043	\$ 593	\$ 541	\$ 379	\$ 350
Indoor Recreation Services	\$ 1,485.00	\$ 4,425	\$ 2,518	\$ 2,296	\$ 1,610	\$ 1,485
Outdoor Recreation Services	\$ 517.00	\$ 1,540	\$ 877	\$ 799	\$ 560	\$ 517
Child Care Services	\$ 10.00	\$ 30	\$ 17	\$ 15	\$ 11	\$ 10
Administration Services	\$ 50.00	\$ 149	\$ 85	\$ 77	\$ 54	\$ 50
<b>Municipal-Wide Discounted Services Total</b>	<b>\$ 2,412.00</b>	<b>\$ 7,187</b>	<b>\$ 4,090</b>	<b>\$ 3,728</b>	<b>\$ 2,614</b>	<b>\$ 2,412</b>
<b>Municipal-Wide Protection Services</b>						
Fire Protection Services	\$ 557.00	\$ 1,660	\$ 944	\$ 861	\$ 604	\$ 557
Police Services	\$ 26.00	\$ 77	\$ 44	\$ 40	\$ 28	\$ 26
<b>Municipal-Wide Protection Services Total</b>	<b>\$ 583.00</b>	<b>\$ 1,737</b>	<b>\$ 988</b>	<b>\$ 901</b>	<b>\$ 632</b>	<b>\$ 583</b>
<b>Municipal-Wide Services Related to a Highway</b>						
Public Works	\$ 303.00	\$ 903	\$ 514	\$ 468	\$ 328	\$ 303
Roads & Related	\$ 1,843.00	\$ 5,491	\$ 3,125	\$ 2,849	\$ 1,998	\$ 1,843
<b>Municipal-Wide Services Related to a Highway Total</b>	<b>\$ 2,146.00</b>	<b>\$ 6,394</b>	<b>\$ 3,639</b>	<b>\$ 3,317</b>	<b>\$ 2,326</b>	<b>\$ 2,146</b>
<b>TOTAL MUNICIPAL-WIDE RESIDENTIAL UNSERVICED CHARGE BY UNIT TYPE</b>	<b>\$ 5,141.00</b>	<b>\$ 15,318</b>	<b>\$ 8,717</b>	<b>\$ 7,946</b>	<b>\$ 5,572</b>	<b>\$ 5,141</b>

<b>Urban Area-Specific Services</b>						
Stormwater Services (Listowel South East Drainage Area)	\$ 622.91	\$ 1,856	\$ 1,056	\$ 963	\$ 675	\$ 623
Water Services (Listowel, Atwood & Wallace Ward)	\$ 270.00	\$ 804	\$ 458	\$ 417	\$ 293	\$ 270
Wastewater Services (Listowel & Atwood)	\$ 1,978.00	\$ 5,894	\$ 3,354	\$ 3,058	\$ 2,144	\$ 1,978
Northeast Master Plan Area	\$ 2,115.00	\$ 6,302	\$ 3,586	\$ 3,270	\$ 2,293	\$ 2,115

(1) Based on Persons Per Unit of:	2.98	1.70	1.55	1.08	1.00	
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MUNICIPALITY OF NORTH PERTH  
DEVELOPMENT CHARGES - MUNICIPAL-WIDE AND AREA-SPECIFIC  
NON-RESIDENTIAL DEVELOPMENT CHARGES

Service	Adjusted Charge After Cashflow (\$/sq.m)
<b>Municipal-Wide Discounted Services</b>	
Library Services	\$ -
Indoor Recreation Services	\$ -
Outdoor Recreation Services	\$ -
Child Care Services	\$ -
Administration Services	\$ 0.70
<b>Municipal-Wide Discounted Services Total</b>	<b>\$ 0.70</b>
<b>Municipal-Wide Protection Services</b>	
Fire Protection Services	\$ 7.84
Police Services	\$ 0.36
<b>Municipal-Wide Protection Services Total</b>	<b>\$ 8.20</b>
<b>Municipal-Wide Services Related to a Highway</b>	
Public Works	\$ 4.28
Roads & Related	\$ 27.40
<b>Municipal-Wide Services Related to a Highway Total</b>	<b>\$ 31.68</b>
<b>TOTAL MUNICIPAL-WIDE NON-RESIDENTIAL UNSERVICED CHARGE PER SQ. M.</b>	<b>\$ 40.58</b>

<b>Urban Area-Specific Services</b>	
Stormwater Services (Listowel South East Drainage Area)	\$ 8.02
Water Services (Listowel, Atwood & Wallace Ward)	\$ 3.50
Wastewater Services (Listowel & Atwood)	\$ 25.86
North East Master Plan Area	\$ 27.20



MUNICIPALITY OF NORTH PERTH  
COMPARISON OF CURRENT AND CALCULATED  
RESIDENTIAL DEVELOPMENT CHARGES

Service	Current Residential Charge / SDU	Calculated Residential Charge / SDU	Difference in Charge	
<b>Municipal-Wide Discounted Services</b>				
Library Services	\$ 665	\$ 1,043	\$ 378	57%
Indoor Recreation Services	\$ 2,501	\$ 4,425	\$ 1,924	77%
Outdoor Recreation Services	\$ 1,541	\$ 1,540	\$ (1)	0%
Child Care Services	\$ 201	\$ 30	\$ (171)	-85%
Administration Services	\$ 575	\$ 149	\$ (426)	-74%
<b>Municipal-Wide Discounted Services Total</b>	<b>\$ 5,483</b>	<b>\$ 7,187</b>	<b>\$ 1,704</b>	<b>31%</b>
<b>Municipal-Wide Protection Services</b>				
Fire Protection Services	\$ 899	\$ 1,660	\$ 761	85%
Police Services	\$ 101	\$ 77	\$ (24)	-24%
<b>Municipal-Wide Protection Services Total</b>	<b>\$ 1,000</b>	<b>\$ 1,737</b>	<b>\$ 737</b>	<b>74%</b>
<b>Municipal-Wide Services Related to a Highway</b>				
Public Works	\$ -	\$ 903	\$ 903	0%
Roads & Related	\$ 4,354	\$ 5,491	\$ 1,137	26%
<b>Municipal-Wide Services Related to a Highway Total</b>	<b>\$ 4,354</b>	<b>\$ 6,394</b>	<b>\$ 2,040</b>	<b>47%</b>
<b>TOTAL MUNICIPAL-WIDE RESIDENTIAL UNSERVED CHARGE BY UNIT TYPE</b>	<b>\$10,837</b>	<b>\$15,318</b>	<b>\$4,481</b>	<b>41%</b>

<b>Urban Area-Specific Services</b>				
Stormwater Services (Listowel South East Drainage Area)	\$ 2,102	\$ 1,856	\$ (246)	-12%
Water Services (Listowel, Atwood & Wallace Ward)	\$ 894	\$ 804	\$ (90)	-10%
Wastewater Services (Listowel & Atwood)	\$ 2,589	\$ 5,894	\$ 3,305	128%
Northeast Master Plan Area	\$ -	\$ 6,302	\$ 6,302	n/a

MUNICIPALITY OF NORTH PERTH  
COMPARISON OF CURRENT AND CALCULATED  
NON-RESIDENTIAL DEVELOPMENT CHARGES

Service	Current Non-Residential Charge / Sq.m	Calculated 2014 Non-Residential Charge / Sq.m	Calculated 2019 Non-Residential Charge / Sq.m	Difference in Charge (Current vs. Calculated)	
<b>Municipal-Wide Discounted Services</b>					
Library Services	\$ -	\$ 0.43	\$ -	\$ -	-
Indoor Recreation Services	\$ -	\$ 1.40	\$ -	\$ -	-
Outdoor Recreation Services	\$ -	\$ 0.86	\$ -	\$ -	-
Child Care Services	\$ -	\$ -	\$ -	\$ -	-
Administration Services	\$ -	\$ 3.01	\$ 0.70	\$ 0.70	-
<b>Municipal-Wide Discounted Services Total</b>	<b>\$ -</b>	<b>\$ 5.70</b>	<b>\$ 0.70</b>	<b>\$ 0.70</b>	<b>-</b>
<b>Municipal-Wide Protection Services</b>					
Fire Protection Services	\$ -	\$ 4.84	\$ 7.84	\$ 7.84	-
Police Services	\$ -	\$ 0.54	\$ 0.36	\$ 0.36	-
<b>Municipal-Wide Protection Services Total</b>	<b>\$ -</b>	<b>\$ 5.38</b>	<b>\$ 8.20</b>	<b>\$ 8.20</b>	<b>-</b>
<b>Municipal-Wide Services Related to a Highway</b>					
Public Works	\$ -	\$ -	\$ 4.28	\$ 4.28	-
Roads & Related	\$ -	\$ 23.25	\$ 27.40	\$ 27.40	-
<b>Municipal-Wide Services Related to a Highway Total</b>	<b>\$ -</b>	<b>\$ 23.25</b>	<b>\$ 31.68</b>	<b>\$ 31.68</b>	<b>-</b>
<b>TOTAL MUNICIPAL-WIDE NON-RESIDENTIAL UNSERVED CHARGE PER SQ. M.</b>	<b>\$ -</b>	<b>\$ 34.33</b>	<b>\$ 40.58</b>	<b>\$ 40.58</b>	<b>-</b>

<b>Urban Area-Specific Services</b>					
Stormwater Services (Listowel South East Drainage Area)	\$15.82	\$15.82	\$8.02	(\$7.80)	-49%
Water Services (Listowel, Atwood & Wallace Ward)	\$4.52	\$4.52	\$3.50	(\$1.02)	-23%
Wastewater Services (Listowel & Atwood)	\$12.70	\$12.70	\$25.86	\$13.16	104%
Northeast Master Plan Area	\$0.00	\$0.00	\$27.20	\$27.20	n/a

## VII COST OF GROWTH ANALYSIS

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### A. LONG-TERM CAPITAL AND OPERATING IMPACT ANALYSIS

This section provides a brief examination of the long-term capital and operating costs for the capital facilities and infrastructure to be included in the development charges by-law. This examination is required as one of the features of the *Development Charges Act, 1997*.

#### 1. Net Operating Costs for the Municipality's Services to Increase over the Forecast Period

Table 11 summarizes the estimated increase in net operating costs that the Municipality will experience for additions associated with the planned capital program. The estimated changes in net operating costs are based on the financial information from the Municipality. Additional details are included in Appendix G.

As shown in Table 11, by 2028 the Municipality's net operating costs for are estimated to increase by approximately \$1.74 million. The most significant portion of this increase relates to the Steve Kerr Recreation Complex, improvements to the roadway network, and library facility relocation/expansions.

#### 2. Long-Term Capital Financing From Non-Development Charges Sources Totals \$10.44 million

Table 12 summarizes the components of the development-related capital forecast that will require funding from non-development charges sources. For general services with a ten-year horizon, \$10.44 million will need to be financed from non-DC sources over the 2019-2028 planning period. \$8.45 million is related to replacement of existing Municipality facilities and \$1.99 million is identified as the mandatory ten per cent discount for certain Municipal-wide General Services. In addition, \$11.12 million in interim DC financing related to post-period shares of projects may be required. For Engineered services, \$32.89 million will need to be financed from non-DC sources over the 2019-2041 planning period, which is entirely related to the replacement of existing infrastructure that will benefit the existing community. In addition, \$8.50 million in interim DC financing may be necessary for post-period shares of engineered services projects.

### B. ASSET MANAGEMENT PLAN

The *Development Charges Act* now requires that municipalities complete an Asset Management Plan before the passing of a development charges by-law. A key function of the Asset Management Plan is to demonstrate that all assets proposed to be funded

under the development charges by-law are financially sustainable over their full life cycle. Further details relating to the Asset Management Plan are discussed in Appendix G.

### **1. Annual Capital Provisions for Tax and Rate Supported Assets**

Table 13 summarizes the annual capital provisions required to replace the development eligible and ineligible costs associated with the capital infrastructure identified in the DC Background Study. The estimate is based on information obtained through the Municipality's Asset Management Plan as well as discussions with municipal staff regarding useful life assumptions and the capital cost of acquiring and/or emplacing each asset.

Table 13 illustrates that, by 2029, the Municipality will need to fund an additional \$379,800 per annum in order to properly fund the full life cycle costs of the new general services assets supported under the proposed Development Charges By-law. In contrast, for Engineered Services that have a longer benefiting period to 2041, the calculated annual provision in 2042 for the assets supported under the proposed Development Charges By-law is \$377,300.

### **2. Future Revenue Growth**

The calculated annual funding provision should be considered within the context of the Municipality's projected growth. Over the next ten years (to 2028) the Municipality is projected to increase by approximately 1,110 households. Over the longer-term planning horizon to 2041, the Municipality will add approximately 1,670 households. In addition, the Municipality will also add roughly 850 new employees that will result in approximately 66,320 square metres of additional non-residential building space. Over the longer planning period to 2041 the Municipality will add 1,420 employees that will be accommodated in 110,100 square metres of new non-residential building space.

This growth will have the effect of increasing the overall assessment base and additional user fee and charges revenues to offset the capital asset provisions required to replace the infrastructure proposed to be funded under the proposed Development Charges By-law.

### **3. Assets Are Deemed to be Financially Sustainable**

It is anticipated that new assets identified through the 2019 DC Background Study process will be incorporated into the Municipality's ongoing asset management plan analyses. The calculated annual provisions identified are considered to be financially sustainable as it is expected that the increased capital asset management requirements can be absorbed by the tax and user base over the long-term.

TABLE 11

**MUNICIPALITY OF NORTH PERTH**  
**ESTIMATED NET OPERATING COST OF THE PROPOSED**  
**DEVELOPMENT-RELATED CAPITAL PROGRAM**  
(in constant 2019 dollars)

	Net Cost (in 2019\$)	Estimated Operating Costs (\$000) 2028
<b>Library Services</b>		<b>\$187.5</b>
Monkton Library Relocation	\$65 per sq.ft. added	\$87.9
Atwood Library Relocation	\$65 per sq.ft. added	\$99.7
<b>Fire Services</b>		<b>\$261.9</b>
New Fire Space	\$ 40.0 per sq.ft. added	\$200.0
New Vehicle Acquisitions	\$ 0.07 per \$1.00 of new infrastructure	\$61.9
<b>Police Services</b>		<b>\$0.0</b>
- No additional operating costs		\$0.0
<b>Indoor Recreation</b>		<b>\$350.0</b>
Steve Kerr Recreation Centre	\$10.00 per sq.ft. added	\$350.0
<b>Outdoor Recreation</b>		<b>\$496.3</b>
Parkland Development	\$0.25 per \$1.00 of new infrastructure	\$483.8
Equipment and Fleet	\$0.25 per \$1.00 of new infrastructure	\$12.5
<b>Child Care</b>		<b>\$0.0</b>
New Child Care Facility	-	\$0.0
<b>Administration Services</b>		<b>\$0.0</b>
No additional operating costs	-	\$0.0
<b>Public Works</b>		<b>\$225.0</b>
New Public Works Infrastructure	\$0.10 per \$1.00 of new infrastructure	\$225.0
<b>Roads and Related</b>		<b>\$222.8</b>
- Development-Related Roads Infrastructure	\$200 per household	\$222.8
<b>TOTAL ESTIMATED OPERATING COSTS</b>		<b>\$1,743.5</b>

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TABLE 12

**MUNICIPALITY OF NORTH PERTH  
SUMMARY OF DEVELOPMENT-RELATED CAPITAL PROGRAM  
FOR GENERAL AND ENGINEERED SERVICES  
(in \$000)**

General Services (2019-2028)	Development-Related Capital Program (2019-2028)					
	Net Municipal Cost (\$000)	Replacement & Benefit to Existing (\$000)	Legislated Service Discount (\$000)	Available DC Reserves (\$000)	Post-2028 Benefit (\$000)	Total DC Eligible Costs for Recovery (\$000)
1.0 LIBRARY SERVICES	\$2,225.0	\$797.6	\$142.7	\$309.0	\$0.0	\$975.7
2.0 INDOOR RECREATION SERVICES	\$23,650.0	\$5,687.5	\$1,796.3	\$695.3	\$11,115.0	\$4,355.9
3.0 OUTDOOR RECREATION SERVICES	\$2,060.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
4.0 CHILD CARE SERVICES	\$26.9	\$0.0	\$2.7	\$0.0	\$0.0	\$24.2
5.0 ADMINISTRATION SERVICES	\$464.0	\$35.0	\$42.9	\$199.8	\$0.0	\$186.3
6.0 FIRE PROTECTION SERVICES	\$2,728.8	\$576.0	\$0.0	\$0.0	\$1.7	\$2,151.2
7.0 POLICE SERVICES	\$81.7	\$0.0	\$0.0	\$0.0	\$0.0	\$81.7
8.0 PUBLIC WORKS	\$2,443.4	\$1,350.0	\$0.0	\$0.0	\$0.0	\$1,093.4
<b>TOTAL - GENERAL SERVICES (2019-2028)</b>	<b>\$33,679.9</b>	<b>\$8,446.1</b>	<b>\$1,984.6</b>	<b>\$1,204.1</b>	<b>\$11,116.7</b>	<b>\$8,868.4</b>

Engineered Services (2019-2041)	Development-Related Capital Program (2019-2041)					
	Net Municipal Cost (\$000)	Replacement & Benefit to Existing (\$000)	Legislated Service Discount (\$000)	Available DC Reserves (\$000)	Post-2041 Benefit (\$000)	Total DC Eligible Costs for Recovery (\$000)
1.0 ROADS & RELATED	\$36,002.7	\$23,926.1	\$0.0	\$0.0	\$2,566.2	\$9,510.4
2.0 WATER SERVICES	\$7,706.5	\$30.5	\$0.0	\$337.7	\$5,937.5	\$1,400.8
3.0 WASTEWATER SERVICES	\$17,599.5	\$8,935.0	\$0.0	\$176.8	\$0.0	\$8,487.7
4.0 STORMWATER MANAGEMENT SERVICES	\$968.4	\$0.0	\$0.0	\$0.0	\$0.0	\$968.4
5.0 ENGINEERED INFRASTRUCTURE (NEMP)	\$1,515.4	\$0.0	\$0.0	\$0.0	\$0.0	\$1,515.4
<b>TOTAL - ENGINEERED SERVICES (2019-2041)</b>	<b>\$63,792.4</b>	<b>\$32,891.5</b>	<b>\$0.0</b>	<b>\$514.5</b>	<b>\$8,503.7</b>	<b>\$21,882.7</b>

**Table 13A**  
**Calculated Annual AMP Provision: 10-Year Services**

10-Year Services: General, Public Works and Protection Services	2019-2028 Capital Program		Annual AMP Provision by 2029	
	DC-Eligible	Non DC-Eligible	DC-Related	Non DC-Related
Library Services	\$797,600	\$2,225,000	\$58,200	\$16,900
Fire Protection Services	\$577,700	\$2,615,000	\$73,900	\$43,000
Indoor Recreation Services	\$18,037,500	\$23,600,000	\$129,400	\$74,100
Police Services	\$81,700	\$0	\$0	\$0
Outdoor Recreation Services	\$0	\$1,985,000	\$76,700	\$0
Child Care Services	\$1,790,000	\$1,790,000	\$0	\$36,200
Administration Services	\$0	\$0	\$0	\$0
Public Works	\$1,350,000	\$2,250,000	\$41,600	\$30,200
<b>Total</b>	<b>\$22,634,500</b>	<b>\$34,465,000</b>	<b>\$379,800</b>	<b>\$200,400</b>

**Table 13B**  
**Calculated Annual AMP Provision: 23-Year Services**

23-Year Services: Roads & Related and Area-Specific Engineered Services	2019-2041 Capital Program		Annual AMP Provision by 2042	
	DC-Eligible	Non DC-Eligible	DC-Related	Non DC-Related
Roads & Related	\$9,510,000	\$27,492,000	\$238,000	\$699,000
Water Services	\$1,738,000	\$5,968,000	\$20,000	\$102,000
Wastewater Services	\$8,302,000	\$12,759,000	\$93,000	\$148,000
Stormwater Management Services	\$968,000	\$0	\$0	\$0
Northeast Master Plan	\$1,515,375	\$0	\$26,312	\$0
<b>Total</b>	<b>\$22,033,375</b>	<b>\$46,219,000</b>	<b>\$377,312</b>	<b>\$949,000</b>

## VIII DEVELOPMENT CHARGES ADMINISTRATION AND POLICY CONSIDERATIONS

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### A. DEVELOPMENT CHARGES ADMINISTRATION

Many of the administrative requirements of the DCA will be similar to those presently followed by the Municipality in terms of collection practices. However, changes will likely be required in the use of and reporting on the new development charges. In this regard:

- It is recommended that the present practices regarding collection of development charges and by-law administration continue to the extent possible;
- As required under the DCA, the Municipality should codify any rules regarding application of the by-laws and any exemptions within the development charges by-laws proposed for adoption;
- It is recommended that the Municipality continue to report policies consistent with the requirements of the DCA;
- It is recommended that the by-laws permit the payment of a development charge in cash or through services-in-lieu agreements. The municipality is not obligated to enter into services-in-lieu agreements;
- It is recommended that no exemptions, other than those required in the DCA, be formally adopted in the by-laws; and
- It is recommended that Council adopt the development-related capital forecast included in this background study for Municipality-wide services, subject to annual review through the Municipality's normal capital budget process.

### B. CONSIDERATION FOR AREA RATING

In accordance with the DCA, Council must give consideration to the use of area rating, also known as area-specific development charges, as part of the DC Background Study. As part of the Municipality's 2019 DC update, the appropriateness of implementing area-specific development charges for the various Municipality services was examined.



The DCA permits the Municipality to designate, in its DC By-law, the areas where development charges shall be imposed. The charges may apply to all lands in the Municipality or to other designated development areas as specified in the DC By-law.

The following was considered with respect to area-specific development charges:

- Is the use of area-specific charges appropriate for some or all services?
- Are there any data limitations with calculating an area-specific development charge?

Area-specific development charges are typically considered when there is clear benefit to a particular area (including the population or population and employment), and have been implemented mostly in stand alone green field developments.

Area specific charges are currently imposed for water, wastewater and stormwater services in the areas of Atwood, Wallace and Listowel. The existing rate structure will be maintained: stormwater services in the Listowel East Drainage Area, water services in Listowel, Atwood and Wallace Ward, and wastewater services in Listowel and Atwood. In addition, a new area-specific charge is proposed to recover for engineering related infrastructure costs associated with servicing the Northeast Master Plan area.

## **APPENDIX A**

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### ***DEVELOPMENT FORECAST***

## APPENDIX A

### DEVELOPMENT FORECAST

This appendix provides the details of the development forecast used to prepare the 2019 Development Charges Background Study for the Municipality of North Perth. The forecast method and key assumptions are discussed. The results of the forecasts are presented in the following nine tables:

Table 1	Historical Population, Occupied Dwellings and Employment Summary
Table 2	Historical Households by Type
Table 3	Historical Annual Completions by Type
Table 4	Historical Households by Period of Construction Showing Household Size
Table 5	Population, Household & Employment Forecast Summary
Table 6	Forecast of Household Growth by Unit Type
Table 7	Forecast of Population Growth in New Households by Unit Type
Table 8	Non-Residential Space Forecast
Table 9	Area-Specific Forecast

The forecasts were prepared by Hemson in consultation with Municipal planning staff. A range of statistical data including Statistics Canada Census and National Household Survey data, and Canada Mortgage Housing Corporation (CMHC) housing market information informs the forecasts. In addition, the forecast is based on the projections outlined in the ongoing Perth County Official Plan Update (2019).

#### A. FORECAST APPROACH AND KEY ASSUMPTIONS

The *Development Charges Act* (DCA) requires the Municipality to estimate “the anticipated amount, type and location of development” for which development charges may be imposed. The development forecast must cover both residential and non-residential development and be specific enough with regards to quantum, type, location and timing of development to allow the Municipality to prepare a reasonable development-related capital program.

“Place of Work Employment” figures in the forecasts record where people work rather than their place of residence. It includes all employment with a regular or no fixed place of work. However, work-at-home employment is excluded from the figures, for development charge purposes, as this type of employment does not require building floorspace for its activities.

The forecast is based on Census years and is translated into the time periods required for DC purposes, generally pro-rating the census periods to the DC time period. A ten-year planning period of 2019-2028 has been used for the general and protection services, as well as Public Works. A planning period of 2019 to 2041 has been used for Water Services, Wastewater Services, Stormwater, and Roads & Related.

## **B. HISTORICAL TRENDS**

Table 1 indicates that the Municipality's Census population increased from 12,760 in 2008 to 14,120 in 2018—an increase of 1,360 people. Total private dwellings increased from 4,695 to 5,390 over the same period, an increase of 695.

There are currently about 7,010 jobs in the Municipality. Overall employment has not grown substantially over the past decade, in part the result of the 2008 financial crisis and subsequent recession. Employment in 2008 was 6,740, not much lower than it is today. The activity rate, which is the ratio between jobs and people, has hovered around 50 per cent for most of the past decade, and has fallen slightly since 2008.

Details on historical housing types is found in Table 2. The overall market share of single and semi-detached units over the last decade has fallen from 80 per cent to 77 per cent, as row housing becomes a more popular option. The market share of apartments has hovered around 14 per cent over the past decade. With all unit types, the number of completions in any given year is variable, though increasing. Similarly, Table 3, which presents annual completions by type, shows that over the past decade singles and semis have made up about 69 per cent of all completions, with rows at 21 per cent and apartments at 10 per cent.

Table 4 provides details on historical occupancy patterns for permanently occupied dwelling units in the Municipality. The overall average occupancy level in the Municipality for single and semi-detached units is 2.75 persons per housing unit (PPU). Occupancy levels for recently constructed units, between 2006 and 2016, are higher than the overall average and are used in the development charges calculation since they better reflect the number of people that are likely to reside in new development. The average PPU of permanent single and semi-detached units built in the Municipality in the period 2006 to 2016 is 2.98. The average PPU for recently constructed row housing is 1.70 and for apartment housing it is 1.42.

## C. FORECAST METHOD AND RESULTS

This section describes the method used to establish the development forecast for the periods of 2019 to 2028 and 2019 to 2041.

Development charges are levied on residential development as a charge per new unit. Therefore, for the residential forecast, a projection of both the *population growth*<sup>1</sup> as well as the *population in new housing* is required.

- The population growth determines the need for additional facilities and provides the foundation for the development-related capital program.
- When calculating the development charge, however, the development-related net capital costs are spread over the total additional population that occupies new dwelling units. This population in new units represents the population from which development charges will be collected.

Development charges are levied on non-residential development as a charge per unit of gross floor area (GFA). The non-residential forecast includes both a projection of *employment growth* as well as a projection of the *employment growth associated with new floorspace* in the Municipality.

### 1. Residential Development Forecast

The residential development forecast is based upon the targets contained in the Perth County Official Plan. The 2041 target of population in the Municipality is 17,900. Once adjusted for the Census undercount of 3 per cent, the target permanent population used in the forecast is 17,400. The undercount represents those who were missed or double-counted by the Census. It should be noted that in development charges studies, Census population exclusive of undercount is used to determine historical service levels and maximum allowable funding envelopes.

Development charges are levied and collected by the Municipality based on the number of building permits issued for new residential dwelling units. The housing forecast assumes housing growth for households occupied by usual residents in the Municipality will average roughly 110 units per year for the ten-year planning period. It is anticipated that housing growth will slow down towards the back end of the planning period.

In addition to the Census population forecast, a forecast of “population in new units” that will result from the addition of new housing units has been made. Population growth in new units is estimated by applying the following PPU to the household

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<sup>1</sup> Commonly referred to as “net population growth” in the context of development charges.

forecast: 2.98 for single and semi-detached units; 1.70 for rows and other multiples; and 1.42 for apartments. The forecasted persons in newly constructed units are generally based upon the historical time series of population growth in housing in the last ten-year census period (2006-2016) as released in the 2016 Census. In total, the forecasted population in new dwelling units over the ten-year planning period is approximately 2,791; over the long-term to 2041, it is 4,060.

## **2. Non-Residential Development Forecast**

The non-residential forecast is based upon the 2041 employment target contained in the Municipality's Official Plan, which forecasts 9,640 total employees by 2041. After removing a portion of work at home employment, the target employment by place of work for 2041 is 8,430.

Non-residential development charges are calculated on a per square metre of gross floor area (GFA) basis. Therefore, as per the DCA, a forecast of non-residential building space has been developed. As with the residential forecast, a ten year development forecast, from mid-year 2019 to mid-year 2028, has been used for General, Protection Services and Public Works. The planning period from mid-year 2019 to mid-year 2041 has been utilized for the engineered services.

Average employment densities of 55 square metres per commercial/institutional employee and 115 square metres per industrial employee have been used to convert the employment forecast into building space estimates. This assumption is consistent with the Municipality's previous Background Study. The GFA forecasts are provided in Table 8. The total GFA growth is forecast at 66,320 square metres over the ten-year period with an accompanying employment growth of 850. Over the longer planning period to 2041, it is forecasted that 1,415 new employees will be accommodated in 110,100 square metres of new non-residential GFA.

## **D. AREA-SPECIFIC FORECAST**

Water, wastewater and stormwater charges are levied on an area-specific basis for the areas of Atwood, Listowel and the Wallace Ward. Listowel is expected to see its population in new units increase by 3,748 people to 2041, while Atwood will see an increase of 123 people in new units (combined 3,871 for wastewater services). Between 2019 and 2041, non-residential gross floor area will increase by 105,485 square metres in Listowel and 2,843 in Atwood (combined 108,328 square meters for water and wastewater services) Limited growth in the Wallace ward exists, and this development is added to the water service area forecasts shown below.

The Northeast Master Plan Area is expected to see growth of approximately 280 households that translates into population in new units of 676 over the planning period

to 2041. About 20,435 sq.m of new non-residential development is anticipated to be constructed over the planning period.

<b>Service Area</b>	<b>Households</b>	<b>Population in new Units</b>	<b>Employment</b>	<b>Gross floor Area (m<sup>2</sup>)</b>
<b>Water Services (Listowel, Atwood and Wallace Ward)</b>	1,620	3,877	1,368	108,328
<b>Wastewater Services (Listowel, and Atwood)</b>	1,618	3,871	1,368	108,328
<b>Stormwater Services (Listowel, Southeast Drainage Area)</b>	569	1,377	178	13,798
<b>Engineering Services (Northeast Master Plan)</b>	280	676	263	20,435

## APPENDIX A - TABLE 1

MUNICIPALITY OF NORTH PERTH  
HISTORICAL POPULATION, OCCUPIED DWELLINGS & EMPLOYMENT SUMMARY

Mid-Year	Total Population	Growth	Census Population	Growth	Occupied Households	Growth	PPU	Employment by Place of Work	Growth	Activity Rate
<b>2001</b>	<b>12,400</b>		<b>12,100</b>		<b>4,390</b>		<b>2.82</b>	<b>5,880</b>		<b>47.4%</b>
2002	12,440	40	12,140	40	4,435	45	2.80	6,062	182	48.7%
2003	12,480	40	12,180	40	4,481	46	2.79	6,250	188	50.1%
2004	12,520	40	12,220	40	4,527	46	2.77	6,444	194	51.5%
2005	12,560	40	12,260	40	4,573	46	2.75	6,644	200	52.9%
<b>2006</b>	<b>12,600</b>	<b>40</b>	<b>12,300</b>	<b>40</b>	<b>4,620</b>	<b>47</b>	<b>2.73</b>	<b>6,850</b>	<b>206</b>	<b>54.4%</b>
2007	12,679	79	12,359	59	4,657	37	2.72	6,795	-55	53.6%
2008	12,758	79	12,419	60	4,695	38	2.72	6,741	-54	52.8%
2009	12,838	80	12,479	60	4,733	38	2.71	6,687	-54	52.1%
2010	12,918	80	12,539	60	4,771	38	2.71	6,633	-54	51.3%
<b>2011</b>	<b>13,000</b>	<b>82</b>	<b>12,600</b>	<b>61</b>	<b>4,810</b>	<b>39</b>	<b>2.70</b>	<b>6,580</b>	<b>-53</b>	<b>50.6%</b>
2012	13,098	98	12,698	98	4,870	60	2.69	6,625	45	50.6%
2013	13,197	99	12,797	99	4,931	61	2.68	6,671	46	50.5%
2014	13,297	100	12,897	100	4,993	62	2.66	6,717	46	50.5%
2015	13,398	101	12,998	101	5,056	63	2.65	6,763	46	50.5%
<b>2016</b>	<b>13,500</b>	<b>102</b>	<b>13,100</b>	<b>102</b>	<b>5,120</b>	<b>64</b>	<b>2.64</b>	<b>6,810</b>	<b>47</b>	<b>50.4%</b>
2017	13,806	306	13,405	305	5,253	133	2.63	6,911	101	50.1%
2018	14,119	313	13,718	313	5,389	136	2.62	7,013	102	49.7%
Growth 2009-2018		1,361		1,299		694			272	

Source: Perth County Official Plan Update, 2019 Figure 5-15



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APPENDIX A - TABLE 2

MUNICIPALITY OF NORTH PERTH  
HISTORICAL HOUSEHOLDS BY TYPE

Year	Historical Households by Type					Households - Shares By Unit Type				
	Singles & Semis	Rows	Apts.	Other	Total	Singles & Semis	Rows	Apts.	Other	Total
2001	<b>3,590</b>	<b>100</b>	<b>630</b>	<b>70</b>	<b>4,390</b>	<b>82%</b>	<b>2%</b>	<b>14%</b>	<b>2%</b>	<b>100%</b>
2002	3,612	108	640	74	4,434	81%	2%	14%	2%	100%
2003	3,634	117	650	78	4,479	81%	3%	15%	2%	100%
2004	3,656	127	660	82	4,525	81%	3%	15%	2%	100%
2005	3,678	138	670	86	4,572	80%	3%	15%	2%	100%
2006	<b>3,700</b>	<b>150</b>	<b>680</b>	<b>90</b>	<b>4,620</b>	<b>80%</b>	<b>3%</b>	<b>15%</b>	<b>2%</b>	<b>100%</b>
2007	3,731	159	670	95	4,655	80%	3%	14%	2%	100%
2008	3,763	168	660	101	4,692	80%	4%	14%	2%	100%
2009	3,795	178	650	107	4,730	80%	4%	14%	2%	100%
2010	3,827	189	640	113	4,769	80%	4%	13%	2%	100%
2011	<b>3,860</b>	<b>200</b>	<b>630</b>	<b>120</b>	<b>4,810</b>	<b>80%</b>	<b>4%</b>	<b>13%</b>	<b>2%</b>	<b>100%</b>
2012	3,884	215	649	120	4,868	80%	4%	13%	2%	100%
2013	3,908	232	668	120	4,928	79%	5%	14%	2%	100%
2014	3,932	250	688	120	4,990	79%	5%	14%	2%	100%
2015	3,956	269	709	120	5,054	78%	5%	14%	2%	100%
2016	<b>3,980</b>	<b>290</b>	<b>730</b>	<b>120</b>	<b>5,120</b>	<b>78%</b>	<b>6%</b>	<b>14%</b>	<b>2%</b>	<b>100%</b>
2017	4,070	322	736	120	5,248	78%	6%	14%	2%	100%
2018	4,162	358	742	120	5,382	77%	7%	14%	2%	100%

Source: Perth County Official Plan Update, 2019 Figure 5-15.

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APPENDIX A - TABLE 3

**MUNICIPALITY OF NORTH PERTH  
HISTORICAL ANNUAL COMPLETIONS BY TYPE**

Year	Annual Completions				Completion - Shares By Unit Type			
	Singles/Semis	Rows	Apartments	Total	Singles/Semis	Rows	Apartments	Total
2009	24	0	0	24	100%	0%	0%	100%
2010	40	21	6	67	60%	31%	9%	100%
2011	16	0	0	16	100%	0%	0%	100%
2012	45	0	0	45	100%	0%	0%	100%
2013	47	8	0	55	85%	15%	0%	100%
2014	43	0	11	54	80%	0%	20%	100%
2015	27	44	4	75	36%	59%	5%	100%
2016	73	16	20	109	67%	15%	18%	100%
2017	92	53	20	165	56%	32%	12%	100%
2018	121	21	16	158	77%	13%	10%	100%
<b>Growth 2009-2018</b>	<b>528</b>	<b>163</b>	<b>77</b>	<b>768</b>	<b>69%</b>	<b>21%</b>	<b>10%</b>	<b>100%</b>
<i>10 Year Average</i>	53	16	8	77				
<i>5 Year Average</i>	71	27	14	112				

Source: CMHC Housing Market Information

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APPENDIX A - TABLE 4

MUNICIPALITY OF NORTH PERTH  
HISTORICAL HOUSEHOLDS BY PERIOD OF CONSTRUCTION SHOWING HOUSEHOLD SIZE

Dwelling Unit Type	Period of Construction										Period of Construction Summaries		
	Pre 1945	1946-1960	1961-1970	1971-1980	1981-1990	1991-1995	1996-2000	2001-2005	2006-2010	2011-2016	Pre 2006	2006-2016	Total
<b>Singles and Semis</b>													
Household Population	3,665	1,265	990	1,100	855	390	615	800	740	720	9,680	1,460	11,140
Households	1,255	505	395	440	345	135	220	260	240	250	3,555	490	4,045
Household Size	2.92	2.50	2.51	2.50	2.48	2.89	2.80	3.08	3.08	2.88	2.72	2.98	2.75
<b>Rows</b>													
Household Population	0	0	0	35	0	0	0	20	65	130	55	195	250
Households	0	0	10	20	0	0	10	15	35	80	55	115	170
Household Size	0.00	0.00	0.00	1.75	N/A	N/A	0.00	1.33	1.86	1.63	1.00	1.70	1.47
<b>Apartments</b>													
Household Population	180	175	180	300	105	80	30	40	85	85	1,090	170	1,260
Households	115	105	130	195	85	50	25	30	60	60	735	120	855
Household Size	1.57	1.67	1.38	1.54	1.24	1.60	1.20	1.33	1.42	1.42	1.48	1.42	1.47
<b>All Units</b>													
Household Population	3,845	1,440	1,170	1,435	960	470	645	860	890	935	10,825	1,825	12,650
Households	1,370	610	535	655	430	185	255	305	335	390	4,345	725	5,070
Household Size	2.81	2.36	2.19	2.19	2.23	2.54	2.53	2.82	2.66	2.40	2.49	2.52	2.50

Source: Statistics Canada, 2016 National Household Survey Special Run.

MUNICIPALITY OF NORTH PERTH  
POPULATION, HOUSEHOLD & EMPLOYMENT FORECAST SUMMARY

Mid-Year	Total Population	Total Pop'n Growth	Census Population	Census Pop'n Growth	Occupied Households	Total Household Growth	Household Size	Employment by POW	Employment by POW Growth	Activity Rate
<b>2011</b>	<b>13,000</b>		<b>12,600</b>		<b>4,810</b>		<b>2.70</b>	<b>6,580</b>		<b>50.6%</b>
2012	13,098	98	12,698	98	4,870	60	2.69	6,625	45	50.6%
2013	13,197	99	12,797	99	4,931	61	2.68	6,671	46	50.5%
2014	13,297	100	12,897	100	4,993	62	2.66	6,717	46	50.5%
2015	13,398	101	12,998	101	5,056	63	2.65	6,763	46	50.5%
<b>2016</b>	<b>13,500</b>	<b>102</b>	<b>13,100</b>	<b>102</b>	<b>5,120</b>	<b>64</b>	<b>2.64</b>	<b>6,810</b>	<b>47</b>	<b>50.4%</b>
2017	13,806	306	13,405	305	5,253	133	2.63	6,911	101	50.1%
2018	14,119	313	13,718	313	5,389	136	2.62	7,013	102	49.7%
2019	14,439	320	14,038	320	5,529	140	2.61	7,117	104	49.3%
2020	14,766	327	14,365	327	5,673	144	2.60	7,223	106	48.9%
<b>2021</b>	<b>15,100</b>	<b>334</b>	<b>14,700</b>	<b>335</b>	<b>5,820</b>	<b>147</b>	<b>2.61</b>	<b>7,330</b>	<b>107</b>	<b>48.5%</b>
2022	15,333	233	14,933	233	5,922	102	2.59	7,408	78	48.3%
2023	15,569	236	15,169	236	6,026	104	2.58	7,487	79	48.1%
2024	15,809	240	15,409	240	6,132	106	2.58	7,567	80	47.9%
2025	16,053	244	15,653	244	6,240	108	2.57	7,648	81	47.6%
<b>2026</b>	<b>16,300</b>	<b>247</b>	<b>15,900</b>	<b>247</b>	<b>6,350</b>	<b>110</b>	<b>2.59</b>	<b>7,730</b>	<b>82</b>	<b>47.4%</b>
2027	16,495	195	16,076	176	6,426	76	2.57	7,797	67	47.3%
2028	16,693	198	16,254	178	6,503	77	2.57	7,864	67	47.1%
2029	16,893	200	16,434	180	6,581	78	2.57	7,932	68	47.0%
2030	17,095	202	16,616	182	6,660	79	2.57	8,001	69	46.8%
<b>2031</b>	<b>17,300</b>	<b>205</b>	<b>16,800</b>	<b>184</b>	<b>6,740</b>	<b>80</b>	<b>2.58</b>	<b>8,070</b>	<b>69</b>	<b>46.6%</b>
2032	17,379	79	16,879	79	6,780	40	<b>2.58</b>	8,123	53	46.7%
2033	17,459	80	16,959	80	6,820	40	<b>2.58</b>	8,177	54	46.8%
2034	17,539	80	17,039	80	6,860	40	<b>2.58</b>	8,231	54	46.9%
2035	17,619	80	17,119	80	6,900	40	<b>2.58</b>	8,285	54	47.0%
<b>2036</b>	<b>17,700</b>	<b>81</b>	<b>17,200</b>	<b>81</b>	<b>6,940</b>	<b>40</b>	<b>2.58</b>	<b>8,340</b>	<b>55</b>	<b>47.1%</b>
2037	17,740	40	17,240	40	6,964	24	<b>2.58</b>	8,358	18	47.1%
2038	17,780	40	17,280	40	6,988	24	<b>2.58</b>	8,376	18	47.1%
2039	17,820	40	17,320	40	7,012	24	<b>2.58</b>	8,394	18	47.1%
2040	17,860	40	17,360	40	7,036	24	<b>2.58</b>	8,412	18	47.1%
<b>2041</b>	<b>17,900</b>	<b>40</b>	<b>17,400</b>	<b>40</b>	<b>7,060</b>	<b>24</b>	<b>2.58</b>	<b>8,430</b>	<b>18</b>	<b>47.1%</b>
2019-2028		2,574		2,536		1,114			851	
2019-2041		3,781		3,682		1,671			1,417	

Source: Perth County Official Plan Update, 2019 Figure 5-15 and 5-16.

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APPENDIX A - TABLE 6

MUNICIPALITY OF NORTH PERTH  
FORECAST OF HOUSEHOLD GROWTH BY UNIT TYPE

Mid-Year	Annual Growth in Total Occupied Households				Shares By Unit Type			
	Singles & Semis	Rows & Other Multiples	Apartments	Total New Households	Singles & Semis	Rows & Other Multiples	Apartments	Total
<b>2016</b>								
2017	90	32	6	128	70%	25%	5%	100%
2018	92	36	6	134	69%	27%	4%	100%
2019	94	40	6	140	67%	29%	4%	100%
2020	96	44	6	146	66%	30%	4%	100%
<b>2021</b>	<b>98</b>	<b>48</b>	<b>6</b>	<b>152</b>	<b>64%</b>	<b>32%</b>	<b>4%</b>	<b>100%</b>
2022	64	22	15	101	63%	22%	15%	100%
2023	65	23	16	104	63%	22%	15%	100%
2024	66	24	16	106	62%	23%	15%	100%
2025	67	25	16	108	62%	23%	15%	100%
<b>2026</b>	<b>68</b>	<b>26</b>	<b>17</b>	<b>111</b>	<b>61%</b>	<b>23%</b>	<b>15%</b>	<b>100%</b>
2027	49	17	10	76	64%	22%	13%	100%
2028	49	17	10	76	64%	22%	13%	100%
2029	50	18	10	78	64%	23%	13%	100%
2030	51	18	10	79	65%	23%	13%	100%
<b>2031</b>	<b>51</b>	<b>20</b>	<b>10</b>	<b>81</b>	<b>63%</b>	<b>25%</b>	<b>12%</b>	<b>100%</b>
2032	18	17	4	39	46%	44%	10%	100%
2033	18	18	4	40	45%	45%	10%	100%
2034	18	18	4	40	45%	45%	10%	100%
2035	18	18	4	40	45%	45%	10%	100%
<b>2036</b>	<b>18</b>	<b>19</b>	<b>4</b>	<b>41</b>	<b>44%</b>	<b>46%</b>	<b>10%</b>	<b>100%</b>
2037	4	14	6	24	17%	58%	25%	100%
2038	4	14	6	24	17%	58%	25%	100%
2039	4	14	6	24	17%	58%	25%	100%
2040	4	14	6	24	17%	58%	25%	100%
<b>2041</b>	<b>4</b>	<b>14</b>	<b>6</b>	<b>24</b>	<b>17%</b>	<b>58%</b>	<b>25%</b>	<b>100%</b>
2019-2028	716	286	118	1,120	64%	26%	11%	100%
2019-2041	978	502	198	1,678	58%	30%	12%	100%

Source: Perth County Official Plan Update, 2019 Figure 5-15

## APPENDIX A - TABLE 7

**MUNICIPALITY OF NORTH PERTH  
FORECAST POPULATION GROWTH IN NEW HOUSEHOLDS BY UNIT TYPE\***

Mid-Year	Singles & Semis	Rows & Other Multiples	Apartments	Total Population in New Households
2019	280	68	9	357
2020	286	75	9	370
<b>2021</b>	<b>292</b>	<b>82</b>	<b>9</b>	<b>383</b>
2022	191	37	21	249
2023	194	39	23	256
2024	197	41	23	261
2025	200	43	23	266
<b>2026</b>	<b>203</b>	<b>44</b>	<b>24</b>	<b>271</b>
2027	146	29	14	189
2028	146	29	14	189
2029	149	31	14	194
2030	152	31	14	197
<b>2031</b>	<b>152</b>	<b>34</b>	<b>14</b>	<b>200</b>
2032	54	29	6	89
2033	54	31	6	91
2034	54	31	6	91
2035	54	31	6	91
<b>2036</b>	<b>54</b>	<b>32</b>	<b>6</b>	<b>92</b>
2037	12	24	9	45
2038	12	24	9	45
2039	12	24	9	45
2040	12	24	9	45
<b>2041</b>	<b>12</b>	<b>24</b>	<b>9</b>	<b>45</b>
2019-2028	2,135	487	169	2,791
2019-2041	2,918	857	286	4,061

\*Based on PPU's

2.98

1.70

1.42

MUNICIPALITY OF NORTH PERTH  
NON-RESIDENTIAL SPACE FORECAST

Average Sq.M. Per Commercial/Institutional Employ 55.0 m<sup>2</sup> per employee  
Average Sq.M. per Industrial Employee 115.0 m<sup>2</sup> per employee  
Average Sq.M. per Farm Employee - m<sup>2</sup> per employee

Mid-Year	Place of Work Employment				Annual Employment Growth				Annual Non-Residential GFA Growth (Sq. M.)			
	Commerical / Institutional	Industrial	Rural	Total	Commerical / Institutional	Industrial	Rural	Total	Commerical / Institutional	Industrial	Rural	Total
2019	3,941	2,763	413	7,117	70	33	0	104	3,858	3,851	0	7,709
2020	4,012	2,797	414	7,223	71	34	0	106	3,928	3,898	0	7,827
<b>2021</b>	<b>4,085</b>	<b>2,831</b>	<b>414</b>	<b>7,330</b>	<b>73</b>	<b>34</b>	<b>0</b>	<b>107</b>	<b>3,999</b>	<b>3,946</b>	<b>0</b>	<b>7,946</b>
2022	4,126	2,866	416	7,408	41	35	2	78	2,275	3,993	0	6,268
2023	4,168	2,901	418	7,487	42	35	2	79	2,298	4,042	0	6,340
2024	4,210	2,937	421	7,567	42	36	2	80	2,321	4,092	0	6,413
2025	4,253	2,973	423	7,648	43	36	2	81	2,345	4,142	0	6,487
<b>2026</b>	<b>4,296</b>	<b>3,009</b>	<b>425</b>	<b>7,730</b>	<b>43</b>	<b>36</b>	<b>2</b>	<b>82</b>	<b>2,368</b>	<b>4,193</b>	<b>0</b>	<b>6,561</b>
2027	4,334	3,038	425	7,797	38	28	0	67	2,095	3,266	0	5,361
2028	4,372	3,066	426	7,864	38	29	0	67	2,114	3,297	0	5,411
2029	4,411	3,095	426	7,932	39	29	0	68	2,133	3,328	0	5,460
2030	4,450	3,124	426	8,001	39	29	0	69	2,151	3,359	0	5,511
<b>2031</b>	<b>4,490</b>	<b>3,154</b>	<b>427</b>	<b>8,070</b>	<b>39</b>	<b>29</b>	<b>0</b>	<b>69</b>	<b>2,171</b>	<b>3,391</b>	<b>0</b>	<b>5,562</b>
2032	4,523	3,173	427	8,123	34	20	0	53	1,843	2,244	0	4,087
2033	4,557	3,193	427	8,177	34	20	0	54	1,856	2,258	0	4,114
2034	4,591	3,213	427	8,231	34	20	0	54	1,870	2,272	0	4,142
2035	4,625	3,233	427	8,285	34	20	0	54	1,884	2,286	0	4,170
<b>2036</b>	<b>4,660</b>	<b>3,253</b>	<b>428</b>	<b>8,340</b>	<b>35</b>	<b>20</b>	<b>0</b>	<b>55</b>	<b>1,898</b>	<b>2,300</b>	<b>0</b>	<b>4,198</b>
2037	4,672	3,258	428	8,358	12	5	0	18	684	616	0	1,301
2038	4,685	3,263	428	8,376	12	5	0	18	686	617	0	1,303
2039	4,697	3,269	428	8,394	13	5	0	18	688	618	0	1,306
2040	4,710	3,274	428	8,412	13	5	0	18	690	619	0	1,309
<b>2041</b>	<b>4,722</b>	<b>3,280</b>	<b>428</b>	<b>8,430</b>	<b>13</b>	<b>5</b>	<b>0</b>	<b>18</b>	<b>692</b>	<b>620</b>	<b>0</b>	<b>1,312</b>
2019-2028	502	337	13	851	502	337	13	851	27,601	38,721	0	66,323
2019-2041	852	550	15	1,417	852	550	15	1,417	46,848	63,251	0	110,099

Source: Perth County Official Plan Update, 2019 Figure 5-15

**APPENDIX B**

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***MUNICIPAL-WIDE GENERAL SERVICES  
TECHNICAL APPENDIX***



## APPENDIX B

### MUNICIPAL-WIDE GENERAL SERVICES TECHNICAL APPENDIX INTRODUCTION AND OVERVIEW

The following appendix provides the detailed analysis undertaken to establish the development charge rates for the Municipal-wide general services in the Municipality of North Perth. This consists of Library, Indoor Recreation, Outdoor Recreation, Child Care and Administration Services. The calculation related to each of the service areas are summarized in a set of three tables with the exception of Administration. The contents is explained for each of the three tables below.

#### **TABLE 1      HISTORICAL SERVICE LEVELS**

Table 1 presents the data used to determine the ten-year historical service level. The DCA and O. Reg. 82/98 require that development charges be set at a level no higher than the average service level provided in the Municipality over the ten-year period immediately preceding the preparation of the background study, on a service-by-service basis. For the purpose of this study, the historical inventory period has been defined as 2009 to 2018.

O. Reg. 82/98 requires that when defining and determining historical service levels, both the quantity and quality of service be taken into consideration. In most cases, the service levels are initially established in quantitative terms. For example, service levels for buildings are presented in terms of square feet. The qualitative aspect is introduced by considering the monetary value of the facility or service. In the case of buildings, for example, the cost would be shown in terms of cost per square foot to replace or construct a facility of the same quality. This approach helps to ensure that the development-related capital facilities that are to be funded by new growth reflect not only the quantity (number and size) but also the quality (replacement value or cost) of service provided by the Municipality in the past. Both the quantitative and qualitative aspects of service levels used in the current analysis are based on information provided by municipal staff. This information is generally based on historical records and experience with costs to acquire or construct similar facilities, equipment and infrastructure.

Table 1 also shows the calculation of the “maximum allowable” funding envelope, net of uncommitted excess capacity and the legislated ten per cent reduction (for all

applicable services). The maximum allowable is defined as the ten-year historical service level (expressed as \$/capita or \$/population & employment) multiplied by the forecast increase in net population, or net population and employment growth, over the planning period. The resulting figure is the value of capital infrastructure that must be constructed for that particular service so that the ten-year historical service level is maintained.

There is also a requirement in the DCA to consider “excess capacity” within the Municipality’s existing infrastructure that may be available to partially meet the future servicing requirements. If Council has expressed its intent before or at the time the capacity was created to recoup the cost of providing the capacity from new development, it is considered “committed excess capacity” under the DCA, and the associated capital cost is eligible for recovery. Should uncommitted excess capacity exist, it is determined whether or not this capacity will be available to service new development and, if so, deductions to the maximum allowable funding envelope are required.

**TABLE 2 2019 – 2028 DEVELOPMENT-RELATED CAPITAL PROGRAM & THE CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGE**

The DCA requires that Council express its intent to provide future capital facilities to support future growth. Based on the development forecasts presented in Appendix A, Hemson Consulting, in collaboration with Municipal staff, has developed a development-related capital program which sets out the projects required to service anticipated development for the ten-year period from 2019 to 2028.

To determine the share of the program that is eligible for recovery through development charges, the project costs are reduced by any anticipated grants, “replacement” shares and the legislated “ten per cent reduction” for any eligible services.

A replacement share occurs when a new facility will, at least in part, replace a facility that is demolished, redeployed or will otherwise not be available to serve its former function. The replacement share of the capital program is not deemed to be development-related and is therefore removed from the development charge calculation. The capital cost for replacement shares will require funding from non-development charge sources, typically property taxes or user fees.

The capital program less any replacement or benefit to existing shares yields the development related costs. Although deemed development-related, not all of the net development-related capital program may be recoverable from development charges in the period from 2019 to 2028. For some of the services, a portion of the capital program will service growth that will not occur until after 2028. This portion of the capital program is deemed “pre-built” service capacity to be considered as committed excess capacity and recovered under future DC by-laws.

The remaining portion of the net capital program represents the development-related cost that may be included in the development charge. In all cases, as required, this amount is equal to or less than the maximum allowable capital amount as calculated at the end of Table 1. The result is the discounted development-related net capital cost that is eligible for recovery against development over the period from 2019 to 2028.

### **Calculation of the Unadjusted Development Charge Rates**

The section below the capital program displays the calculation of the “unadjusted” development charge rates. The term “unadjusted” development charge is used to distinguish the charge that is calculated prior to cash flow financing considerations. The cash flow analysis is shown in Table 3.

The first step when determining the unadjusted development charge rate is to allocate the development-related net capital cost between the residential and non-residential sectors. For the general services with the exception of Administration Services, development-related costs have been apportioned as 100 per cent residential. For Administration Services, costs are apportioned as 75 per cent residential and 25 per cent non-residential, based on the anticipated shares of population in new units and employment growth to 2028. The residential share of the in-period DC eligible costs are then divided by the forecast population in new dwelling units. This gives the unadjusted residential development charge per capita. The non-residential development-related net capital costs are divided by the forecast increase in non-residential gross floor area (GFA). This yields a charge per square metre of new non-residential GFA.

### **TABLE 3 CASH FLOW ANALYSIS**

A cash flow analysis is also undertaken to account for the timing of projects and receipt of development charges. Interest earnings or borrowing costs are, therefore, accounted

for in the calculation as allowed under the DCA. Based on the development forecast, the analysis calculates the development charges rate that is required to finance the net development-related capital spending plan including provisions for any borrowing costs or interest earnings on the reserve funds. The cash flow analysis is designed so that the closing cash balance at the end of the planning period is as close to nil as possible.

In order to determine appropriate development charge rates reflecting borrowing and earnings necessary to support the net development-related funding requirement, assumptions are used for the inflation rate and interest rate. An inflation rate of 2.0 per cent is used for the funding requirements, an interest rate of 3.5 per cent is used for positive opening balances, and a rate of 5.5 per cent is used for negative opening balances.

Table 3 displays the results of the cash flow analysis and provides the adjusted or final per capita residential and per square metre (of GFA) non-residential development charges.

**APPENDIX B.1**

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***LIBRARY SERVICES***

## APPENDIX B.1

### LIBRARY SERVICES

The North Perth Library has three branches, in Listowel, Atwood and Monkton. It is responsible for distributing collection materials such as books, electronic resources, CDs, eBooks, and periodicals. The benefits of Library Services are deemed Municipal-wide for the purposes of calculating the development charge.

#### TABLE 1 2009-2018 HISTORICAL SERVICE LEVELS

The Library operates three branches: Atwood, Listowel, and Monkton. These branches total nearly 11,130 square feet and are valued at \$3.95 million, and sit on 0.61 hectares of land valued at \$488,000. Each of the three branches holds a wide array of collection materials such as reference volumes, electronic resources, periodicals, ebooks as well as furnishings and equipment valued at approximately \$1.49 million.

The current replacement value of the Library Services inventory totals \$5.92 million, which provides the Municipality with a ten-year historical average service level of \$468.14 per capita.

The calculated maximum allowable DC funding envelope over the 2019 to 2028 planning period is \$1.19 million (\$468.14 per capita x 2,536 net population growth). After deducting the statutory ten per cent discount, the discounted maximum allowable funding envelope is \$1.07 million.

#### TABLE 2 2019 – 2028 DEVELOPMENT-RELATED CAPITAL PROGRAM & CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGE

The Library Services capital program totals \$2.23 million. A relocation and expansion of the Monkton and Atwood branches are expected in 2020 and 2025 respectively. The expansions are expected to be approximately 2,500 square feet in total and amount to \$937,500 for each of the two branches. Provisions for furniture and equipment at the two branches amount to approximately \$50,000 over the 10-year period to 2028. Finally, additional collection materials at all three branches amount to \$300,000 over the 10-year period.

No grants are identified for the Library Services capital program. A benefit to existing share of \$797,600 has been subtracted from the calculation associated to the relocation

and expansion of the Monkton and Atwood Branches – this share has been determined based on the net new floor space relative to the existing library buildings. The statutory 10 per cent deduction removes another \$142,700 from the calculation. Reserve fund balances amounting to approximately \$309,000 have been applied to the projects occurring first in the program. The resulting DC eligible cost for the 2019-2028 period amounts to approximately \$975,700. No post-period benefit shares have been identified.

The ten-year development-related net capital cost is allocated 100 per cent to residential development, resulting in an unadjusted residential charge of \$349.58 per capita.

### TABLE 3 CASH FLOW ANALYSIS

After cash flow consideration, the residential charge increases slightly to \$350.00 per capita. The following table summarizes the calculation of the Library Services development charge.

LIBRARY SERVICES SUMMARY						
10-year Hist. Service Level per capita	2019 - 2028		Unadjusted		Adjusted	
	Development-Related Capital Program		Development Charge		Development Charge	
	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$468.14	\$2,225,000	\$975,665	\$349.58	\$0.00	<b>\$350.00</b>	<b>\$0.00</b>

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APPENDIX B.1  
TABLE 1

MUNICIPALITY OF NORTH PERTH  
INVENTORY OF CAPITAL ASSETS  
LIBRARY SERVICES

BUILDINGS Branch Name	# of Square Feet										UNIT COST (\$/sq.ft.)	
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
Listowel Main Library	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	\$ 350
Atwood Branch Library	973	973	973	973	973	973	973	973	973	973	973	\$ 375
Monkton Branch Library	1,154	1,154	1,154	1,154	1,154	1,154	1,154	1,154	1,154	1,154	1,154	\$ 375
<b>Total (sq.ft.)</b>	<b>11,127</b>	<b>11,127</b>	<b>11,127</b>	<b>11,127</b>	<b>11,127</b>	<b>11,127</b>	<b>11,127</b>	<b>11,127</b>	<b>11,127</b>	<b>11,127</b>	<b>11,127</b>	
<b>Total (\$000)</b>	<b>\$ 3,947.6</b>	<b>\$ 3,947.6</b>	<b>\$ 3,947.6</b>	<b>\$ 3,947.6</b>	<b>\$ 3,947.6</b>	<b>\$ 3,947.6</b>	<b>\$ 3,947.6</b>	<b>\$ 3,947.6</b>	<b>\$ 3,947.6</b>	<b>\$ 3,947.6</b>	<b>\$ 3,947.6</b>	

LAND Branch Name	# of Hectares										UNIT COST (\$/ha)	
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
Listowel Main Library	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	\$ 800,000
Atwood Branch Library	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	\$ 800,000
Monkton Branch Library	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	\$ 800,000
<b>Total (ha)</b>	<b>0.61</b>	<b>0.61</b>	<b>0.61</b>	<b>0.61</b>	<b>0.61</b>	<b>0.61</b>	<b>0.61</b>	<b>0.61</b>	<b>0.61</b>	<b>0.61</b>	<b>0.61</b>	
<b>Total (\$000)</b>	<b>\$ 488.0</b>	<b>\$ 488.0</b>	<b>\$ 488.0</b>	<b>\$ 488.0</b>	<b>\$ 488.0</b>	<b>\$ 488.0</b>	<b>\$ 488.0</b>	<b>\$ 488.0</b>	<b>\$ 488.0</b>	<b>\$ 488.0</b>	<b>\$ 488.0</b>	

MATERIALS Type of Collection	# of Collection Materials										UNIT COST (\$/item)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Reference Volumes Held	221	221	184	195	139	144	93	89	92	94	\$ 40.00
Electronic Resources - Databases	27	27	13	13	18	17	17	9	10	10	\$ 390.00
Circulating Volumes - Held (English)	48,525	48,525	59,414	53,825	51,132	50,164	48,925	42,020	42,356	42,832	\$ 25.00
CDs, Audiobooks, Video Tapes, DVDs	8,182	6,916	7,284	6,654	6,968	4,217	4,526	6,005	5,938	6,515	\$ 31.00
Periodicals - Titles Held	99	99	89	74	69	68	71	53	62	65	\$ 29.00
eBooks (Download Library Consortium)	-	-	-	-	151	198	249	400	725	1,038	\$ 36.00
Furnishings & Equipment	\$ 166,905	\$ 166,905	\$ 166,905	\$ 166,905	\$ 166,905	\$ 166,905	\$ 166,905	\$ 166,905	\$ 166,905	\$ 166,905	\$ 15.00
<b>Total (#)</b>	<b>57,054</b>	<b>55,788</b>	<b>66,984</b>	<b>60,761</b>	<b>58,477</b>	<b>54,808</b>	<b>53,881</b>	<b>48,576</b>	<b>49,183</b>	<b>50,554</b>	
<b>Total (\$000)</b>	<b>\$ 1,655.9</b>	<b>\$ 1,616.7</b>	<b>\$ 1,893.1</b>	<b>\$ 1,733.8</b>	<b>\$ 1,681.2</b>	<b>\$ 1,573.2</b>	<b>\$ 1,551.7</b>	<b>\$ 1,426.6</b>	<b>\$ 1,445.4</b>	<b>\$ 1,486.6</b>	



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APPENDIX B.1  
TABLE 1

**MUNICIPALITY OF NORTH PERTH  
CALCULATION OF SERVICE LEVELS  
LIBRARY SERVICES**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Historical Population	12,479	12,539	12,600	12,698	12,797	12,897	12,998	13,100	13,405	13,718

**INVENTORY SUMMARY (\$000)**

Buildings	\$ 3,947.6	\$ 3,947.6	\$ 3,947.6	\$ 3,947.6	\$ 3,947.6	\$ 3,947.6	\$ 3,947.6	\$ 3,947.6	\$ 3,947.6	\$ 3,947.6
Land	\$ 488.0	\$ 488.0	\$ 488.0	\$ 488.0	\$ 488.0	\$ 488.0	\$ 488.0	\$ 488.0	\$ 488.0	\$ 488.0
Materials	\$ 1,655.9	\$ 1,616.7	\$ 1,893.1	\$ 1,733.8	\$ 1,681.2	\$ 1,573.2	\$ 1,551.7	\$ 1,426.6	\$ 1,445.4	\$ 1,486.6
<b>Total (\$000)</b>	<b>\$ 6,091.5</b>	<b>\$ 6,052.3</b>	<b>\$ 6,328.7</b>	<b>\$ 6,169.4</b>	<b>\$ 6,116.9</b>	<b>\$ 6,008.8</b>	<b>\$ 5,987.3</b>	<b>\$ 5,862.2</b>	<b>\$ 5,881.0</b>	<b>\$ 5,922.2</b>

**SERVICE LEVEL (\$/capita)** **Average  
Service  
Level**

Buildings	\$ 316.34	\$ 314.83	\$ 313.30	\$ 310.89	\$ 308.48	\$ 306.09	\$ 303.71	\$ 301.35	\$ 294.49	\$ 287.77	\$ 305.72
Land	\$ 39.11	\$ 38.92	\$ 38.73	\$ 38.43	\$ 38.13	\$ 37.84	\$ 37.54	\$ 37.25	\$ 36.40	\$ 35.57	\$ 37.79
Materials	\$ 132.70	\$ 128.93	\$ 150.24	\$ 136.54	\$ 131.38	\$ 121.98	\$ 119.38	\$ 108.90	\$ 107.82	\$ 108.37	\$ 124.62
<b>Total (\$/capita)</b>	<b>\$ 488.14</b>	<b>\$ 482.68</b>	<b>\$ 502.28</b>	<b>\$ 485.86</b>	<b>\$ 477.99</b>	<b>\$ 465.91</b>	<b>\$ 460.64</b>	<b>\$ 447.50</b>	<b>\$ 438.72</b>	<b>\$ 431.71</b>	<b>\$ 468.14</b>

**MUNICIPALITY OF NORTH PERTH  
CALCULATION OF MAXIMUM ALLOWABLE  
LIBRARY SERVICES**

<b>10-Year Funding Envelope Calculation</b>	
10 Year Average Service Level 2009 - 2018	\$ 468.14
Net Population Growth 2019 - 2028	2,536
Maximum Allowable Funding Envelope	\$ 1,187,203
Less: 10% Legislated Reduction	\$ 118,720
<b>Discounted Maximum Allowable Funding Envelope</b>	<b>\$ 1,068,483</b>

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APPENDIX B.1  
TABLE 2

MUNICIPALITY OF NORTH PERTH  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
LIBRARY SERVICES

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs			Total DC Eligible Costs	DC Eligible Costs		
					BTE (%)	Replacement & BTE Shares	10% Reduction		Available DC Reserves	2019-2028	Post 2028
<b>1.0 LIBRARY SERVICES</b>											
<b>1.1 Buildings, Land and Equipment</b>											
1.1.1 Monkton Relocation and Expansion (2,500 Sq.ft)	2020	\$ 937,500	\$ -	\$ 937,500	46%	\$ 432,750	\$ 50,475	\$ 454,275	\$ 277,472	\$ 176,803	\$ -
1.1.2 Atwood Relocation and Expansion (2,500 Sq.ft)	2025	\$ 937,500	\$ -	\$ 937,500	39%	\$ 364,875	\$ 57,263	\$ 515,363	\$ -	\$ 515,363	\$ -
1.1.3 Provision for Furniture and Equipment	Various	\$ 50,000	\$ -	\$ 50,000		\$ -	\$ 5,000	\$ 45,000	\$ 4,500	\$ 40,500	\$ -
Subtotal Buildings, Land and Equipment		\$ 1,925,000	\$ -	\$ 1,925,000		\$ 797,625	\$ 112,738	\$ 1,014,638	\$ 281,972	\$ 732,665	\$ -
<b>1.2 Materials and Equipment</b>											
1.2.1 Additional Collections Materials	Various	\$ 300,000	\$ -	\$ 300,000	0%	\$ -	\$ 30,000	\$ 270,000	\$ 27,000	\$ 243,000	\$ -
Subtotal Materials and Equipment		\$ 300,000	\$ -	\$ 300,000		\$ -	\$ 30,000	\$ 270,000	\$ 27,000	\$ 243,000	\$ -
<b>TOTAL LIBRARY SERVICES</b>		<b>\$ 2,225,000</b>	<b>\$ -</b>	<b>\$ 2,225,000</b>		<b>\$ 797,625</b>	<b>\$ 142,738</b>	<b>\$ 1,284,638</b>	<b>\$ 308,972</b>	<b>\$ 975,665</b>	<b>\$ -</b>

Residential Development Charge Calculation		
Residential Share of 2019 - 2028 DC Eligible Costs	100%	\$975,665
10-Year Growth in Population in New Units		2,791
Unadjusted Development Charge Per Capita		<b>\$349.58</b>
Non-Residential Development Charge Calculation		
Non-Residential Share of 2019 - 2028 DC Eligible Costs	0%	\$0
10-Year Growth in Square Metres		66,323
Unadjusted Development Charge Per Square Metre		<b>\$0.00</b>

2019 - 2028 Net Funding Envelope	\$1,068,483
Reserve Fund Balance	
Balance as at December 31, 2018	\$308,972

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APPENDIX B.1  
TABLE 3

MUNICIPALITY OF NORTH PERTH  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE  
LIBRARY SERVICES  
RESIDENTIAL DEVELOPMENT CHARGE  
(in \$000)

LIBRARY SERVICES	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL
OPENING CASH BALANCE	\$ -	\$ 98.3	\$ 22.4	\$ 135.1	\$ 203.3	\$ 277.9	\$ 358.4	\$ (150.5)	\$ (81.0)	\$ (40.4)	
2019 - 2028 RESIDENTIAL FUNDING REQUIREMENTS											
- Library Services: Non Inflated	\$ 28.4	\$ 205.2	\$ 28.4	\$ 28.4	\$ 28.4	\$ 28.4	\$ 543.7	\$ 28.4	\$ 28.4	\$ 28.4	\$ 975.7
- Library Services: Inflated	\$ 28.4	\$ 209.3	\$ 29.5	\$ 30.1	\$ 30.7	\$ 31.3	\$ 612.3	\$ 32.6	\$ 33.2	\$ 33.9	\$ 1,071.1
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	357	370	383	249	256	261	266	271	189	189	2,791
REVENUE											
- DC Receipts: Inflated	\$ 125.0	\$ 132.1	\$ 139.5	\$ 92.5	\$ 97.0	\$ 100.9	\$ 104.8	\$ 109.0	\$ 77.5	\$ 79.1	\$ 1,057.2
INTEREST											
- Interest on Opening Balance	\$ -	\$ 3.4	\$ 0.8	\$ 4.7	\$ 7.1	\$ 9.7	\$ 12.5	\$ (8.3)	\$ (4.5)	\$ (2.2)	\$ 23.4
- Interest on In-year Transactions	\$ 1.7	\$ (2.1)	\$ 1.9	\$ 1.1	\$ 1.2	\$ 1.2	\$ (14.0)	\$ 1.3	\$ 0.8	\$ 0.8	\$ (6.1)
TOTAL REVENUE	\$ 126.6	\$ 133.4	\$ 142.2	\$ 98.3	\$ 105.3	\$ 111.8	\$ 103.4	\$ 102.0	\$ 73.8	\$ 77.6	\$ 1,074.5
CLOSING CASH BALANCE	\$ 98.3	\$ 22.4	\$ 135.1	\$ 203.3	\$ 277.9	\$ 358.4	\$ (150.5)	\$ (81.0)	\$ (40.4)	\$ 3.3	

2019 Adjusted Charge Per Capita \$350.00

Allocation of Capital Program	
Residential Sector	100.0%
Non-Residential Sector	0.0%
Rates for 2019	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

## **APPENDIX B.2**

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### ***INDOOR RECREATION***

## APPENDIX B.2

### INDOOR RECREATION

Indoor Recreation services in North Perth are delivered primarily through arenas, recreation centres and community centres. The benefits of Indoor Recreation are deemed Municipal-wide for the purposes of calculating the development charge.

#### TABLE 1 2009-2018 HISTORICAL SERVICE LEVELS

The ten-year historical inventory of capital assets for Indoor Recreation include several arenas, recreation complexes, and community centres that total 169,970 square feet that are valued at \$42.49 million. They sit on 6.62 hectares of land valued at \$5.30 million. Furniture and equipment including ice resurfacers, a watering system and recreation equipment amount to approximately \$714,000.

The total value of the Indoor Recreation inventory is \$48.50 million. The ten-year average service level is therefore \$2,505.10 per capita. This results in a funding envelope of \$6.35 million (\$2,505.10 per capita x 2,536 net population growth). After the statutory ten per cent discount, the discounted maximum allowable funding envelope is \$5.72 million.

#### TABLE 2 2019 – 2028 DEVELOPMENT-RELATED CAPITAL PROGRAM & CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGE

The Indoor Recreation capital program largely relates to phase 2 and 3 of the Steve Kerr Recreation Complex expansions. A feasibility study is planned in 2023 for \$50,000 for phase 2 and 3 of the Steve Kerr Recreation Complex. Phase 2 works include 35,000 square feet of new space for a cost of \$8.75 million expected in 2027, while Phase 3 includes 27,000 square feet for a new indoor pool at a cost of \$14.85 million which is expected to occur beyond the ten-year planning period. The gross capital program is therefore \$23.65 million.

No grants or subsidies have been identified. Replacement and benefit to existing shares of \$5.69 million have been identified associated to phase 2 and 3 of the Steve Kerr Recreation Complex. Once phase 2 and phase 3 are constructed, this will result in the decommissioning of some space at the Wallace arena and one outdoor pool. After the statutory ten per cent discount of \$1.80 million, the total DC eligible costs are \$16.17 million.

Available DC reserve funds of \$695,300 have been applied to the projects occurring first in the capital program. In addition, the entire DC eligible share of \$11.12 million associated with the new pool construction (phase 3) has been deemed a post period benefit and will be considered for recovery under future DC by-laws. The resulting in-period DC recoverable capital costs are therefore \$4.36 million.

The total development-related cost is allocated 100 per cent to residential development, which results in an unadjusted residential development charge of \$1,560.71 per capita.

**TABLE 3 CASH FLOW ANALYSIS**

After cash flow consideration, the residential charge decreases to \$1,485.00 per capita due to the timing of the capital works and development charge revenues. The following table summarizes the calculation of the Indoor Recreation Services development charge.

<b>INDOOR RECREATION SERVICES SUMMARY</b>						
10-year Hist.	2019 - 2028		Unadjusted		Adjusted	
Service Level	Development-Related Capital Program		Development Charge		Development Charge	
per capita	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$2,505.10	\$23,650,000	\$4,355,946	\$1,560.71	\$0.00	<b>\$1,485.00</b>	<b>\$0.00</b>

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APPENDIX B.2  
TABLE 1

MUNICIPALITY OF NORTH PERTH  
INVENTORY OF CAPITAL ASSETS  
INDOOR RECREATION SERVICES

BUILDINGS Facility Name	# of Square Feet										UNIT COST (\$/sq. ft.)	
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
Listowel Memorial Arena	33,619	33,619	33,619	33,619	33,619	33,619	33,619	33,619	33,619	33,619	33,619	\$250
Elma Logan Recreation Complex	30,782	30,782	34,422	34,422	37,372	37,372	37,372	37,372	37,372	37,372	37,372	\$250
Wallace Arena & Community Centre	25,500	25,500	25,500	25,500	25,500	25,500	25,500	25,500	25,500	25,500	25,500	\$250
Elma Memorial Community Centre	9,978	9,978	9,978	9,978	9,978	9,978	9,978	9,978	9,978	9,978	9,978	\$250
Wallace Community Centre (At Old Municipal Office)	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	-	-	-	\$250
Steve Kerr Memorial Complex	-	-	-	-	-	-	-	-	-	-	63,500	\$250
<b>Total (sq.ft.)</b>	<b>102,279</b>	<b>102,279</b>	<b>105,919</b>	<b>105,919</b>	<b>108,869</b>	<b>108,869</b>	<b>108,869</b>	<b>108,869</b>	<b>108,869</b>	<b>106,469</b>	<b>169,969</b>	
<b>Total (\$000)</b>	<b>\$25,569.8</b>	<b>\$25,569.8</b>	<b>\$26,479.8</b>	<b>\$26,479.8</b>	<b>\$27,217.3</b>	<b>\$27,217.3</b>	<b>\$27,217.3</b>	<b>\$27,217.3</b>	<b>\$27,217.3</b>	<b>\$26,617.3</b>	<b>\$42,492.3</b>	

LAND Facility Name	# of Hectares										UNIT COST (\$/ha)	
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
Listowel Memorial Arena	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	\$800,000
Elma Logan Recreation Complex	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24	2.24	\$800,000
Wallace Arena & Community Centre	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	\$800,000
Elma Memorial Community Centre	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	\$800,000
Wallace Community Centre (At Old Municipal Office)	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	-	-	-	\$800,000
Steve Kerr Memorial Complex	-	-	-	-	-	-	-	-	-	-	2.40	\$800,000
<b>Total (ha)</b>	<b>4.30</b>	<b>4.30</b>	<b>4.30</b>	<b>4.30</b>	<b>4.30</b>	<b>4.30</b>	<b>4.30</b>	<b>4.30</b>	<b>4.30</b>	<b>4.22</b>	<b>6.62</b>	
<b>Total (\$000)</b>	<b>\$3,438.7</b>	<b>\$3,438.7</b>	<b>\$3,438.7</b>	<b>\$3,438.7</b>	<b>\$3,438.7</b>	<b>\$3,438.7</b>	<b>\$3,438.7</b>	<b>\$3,438.7</b>	<b>\$3,438.7</b>	<b>\$3,377.4</b>	<b>\$5,297.4</b>	

EQUIPMENT Description	Value of Furniture and Equipment (\$000)										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Equipment	\$ 254,000	\$ 254,000	\$ 254,000	\$ 254,000	\$ 254,000	\$ 254,000	\$ 254,000	\$ 254,000	\$ 254,000	\$ 254,000	\$ 254,000
200 Gallon Watering System	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
Ice Resurfacer	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000
Ice Resurfacer	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000
Ice Resurfacer	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000	\$ 90,000
Ice Resurfacer											\$ 90,000
<b>Total (\$000)</b>	<b>\$ 624.0</b>	<b>\$ 624.0</b>	<b>\$ 624.0</b>	<b>\$ 624.0</b>	<b>\$ 624.0</b>	<b>\$ 624.0</b>	<b>\$ 624.0</b>	<b>\$ 624.0</b>	<b>\$ 624.0</b>	<b>\$ 624.0</b>	<b>\$ 714.0</b>

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APPENDIX B.2  
TABLE 1

MUNICIPALITY OF NORTH PERTH  
CALCULATION OF SERVICE LEVELS  
INDOOR RECREATION SERVICES

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Historical Population	12,479	12,539	12,600	12,698	12,797	12,897	12,998	13,100	13,405	13,718

INVENTORY SUMMARY (\$000)

Buildings	\$25,569.8	\$25,569.8	\$26,479.8	\$26,479.8	\$27,217.3	\$27,217.3	\$27,217.3	\$27,217.3	\$26,617.3	\$42,492.3
Land	\$3,438.7	\$3,438.7	\$3,438.7	\$3,438.7	\$3,438.7	\$3,438.7	\$3,438.7	\$3,438.7	\$3,377.4	\$5,297.4
Equipment	\$624.0	\$624.0	\$624.0	\$624.0	\$624.0	\$624.0	\$624.0	\$624.0	\$624.0	\$714.0
<b>Total (\$000)</b>	<b>\$29,632.5</b>	<b>\$29,632.5</b>	<b>\$30,542.5</b>	<b>\$30,542.5</b>	<b>\$31,280.0</b>	<b>\$31,280.0</b>	<b>\$31,280.0</b>	<b>\$31,280.0</b>	<b>\$30,618.7</b>	<b>\$48,503.7</b>

SERVICE LEVEL (\$/capita)

Average  
Service  
Level

Buildings	\$ 2,049.02	\$ 2,039.22	\$ 2,101.57	\$ 2,085.35	\$ 2,126.85	\$ 2,110.36	\$ 2,093.96	\$ 2,077.65	\$ 1,985.62	\$ 3,097.55	\$2,176.71
Land	\$ 275.56	\$ 274.24	\$ 272.91	\$ 270.81	\$ 268.71	\$ 266.63	\$ 264.56	\$ 262.50	\$ 251.95	\$ 386.17	\$279.40
Equipment	\$ 50.00	\$ 49.76	\$ 49.52	\$ 49.14	\$ 48.76	\$ 48.38	\$ 48.01	\$ 47.63	\$ 46.55	\$ 52.05	\$48.98
<b>Total (\$/capita)</b>	<b>\$ 2,374.59</b>	<b>\$ 2,363.22</b>	<b>\$ 2,424.01</b>	<b>\$ 2,405.30</b>	<b>\$ 2,444.32</b>	<b>\$ 2,425.37</b>	<b>\$ 2,406.52</b>	<b>\$ 2,387.78</b>	<b>\$ 2,284.12</b>	<b>\$ 3,535.77</b>	<b>\$2,505.10</b>

MUNICIPALITY OF NORTH PERTH  
CALCULATION OF MAXIMUM ALLOWABLE  
INDOOR RECREATION SERVICES

10-Year Funding Envelope Calculation	
10 Year Average Service Level 2009 - 2018	\$ 2,505.10
Net Population Growth 2019 - 2028	2,536
Maximum Allowable Funding Envelope	\$ 6,352,934
Less: 10% Legislated Reduction	\$ 635,293
<b>Discounted Maximum Allowable Funding Envelope</b>	<b>\$ 5,717,640</b>



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APPENDIX B.2  
TABLE 2

MUNICIPALITY OF NORTH PERTH  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
INDOOR RECREATION SERVICES

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs			Total DC Eligible Costs	DC Eligible Costs		
					BTE (%)	Replacement & BTE Shares	10% Reduction		Available DC Reserves	2019-2028	Post 2028
<b>2.0 INDOOR RECREATION SERVICES</b>											
<b>2.1 Indoor Recreation</b>											
2.1.1 Business Plan/ Feasibility Study for Phase 2 and 3	2023	\$ 50,000	\$ -	\$ 50,000	0%	\$ -	\$ 5,000	\$ 45,000	\$ 45,000	\$ -	\$ -
2.1.2 Steve Kerr Recreation Complex - Phase 2 (New Space 35,000 sq.ft)	2027	\$ 8,750,000	\$ -	\$ 8,750,000	36%	\$ 3,187,500	\$ 556,250	\$ 5,006,250	\$ 650,304	\$ 4,355,946	\$ -
2.1.3 Steve Kerr Recreation Complex - Phase 3 (Indoor Pool - 27,000 sq.ft) - Post	2028	\$ 14,850,000	\$ -	\$ 14,850,000	17%	\$ 2,500,000	\$ 1,235,000	\$ 11,115,000	\$ -	\$ -	\$ 11,115,000
Subtotal Indoor Recreation		\$ 23,650,000	\$ -	\$ 23,650,000		\$ 5,687,500	\$ 1,796,250	\$ 16,166,250	\$ 695,304	\$ 4,355,946	\$ 11,115,000
<b>TOTAL INDOOR RECREATION SERVICES</b>		<b>\$ 23,650,000</b>	<b>\$ -</b>	<b>\$ 23,650,000</b>		<b>\$ 5,687,500</b>	<b>\$ 1,796,250</b>	<b>\$ 16,166,250</b>	<b>\$ 695,304</b>	<b>\$ 4,355,946</b>	<b>\$ 11,115,000</b>

<b>Residential Development Charge Calculation</b>		
Residential Share of 2019 - 2028 DC Eligible Costs	100%	\$4,355,946
10-Year Growth in Population in New Units		2,791
Unadjusted Development Charge Per Capita		<b>\$1,560.71</b>
<b>Non-Residential Development Charge Calculation</b>		
Non-Residential Share of 2019 - 2028 DC Eligible Costs	0%	\$0
10-Year Growth in Square Metres		66,323
Unadjusted Development Charge Per Square Metre		<b>\$0.00</b>

2019 - 2028 Net Funding Envelope	\$5,717,640
Reserve Fund Balance	
Balance as at December 31, 2018	\$695,304

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APPENDIX B.2  
TABLE 3

**MUNICIPALITY OF NORTH PERTH  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE  
INDOOR RECREATION SERVICES  
RESIDENTIAL DEVELOPMENT CHARGE  
(in \$000)**

<b>INDOOR RECREATION SERVICES</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>TOTAL</b>
OPENING CASH BALANCE	\$ -	\$ 539.4	\$ 1,128.5	\$ 1,770.1	\$ 2,231.4	\$ 2,728.2	\$ 3,259.1	\$ 3,825.7	\$ 4,430.0	\$ (321.1)	
<b>2019 - 2028 RESIDENTIAL FUNDING REQUIREMENTS</b>											
- Indoor Recreation Services: Non Inflated	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,355.9	\$ -	\$ <b>4,355.9</b>
- Indoor Recreation Services: Inflated	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,103.7	\$ -	\$ <b>5,103.7</b>
<b>NEW RESIDENTIAL DEVELOPMENT</b>											
- Population Growth in New Units	357	370	383	249	256	261	266	271	189	189	<b>2,791</b>
<b>REVENUE</b>											
- DC Receipts: Inflated	\$ 530.1	\$ 560.4	\$ 591.7	\$ 392.4	\$ 411.5	\$ 427.9	\$ 444.8	\$ 462.3	\$ 328.8	\$ 335.4	\$ <b>4,485.5</b>
<b>INTEREST</b>											
- Interest on Opening Balance	\$ -	\$ 18.9	\$ 39.5	\$ 62.0	\$ 78.1	\$ 95.5	\$ 114.1	\$ 133.9	\$ 155.1	\$ (17.7)	\$ <b>679.3</b>
- Interest on In-year Transactions	\$ 9.3	\$ 9.8	\$ 10.4	\$ 6.9	\$ 7.2	\$ 7.5	\$ 7.8	\$ 8.1	\$ (131.3)	\$ 5.9	\$ <b>(58.6)</b>
<b>TOTAL REVENUE</b>	\$ <b>539.4</b>	\$ <b>589.1</b>	\$ <b>641.6</b>	\$ <b>461.2</b>	\$ <b>496.8</b>	\$ <b>530.9</b>	\$ <b>566.7</b>	\$ <b>604.3</b>	\$ <b>352.6</b>	\$ <b>323.6</b>	\$ <b>5,106.2</b>
CLOSING CASH BALANCE	\$ 539.4	\$ 1,128.5	\$ 1,770.1	\$ 2,231.4	\$ 2,728.2	\$ 3,259.1	\$ 3,825.7	\$ 4,430.0	\$ (321.1)	\$ 2.5	

**2019 Adjusted Charge Per Capita** **\$1,485.00**

<b>Allocation of Capital Program</b>	
Residential Sector	100.0%
Non-Residential Sector	0.0%
<b>Rates for 2019</b>	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

**APPENDIX B.3**

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***OUTDOOR RECREATION***

## APPENDIX B.3

### OUTDOOR RECREATION

Outdoor Recreation in North Perth is delivered through various parks, amenities, and trails. The benefits of Outdoor Recreation are deemed Municipal-wide for the purposes of calculating the development charge.

#### TABLE 1 2009-2018 HISTORICAL SERVICE LEVELS

The ten-year historical inventory of capital assets for Outdoor Recreation includes 126.9 hectares of developed parkland valued at \$6.16 million. In addition, the Municipality has amenities such as pools, splash pads, playgrounds, sports fields, pavilions, and skate parks that are valued at \$21.49 million. The Municipality has 25.8 kilometers of trails that have a replacement value of \$105,600. Lastly, 74 fleet and equipment units such as tractors, lawn mowers, chainsaws, trailers, vehicles and other smaller equipment are valued at \$696,200.

The total replacement cost of Outdoor Recreation infrastructure is \$28.45 million. This provides a ten-year average historical service level of \$2,107.04 per capita. This average historical service level multiplied by the 10-year forecast growth in net population results in a maximum allowable funding envelope of \$5.34 million (\$2,107.04 per capita x 2,536 net population growth). After the mandatory ten per cent discount, the discounted maximum allowable funding envelope is \$4.81 million.

#### TABLE 2 2019 – 2028 DEVELOPMENT-RELATED CAPITAL PROGRAM & CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGE

The Outdoor Recreation capital program consists of \$1.94 million in park development, play structures and park amenities. In addition, a front mount mower amounts to \$25,000 with a provision for additional equipment adding another \$25,000. \$75,000 has also been identified for development of a Parks and Recreation Master Plan to be undertaken towards the end of the planning period. The total outdoor recreation capital program is therefore \$2.06 million.

No grants or subsidies are expected to offset any portion of the program. A share of \$18,750 has been identified as a benefit to existing related to the Parks and Recreation Master Plan and has been deducted from the total cost. The statutory ten per cent discount removes another \$204,100 from the calculation.

The total DC eligible costs therefore amount to approximately \$1.84 million. Available DC reserve funds on hand of about \$367,800 have been applied, leaving \$1.47 million as the in-period DC eligible costs for recovery. No post period benefit shares have been identified.

The total development-related cost is allocated 100 per cent against new residential development, resulting in an unadjusted residential development charge of \$526.47 per capita.

**TABLE 3 CASH FLOW ANALYSIS**

After cash flow consideration, the residential charge decreases to \$517.00 per capita due to the timing of capital works. The following table summarizes the calculation of the Outdoor Recreation Services development charge.

10-year Hist. Service Level per capita	OUTDOOR RECREATION SERVICES SUMMARY					
	2019 - 2028		Unadjusted		Adjusted	
	Development-Related Capital Program		Development Charge		Development Charge	
	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$2,107.04	\$2,060,000	\$1,469,368	\$526.47	\$0.00	<b>\$517.00</b>	<b>\$0.00</b>

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APPENDIX B.3  
TABLE 1

MUNICIPALITY OF NORTH PERTH  
INVENTORY OF CAPITAL ASSETS  
OUTDOOR RECREATION SERVICES

PARKLAND DEVELOPMENT Park Type	# of Hectares										UNIT COST (\$/ha)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Neighbourhood Parks	28.4	28.4	28.4	28.4	28.4	28.4	28.4	27.9	27.9	27.9	\$54,000
District Parks	78.8	78.8	78.8	78.8	78.8	78.8	78.8	78.8	82.8	82.8	\$54,000
Naturalized Parks	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	\$10,800
Pavilion Land	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	\$54,000
<b>Total (ha)</b>	<b>123.5</b>	<b>123.5</b>	<b>123.5</b>	<b>123.5</b>	<b>123.5</b>	<b>123.5</b>	<b>123.5</b>	<b>123.0</b>	<b>127.0</b>	<b>126.9</b>	
<b>Total (\$000)</b>	<b>\$5,975.5</b>	<b>\$5,975.5</b>	<b>\$5,975.5</b>	<b>\$5,975.5</b>	<b>\$5,975.5</b>	<b>\$5,975.5</b>	<b>\$5,975.5</b>	<b>\$5,948.5</b>	<b>\$6,164.5</b>	<b>\$6,163.3</b>	

PARKLAND AMENITIES Amentity Type	# of Items										UNIT COST (\$/unit)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
<b>Pools and Splash Pads</b>											
Atwood Lions Outdoor Pool	1	1	1	1	1	1	1	1	1	1	\$ 2,500,000
Listowel Kinsmen Outdoor Pool	1	1	1	1	1	1	1	1	1	1	\$ 2,500,000
Kinette's Splash Pad	-	-	-	-	1	1	1	1	1	1	\$ 500,000
Listowel Comancheros Wading Pool	1	1	1	1	-	-	-	-	-	-	\$ 100,000
<b>Play Structures</b>											
Playstructures (Senior)	4	4	4	4	5	5	5	5	5	5	\$ 115,000
Playstructures (Junior)	6	6	6	6	7	7	7	7	7	7	\$ 75,000
<b>Sports Fields</b>											
Soccer Pitches (unlit)	7	7	7	7	7	7	7	7	7	7	\$ 600,000
Soccer Pitches (lit)	-	-	-	-	-	-	-	-	-	-	\$ 825,000
Baseball (Lit)	1	1	1	1	1	1	1	1	1	1	\$ 575,000
Softball (Lit)	8	8	8	8	8	8	8	8	8	8	\$ 575,000
Softball (Unlit)	4	4	4	4	4	4	4	4	4	4	\$ 250,000
Tennis Courts (Single)	2	2	2	2	2	2	2	2	2	2	\$ 250,000
Tennis Courts (Double)	2	2	2	2	2	2	2	2	2	2	\$ 250,000
Bocce Courts	5	5	5	5	5	5	5	5	5	5	\$ 7,600
Batting Cages	2	2	2	2	2	2	2	2	2	2	\$ 16,300

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TABLE 1

MUNICIPALITY OF NORTH PERTH  
INVENTORY OF CAPITAL ASSETS  
OUTDOOR RECREATION SERVICES

PARKLAND AMENITIES (CONT'D) Amentity Type	# of Items										UNIT COST (\$/unit)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
<b>Other Amenities</b>											
Clock Tower	1	1	1	1	1	1	1	1	1	1	\$ 201,000
Planting Beds	1	1	1	1	1	1	1	1	1	1	\$ 177,000
Walkway Lighting	1	1	1	1	1	1	1	1	1	1	\$ 113,000
Pedestrian Bridge	1	1	1	1	1	1	1	1	2	2	\$ 60,000
Skateboard Park (Lit)	1	1	1	1	1	1	1	1	1	1	\$ 51,000
Trail Bridges	4	4	4	4	4	4	4	4	4	4	\$ 60,000
Trail Amenities (Benches, Signage)	1	1	1	1	1	1	1	1	1	1	\$ 17,000
<b>Structures and Pavillions</b>											
Monkton Lions Pavillion	1	1	1	1	1	1	1	1	1	1	\$ 169,000
Monkton Kinsmen Pavillion	1	1	1	1	1	1	1	1	1	1	\$ 169,000
Listowel Kin Park Pavillion	1	1	1	1	1	1	1	1	1	1	\$ 169,000
Wallace Optimist Pavillion	1	1	1	1	1	1	1	1	1	1	\$ 169,000
Trowbridge Park Pavillion	1	1	1	1	1	1	1	1	1	-	\$ 169,000
Listowel Memorial Park Pavillion	1	1	1	1	1	1	1	1	1	1	\$ 169,000
Atwood Lions Pavillion	1	1	1	1	1	1	1	1	1	1	\$ 169,000
Parks Storage Shed Listowel	-	-	-	-	1	1	1	1	1	1	\$ 55,000
Parks Storage Shed Atwood	-	-	-	-	1	1	1	1	1	1	\$ 82,000
Elma Logan Storage Shed	1	1	1	1	1	1	1	1	1	1	\$ 42,000
Gazebo (Small)	2	2	2	2	2	2	2	2	2	2	\$ 113,000
Bandshell	1	1	1	1	1	1	1	1	1	1	\$ 113,000
Amphitheatre	-	-	-	-	-	-	1	1	1	1	\$ 169,000
<b>Total (#)</b>	<b>65</b>	<b>65</b>	<b>65</b>	<b>65</b>	<b>69</b>	<b>69</b>	<b>70</b>	<b>70</b>	<b>71</b>	<b>71</b>	
<b>Total (\$000)</b>	<b>\$19,878.6</b>	<b>\$19,878.6</b>	<b>\$19,878.6</b>	<b>\$19,878.6</b>	<b>\$20,605.6</b>	<b>\$20,605.6</b>	<b>\$20,774.6</b>	<b>\$20,774.6</b>	<b>\$20,834.6</b>	<b>\$21,490.6</b>	

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TABLE 1

MUNICIPALITY OF NORTH PERTH  
INVENTORY OF CAPITAL ASSETS  
OUTDOOR RECREATION SERVICES

PARKLAND TRAILS Trail Type	# of Kilometers										UNIT COST (\$/km)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Stone Dust	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	25.0	\$ 4,000
Hard Surface (Concrete)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.8	\$ 7,000
<b>Total (km)</b>	<b>25.0</b>	<b>25.0</b>	<b>25.0</b>	<b>25.0</b>	<b>25.0</b>	<b>25.0</b>	<b>25.0</b>	<b>25.0</b>	<b>25.0</b>	<b>25.8</b>	
<b>Total (\$000)</b>	<b>\$101.5</b>	<b>\$101.5</b>	<b>\$101.5</b>	<b>\$101.5</b>	<b>\$101.5</b>	<b>\$101.5</b>	<b>\$101.5</b>	<b>\$101.5</b>	<b>\$101.5</b>	<b>\$105.6</b>	

VEHICLES & EQUIPMENT Description	# of Items										UNIT COST (\$/unit)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Kubota L4310 Tractor	1	1	1	1	1	1	1	1	1	1	\$ 40,000
Kubota MX5100 (Listowel)	-	-	-	1	1	1	1	1	1	1	\$ 40,000
M.F. 245 Tractor	1	1	1	-	-	-	-	-	-	-	\$ 40,000
Woods Mowers	2	2	2	2	2	-	-	-	-	-	\$ 4,800
Fertilizer Spreader	1	1	1	1	1	1	1	1	1	1	\$ 2,600
Landpride Flex Mower	1	1	1	1	1	1	1	1	1	1	\$ 19,300
Sickle Mower - 3'	1	1	1	1	1	1	1	1	1	1	\$ 2,500
Sickle Mower - 8'	1	1	1	1	1	1	1	1	1	1	\$ 3,700
Gas Trimmers	5	5	5	5	5	5	5	5	5	5	\$ 400
Chainsaw	1	1	1	1	1	1	1	1	1	1	\$ 1,000
Trailer - 20' Tandem	1	1	1	1	1	1	1	1	1	1	\$ 9,600
Dump Trailer	1	1	1	1	1	1	3	3	3	3	\$ 9,700
Trailer - Monkton	1	1	1	1	1	1	1	1	1	1	\$ 6,500
Trailer - Atwood	1	1	1	1	1	1	1	1	1	1	\$ 2,500
Trailer - 8'	1	1	1	1	1	1	1	1	1	1	\$ 2,500
Bannerman Diamond Groomer	3	3	3	3	3	3	3	3	3	3	\$ 6,500
Kubota Front Mount 2650	1	1	1	1	1	1	1	1	1	1	\$ 26,900
Kubota Front Mount 3050	-	-	-	-	-	-	-	-	1	1	\$ 26,900
Kubota Loader Tractor 2008 (Listowel)	1	1	1	1	1	1	1	1	1	1	\$ 29,200
Kubota Loader Tractor 2006 (Listowel)	1	1	1	1	1	1	1	1	1	1	\$ 29,200



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TABLE 1

MUNICIPALITY OF NORTH PERTH  
INVENTORY OF CAPITAL ASSETS  
OUTDOOR RECREATION SERVICES

VEHICLES & EQUIPMENT (CONT'D) Description	# of Items										UNIT COST
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	(\$/unit)
Bannerman Aerator	1	1	1	1	1	1	1	1	1	1	\$ 3,100
Lawn Roller	1	1	1	1	1	1	1	1	1	1	\$ 1,600
8N Ford Tractor	1	1	-	-	-	-	-	-	-	-	\$ 24,100
John Deere Tractor (Atwood)	-	-	1	1	1	-	-	1	1	1	\$ 24,100
John Deere Tractor (Wallace/Trow)	2	2	2	2	2	2	2	2	2	2	\$ 7,300
2005 Dodge 1/2 Ton Truck	1	1	1	1	1	1	1	1	1	1	\$ 29,200
2004 1/2 Ton Truck Chevy	1	1	1	1	1	1	1	1	1	1	\$ 29,200
2007 Pontiac Montana Van	1	1	1	1	1	1	1	1	1	1	\$ 29,200
2019 Dodge Caravan	-	-	-	-	-	-	-	-	-	1	\$ 28,000
Ice Lazer Level	3	3	3	3	3	3	3	3	3	3	\$ 17,600
Ice Edger - Listowel	1	1	1	1	1	1	1	1	1	1	\$ 3,900
Ice Edger - Monkton	1	1	1	1	1	1	1	1	1	1	\$ 3,900
Ice Edger - Wallace	1	1	1	1	1	1	1	1	1	1	\$ 4,000
Bushog Mower	1	1	1	1	1	2	2	2	2	2	\$ 4,000
Top Dresser	1	1	1	1	1	1	1	1	1	1	\$ 18,700
Scrapper Blades	1	1	1	1	1	1	1	1	1	1	\$ 500
Auger	1	1	1	1	1	1	1	1	1	1	\$ 3,500
Sweeper	1	1	1	1	1	1	1	1	2	2	\$ 5,300
Ford Loader Tractor	1	1	1	1	-	-	-	-	-	-	\$ 86,900
Antique Alls Chalmers Tractor	1	1	1	1	1	1	1	1	1	1	\$ 5,900
1998 Chevy Truck - Beautification	1	1	1	1	-	-	-	-	-	-	\$ 3,500
Floor Burnisher - Listowel	1	1	1	1	1	1	1	1	1	1	\$ 7,100
Floor Burnisher - Wallace	1	1	1	1	1	1	1	1	1	1	\$ 7,100
Floor Burnisher - EMCC	1	1	1	1	1	1	1	1	1	1	\$ 7,100
Floor Burnisher - Elma Logan	1	1	1	1	1	1	1	1	1	1	\$ 7,100

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TABLE 1

MUNICIPALITY OF NORTH PERTH  
INVENTORY OF CAPITAL ASSETS  
OUTDOOR RECREATION SERVICES

VEHICLES & EQUIPMENT (CONT'D) Description	# of Items										UNIT COST (\$/unit)	
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
Floor Burnisher - Listowel	1	1	1	1	1	1	1	1	1	1	1	\$ 2,900
Floor Burnisher - Wallace	1	1	1	1	1	1	1	1	1	1	1	\$ 2,900
Floor Burnisher - EMCC	1	1	1	1	1	1	1	1	1	1	1	\$ 2,900
Floor Burnisher - Elma Logan	1	1	1	1	1	1	1	1	1	1	1	\$ 2,900
Floor Burnisher (ride on) - Listowel	-	-	-	-	-	-	-	-	-	1	1	\$ 2,900
Low Speed Buffer - Listowel	1	1	1	1	1	1	1	1	1	1	1	\$ 1,200
Low Speed Buffer - Wallace	1	1	1	1	1	1	1	1	1	1	1	\$ 1,200
Low Speed Buffer - EMCC	1	1	1	1	1	1	1	1	1	1	1	\$ 1,200
Low Speed Buffer - Elma Logan	1	1	1	1	1	1	1	1	1	1	1	\$ 1,200
Pressure Washer - Listowel	1	1	1	1	1	1	1	1	1	1	1	\$ 900
Pressure Washer - Wallace	1	1	1	1	1	1	1	1	1	1	1	\$ 900
Pressure Washer - Elma Logan	1	1	1	1	1	1	1	1	1	1	1	\$ 900
Wet/Dry Vacuum - Listowel	1	1	1	1	1	1	1	1	1	1	1	\$ 800
Wet/Dry Vacuum - Wallace	1	1	1	1	1	1	1	1	1	1	1	\$ 800
Wet/Dry Vacuum - EMCC	1	1	1	1	1	1	1	1	1	1	1	\$ 800
Wet/Dry Vacuum - Elma Logan	1	1	1	1	1	1	1	1	1	1	1	\$ 800
Pool Vacuum - Listowel	1	1	1	1	1	1	1	1	1	1	1	\$ 4,700
Pool Vacuum - Atwood	1	1	1	1	1	1	1	1	1	1	1	\$ 4,700
2013 Chevy Pick-up	-	-	-	-	1	1	1	1	1	1	1	\$ 29,200
2007 Chevy Pick-up	1	1	1	1	1	1	1	1	1	1	1	\$ 29,200
Man Lift (2012)	-	-	-	1	1	1	1	1	1	1	1	\$ 11,000
<b>Total (#)</b>	<b>69</b>	<b>69</b>	<b>69</b>	<b>70</b>	<b>69</b>	<b>67</b>	<b>69</b>	<b>70</b>	<b>73</b>	<b>74</b>		
<b>Total (\$000)</b>	<b>\$669.5</b>	<b>\$669.5</b>	<b>\$669.5</b>	<b>\$680.5</b>	<b>\$619.3</b>	<b>\$589.6</b>	<b>\$609.0</b>	<b>\$633.1</b>	<b>\$668.2</b>	<b>\$696.2</b>		

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TABLE 1

**MUNICIPALITY OF NORTH PERTH  
CALCULATION OF SERVICE LEVELS  
OUTDOOR RECREATION SERVICES**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Historical Population	12,479	12,539	12,600	12,698	12,797	12,897	12,998	13,100	13,405	13,718

**INVENTORY SUMMARY (\$000)**

Parkland Development	\$ 5,975.5	\$ 5,975.5	\$ 5,975.5	\$ 5,975.5	\$ 5,975.5	\$ 5,975.5	\$ 5,975.5	\$ 5,948.5	\$ 6,164.5	\$ 6,163.3
Parkland Amenities	\$ 19,878.6	\$ 19,878.6	\$ 19,878.6	\$ 19,878.6	\$ 20,605.6	\$ 20,605.6	\$ 20,774.6	\$ 20,774.6	\$ 20,834.6	\$ 21,490.6
Parkland Trails	\$ 101.5	\$ 101.5	\$ 101.5	\$ 101.5	\$ 101.5	\$ 101.5	\$ 101.5	\$ 101.5	\$ 101.5	\$ 105.6
Vehicles & Equipment	\$ 669.5	\$ 669.5	\$ 669.5	\$ 680.5	\$ 619.3	\$ 589.6	\$ 609.0	\$ 633.1	\$ 668.2	\$ 696.2
<b>Total (\$000)</b>	<b>\$ 26,625.1</b>	<b>\$ 26,625.1</b>	<b>\$ 26,625.1</b>	<b>\$ 26,636.1</b>	<b>\$ 27,301.9</b>	<b>\$ 27,272.2</b>	<b>\$ 27,460.6</b>	<b>\$ 27,457.7</b>	<b>\$ 27,768.8</b>	<b>\$ 28,455.7</b>

**SERVICE LEVEL (\$/capita)**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Average Service Level
Parkland Development	\$ 478.85	\$ 476.55	\$ 474.25	\$ 470.59	\$ 466.95	\$ 463.33	\$ 459.73	\$ 454.09	\$ 459.87	\$ 449.29	\$ 465.35
Parkland Amenities	\$ 1,592.96	\$ 1,585.34	\$ 1,577.67	\$ 1,565.49	\$ 1,610.19	\$ 1,597.70	\$ 1,598.29	\$ 1,585.85	\$ 1,554.24	\$ 1,566.60	\$ 1,583.43
Parkland Trails	\$ 8.13	\$ 8.09	\$ 8.06	\$ 7.99	\$ 7.93	\$ 7.87	\$ 7.81	\$ 7.75	\$ 7.57	\$ 7.70	\$ 7.89
Vehicles & Equipment	\$ 53.65	\$ 53.39	\$ 53.13	\$ 53.59	\$ 48.39	\$ 45.72	\$ 46.85	\$ 48.33	\$ 49.85	\$ 50.75	\$ 50.37
<b>Total (\$/capita)</b>	<b>\$ 2,133.59</b>	<b>\$ 2,123.38</b>	<b>\$ 2,113.10</b>	<b>\$ 2,097.66</b>	<b>\$ 2,133.46</b>	<b>\$ 2,114.62</b>	<b>\$ 2,112.68</b>	<b>\$ 2,096.01</b>	<b>\$ 2,071.53</b>	<b>\$ 2,074.33</b>	<b>\$ 2,107.04</b>

**MUNICIPALITY OF NORTH PERTH  
CALCULATION OF MAXIMUM ALLOWABLE  
OUTDOOR RECREATION SERVICES**

<b>10-Year Funding Envelope Calculation</b>	
10 Year Average Service Level 2009 - 2018	\$ 2,107.04
Net Population Growth 2019 - 2028	2,536
Maximum Allowable Funding Envelope	\$ 5,343,453
Less: 10% Statutory Deduction	\$ 534,345
<b>Discounted Maximum Allowable Funding Envelope</b>	<b>\$ 4,809,108</b>

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TABLE 2

MUNICIPALITY OF NORTH PERTH  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
OUTDOOR RECREATION SERVICES

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs			Total DC Eligible Costs	DC Eligible Costs		
					BTE (%)	Replacement & BTE Shares	10% Reduction		Available DC Reserves	2019-2028	Post 2028
<b>3.0 OUTDOOR RECREATION SERVICES</b>											
<b>3.1 Park Development</b>											
3.1.1 Hanna's Haven (Ameribuild) Park Development	2022	\$ 220,000	\$ -	\$ 220,000	0%	\$ -	\$ 22,000	\$ 198,000	\$ 198,000	\$ -	\$ -
3.1.2 Riverview Park Development (North and South)	2022	\$ 220,000	\$ -	\$ 220,000	0%	\$ -	\$ 22,000	\$ 198,000	\$ -	\$ 198,000	\$ -
3.1.3 Lunor (Sharma) Subdivision Park Development	2025	\$ 175,000	\$ -	\$ 175,000	0%	\$ -	\$ 17,500	\$ 157,500	\$ -	\$ 157,500	\$ -
3.1.4 Junior Play Structures (4)	2025	\$ 300,000	\$ -	\$ 300,000	0%	\$ -	\$ 30,000	\$ 270,000	\$ -	\$ 270,000	\$ -
3.1.5 Atwood Neighbourhood Park	2028	\$ 220,000	\$ -	\$ 220,000	0%	\$ -	\$ 22,000	\$ 198,000	\$ -	\$ 198,000	\$ -
3.1.6 Future Park Development (playground structure, park amenities, light)	Various	\$ 800,000	\$ -	\$ 800,000	0%	\$ -	\$ 80,000	\$ 720,000	\$ 140,507	\$ 579,493	\$ -
<b>Subtotal Park Development</b>		<b>\$ 1,935,000</b>	<b>\$ -</b>	<b>\$ 1,935,000</b>		<b>\$ -</b>	<b>\$ 193,500</b>	<b>\$ 1,741,500</b>	<b>\$ 338,507</b>	<b>\$ 1,402,993</b>	<b>\$ -</b>
<b>3.2 Fleet &amp; Equipment</b>											
3.2.1 60" Front Mount Mower	2020	\$ 25,000	\$ -	\$ 25,000	0%	\$ -	\$ 2,500	\$ 22,500	\$ 22,500	\$ -	\$ -
3.2.2 Provisison for Additional Equipment	Various	\$ 25,000	\$ -	\$ 25,000	0%	\$ -	\$ 2,500	\$ 22,500	\$ 6,750	\$ 15,750	\$ -
<b>Subtotal Fleet &amp; Equipment</b>		<b>\$ 50,000</b>	<b>\$ -</b>	<b>\$ 50,000</b>		<b>\$ -</b>	<b>\$ 5,000</b>	<b>\$ 45,000</b>	<b>\$ 29,250</b>	<b>\$ 15,750</b>	<b>\$ -</b>
<b>3.3 Studies</b>											
3.3.1 Parks and Recreation Master Plan	2028	\$ 75,000	\$ -	\$ 75,000	25%	\$ 18,750	\$ 5,625	\$ 50,625	\$ -	\$ 50,625	\$ -
<b>Subtotal Studies</b>		<b>\$ 75,000</b>	<b>\$ -</b>	<b>\$ 75,000</b>		<b>\$ 18,750</b>	<b>\$ 5,625</b>	<b>\$ 50,625</b>	<b>\$ -</b>	<b>\$ 50,625</b>	<b>\$ -</b>
<b>TOTAL OUTDOOR RECREATION SERVICES</b>		<b>\$ 2,060,000</b>	<b>\$ -</b>	<b>\$ 2,060,000</b>		<b>\$ 18,750</b>	<b>\$ 204,125</b>	<b>\$ 1,837,125</b>	<b>\$ 367,757</b>	<b>\$ 1,469,368</b>	<b>\$ -</b>

Residential Development Charge Calculation		
Residential Share of 2019 - 2028 DC Eligible Costs	100%	\$1,469,368
10-Year Growth in Population in New Units		2,791
Unadjusted Development Charge Per Capita		<b>\$526.47</b>
Non-Residential Development Charge Calculation		
Non-Residential Share of 2019 - 2028 DC Eligible Costs	0%	\$0
10-Year Growth in Square Metres		66,323
Unadjusted Development Charge Per Square Metre		<b>\$0.00</b>

2019 - 2028 Net Funding Envelope	\$4,809,108
Reserve Fund Balance	
Balance as at December 31, 2018	\$367,757

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TABLE 3

**MUNICIPALITY OF NORTH PERTH  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE  
OUTDOOR RECREATION SERVICES  
RESIDENTIAL DEVELOPMENT CHARGE  
(in \$000)**

<b>OUTDOOR RECREATION SERVICES</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>TOTAL</b>
OPENING CASH BALANCE	\$ -	\$ 127.2	\$ 268.4	\$ 424.4	\$ 298.9	\$ 389.5	\$ 487.9	\$ 100.5	\$ 198.2	\$ 250.7	
<b>2019 - 2028 RESIDENTIAL FUNDING REQUIREMENTS</b>											
- Outdoor Recreation Services: Non Inflated	\$ 59.5	\$ 59.5	\$ 59.5	\$ 257.5	\$ 59.5	\$ 59.5	\$ 487.0	\$ 59.5	\$ 59.5	\$ 308.1	\$ 1,469.4
- Outdoor Recreation Services: Inflated	\$ 59.5	\$ 60.7	\$ 61.9	\$ 273.3	\$ 64.4	\$ 65.7	\$ 548.5	\$ 68.4	\$ 69.7	\$ 368.3	\$ 1,640.5
<b>NEW RESIDENTIAL DEVELOPMENT</b>											
- Population Growth in New Units	357	370	383	249	256	261	266	271	189	189	2,791
<b>REVENUE</b>											
- DC Receipts: Inflated	\$ 184.6	\$ 195.1	\$ 206.0	\$ 136.6	\$ 143.3	\$ 149.0	\$ 154.9	\$ 160.9	\$ 114.5	\$ 116.8	\$ 1,561.6
<b>INTEREST</b>											
- Interest on Opening Balance	\$ -	\$ 4.5	\$ 9.4	\$ 14.9	\$ 10.5	\$ 13.6	\$ 17.1	\$ 3.5	\$ 6.9	\$ 8.8	\$ 89.1
- Interest on In-year Transactions	\$ 2.2	\$ 2.4	\$ 2.5	\$ (3.8)	\$ 1.4	\$ 1.5	\$ (10.8)	\$ 1.6	\$ 0.8	\$ (6.9)	\$ (9.2)
<b>TOTAL REVENUE</b>	\$ 186.8	\$ 201.9	\$ 217.9	\$ 147.7	\$ 155.1	\$ 164.1	\$ 161.1	\$ 166.1	\$ 122.2	\$ 118.6	\$ 1,641.5
CLOSING CASH BALANCE	\$ 127.2	\$ 268.4	\$ 424.4	\$ 298.9	\$ 389.5	\$ 487.9	\$ 100.5	\$ 198.2	\$ 250.7	\$ 1.1	

<b>2019 Adjusted Charge Per Capita</b>	<b>\$517.00</b>
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<b>Allocation of Capital Program</b>	
Residential Sector	100.0%
Non-Residential Sector	0.0%
<b>Rates for 2019</b>	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

## **APPENDIX B.4**

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### ***CHILD CARE***

## APPENDIX B.4

### CHILD CARE

Child Care Services in North Perth are delivered through the North Perth Day Care Facility. The benefits of Child Care Services are deemed to be Municipal-wide for the purposes of calculating the development charge.

#### TABLE 1 2009-2018 HISTORICAL SERVICE LEVELS

The ten-year historical inventory of capital assets for Child Care Services includes the North Perth Day Care Facility, a 3,106 square foot facility valued at \$931,800. The equipment for various before and after school programs, best start programs and early childhood programs are valued at \$70,700. The total value of the Child Care inventory in the Municipality is \$1.00 million.

This provides a ten-year average historical service level of \$77.55 per capita. This average historical service level multiplied by the 10-year forecast growth in net population results in a maximum allowable funding envelope of \$196,667 (\$77.55 per capita x 2,536 net population growth). After the statutory ten per cent discount, the discounted maximum allowable funding envelope is \$177,000.

#### TABLE 2 2019 – 2028 DEVELOPMENT-RELATED CAPITAL PROGRAM & CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGE

The Child Care capital program includes \$26,930 to recover a negative reserve fund balance. In addition, a new childcare centre is slated to be built in 2020, for a cost of \$1.79 million. The new early program cost will total about \$40,000. The total Child Care capital program totals \$1.86 million.

The costs related to the new child care centre and early program are entirely funded through grants, so the net municipal cost to the Municipality is just \$26,930. After the statutory ten per cent discount, the total DC costs eligible for recovery in 2019-2028 is \$24,237.

The total development-related cost is allocated 100 per cent against new residential development, resulting in an unadjusted residential development charge of \$8.68 per capita.

**TABLE 3 CASH FLOW ANALYSIS**

After cash flow consideration, the residential charge increases to \$10.00 per capita. The following table summarizes the calculation of the Child Care Services development charge.

<b>CHILD CARE SERVICES SUMMARY</b>						
10-year Hist. Service Level per capita	2019 - 2028		Unadjusted		Adjusted	
	Development-Related Capital Program		Development Charge		Development Charge	
	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$77.55	\$1,856,930	\$24,237	\$8.68	\$0.00	<b>\$10.00</b>	<b>\$0.00</b>



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APPENDIX B.4  
TABLE 1

MUNICIPALITY OF NORTH PERTH  
INVENTORY OF CAPITAL ASSETS  
CHILD CARE SERVICES

BUILDINGS Facility Name	# of Square Feet										UNIT COST (\$/sq.ft.)	
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
North Perth Day Care Facility	3,106	3,106	3,106	3,106	3,106	3,106	3,106	3,106	3,106	3,106	3,106	\$300
<b>Total (sq.ft.)</b>	<b>3,106</b>	<b>3,106</b>	<b>3,106</b>	<b>3,106</b>	<b>3,106</b>	<b>3,106</b>	<b>3,106</b>	<b>3,106</b>	<b>3,106</b>	<b>3,106</b>	<b>3,106</b>	
<b>Total (\$000)</b>	<b>\$931.8</b>	<b>\$931.8</b>	<b>\$931.8</b>	<b>\$931.8</b>	<b>\$931.8</b>	<b>\$931.8</b>	<b>\$931.8</b>	<b>\$931.8</b>	<b>\$931.8</b>	<b>\$931.8</b>	<b>\$931.8</b>	

EQUIPMENT Description	# of Items										UNIT COST (\$/unit)	
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
Eastdale Public School (B&A Program)	1	1	1	1	2	2	2	2	2	2	2	\$5,900
Central Public School (B&A Program)	1	1	1	1	2	2	2	2	2	2	-	\$5,900
Elma Public School (B&A Program)	1	1	1	1	1	1	1	1	-	-	-	\$5,900
Wallace Public School (B&A Program)	1	1	1	1	1	1	1	1	1	1	-	\$5,900
St. Mary's Catholic School (B&A Program)	1	1	1	1	1	1	1	1	1	1	1	\$5,900
St. Mary's Catholic School (Best Start Program)	1	1	1	1	-	-	-	-	-	-	-	\$23,500
Central Public School (Best Start Program)	-	-	-	-	1	1	1	1	1	1	1	\$23,500
New Location (B&A) Westfields	-	-	-	-	-	4	4	4	4	4	4	\$5,900
Early Childhood Program (New Location)										1	1	\$5,900
<b>Total (#)</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>8</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>9</b>	
<b>Total (\$000)</b>	<b>\$53.0</b>	<b>\$53.0</b>	<b>\$53.0</b>	<b>\$53.0</b>	<b>\$64.8</b>	<b>\$88.4</b>	<b>\$88.4</b>	<b>\$88.4</b>	<b>\$88.4</b>	<b>\$85.5</b>	<b>\$70.7</b>	

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APPENDIX B.4  
TABLE 1

**MUNICIPALITY OF NORTH PERTH  
CALCULATION OF SERVICE LEVELS  
CHILD CARE SERVICES**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Historical Population	12,479	12,539	12,600	12,698	12,797	12,897	12,998	13,100	13,405	13,718

**INVENTORY SUMMARY (\$000)**

Buildings	\$931.8	\$931.8	\$931.8	\$931.8	\$931.8	\$931.8	\$931.8	\$931.8	\$931.8	\$931.80
Land	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Equipment	\$53.0	\$53.0	\$53.0	\$53.0	\$64.8	\$88.4	\$88.4	\$88.4	\$85.5	\$70.7
<b>Total (\$000)</b>	<b>\$984.8</b>	<b>\$984.8</b>	<b>\$984.8</b>	<b>\$984.8</b>	<b>\$996.6</b>	<b>\$1,020.2</b>	<b>\$1,020.2</b>	<b>\$1,020.2</b>	<b>\$1,017.3</b>	<b>\$1,002.5</b>

SERVICE LEVEL (\$/capita)											Average Service Level
Buildings	\$74.67	\$74.31	\$73.95	\$73.38	\$72.81	\$72.25	\$71.69	\$71.13	\$69.51	\$67.93	\$72.16
Land	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Equipment	\$4.25	\$4.23	\$4.21	\$4.17	\$5.06	\$6.85	\$6.80	\$6.75	\$6.37	\$5.15	\$5.38
<b>Total (\$/capita)</b>	<b>\$78.92</b>	<b>\$78.54</b>	<b>\$78.16</b>	<b>\$77.56</b>	<b>\$77.88</b>	<b>\$79.10</b>	<b>\$78.49</b>	<b>\$77.88</b>	<b>\$75.89</b>	<b>\$73.08</b>	<b>\$77.55</b>

**MUNICIPALITY OF NORTH PERTH  
CALCULATION OF MAXIMUM ALLOWABLE  
CHILD CARE SERVICES**

10-Year Funding Envelope Calculation	
10 Year Average Service Level 2009 - 2018	\$77.55
Net Population Growth 2019 - 2028	2,536
Maximum Allowable Funding Envelope	\$196,667
Less: 10% Legislated Reduction	\$19,667
<b>Discounted Maximum Allowable Funding Envelope</b>	<b>\$177,000</b>

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APPENDIX B.4  
TABLE 2

MUNICIPALITY OF NORTH PERTH  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
CHILD CARE SERVICES

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs			Total DC Eligible Costs	DC Eligible Costs		
					BTE (%)	Replacement & BTE Shares	10% Reduction		Available DC Reserves	2019-2028	Post 2028
<b>4.0 CHILD CARE SERVICES</b>											
4.1 Recovery of Negative Reserve Fund	2019	\$ 26,930	\$ -	\$ 26,930	0%	\$ -	\$ 2,693	\$ 24,237	\$ -	\$ 24,237	\$ -
<b>4.2 Buildings &amp; Equipment</b>											
4.2.1 Child Care Centre	2020	\$ 1,790,000	\$ 1,790,000	\$ -	0%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.2.2 Early Program Cost	2019	\$ 40,000	\$ 40,000	\$ -	50%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal Buildings & Equipment		\$ 1,830,000	\$ 1,830,000	\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>TOTAL CHILD CARE SERVICES</b>		<b>\$ 1,856,930</b>	<b>\$ 1,830,000</b>	<b>\$ 26,930</b>		<b>\$ -</b>	<b>\$ 2,693</b>	<b>\$ 24,237</b>	<b>\$ -</b>	<b>\$ 24,237</b>	<b>\$ -</b>

Residential Development Charge Calculation		
Residential Share of 2019 - 2028 DC Eligible Costs	100%	\$24,237
10-Year Growth in Population in New Units		2,791
Unadjusted Development Charge Per Capita		<b>\$8.68</b>
Non-Residential Development Charge Calculation		
Non-Residential Share of 2019 - 2028 DC Eligible Costs	0%	\$0
10-Year Growth in Square Metres		66,323
Unadjusted Development Charge Per Square Metre		<b>\$0.00</b>

2019 - 2028 Net Funding Envelope	\$177,000
Reserve Fund Balance	
Balance as at December 31, 2018	(\$24,237)

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APPENDIX B.4  
TABLE 3

**MUNICIPALITY OF NORTH PERTH  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE  
CHILD CARE SERVICES  
RESIDENTIAL DEVELOPMENT CHARGE  
(in \$000)**

<b>CHILD CARE SERVICES</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>TOTAL</b>
OPENING CASH BALANCE	\$ -	\$ (21.2)	\$ (18.6)	\$ (15.5)	\$ (13.7)	\$ (11.6)	\$ (9.3)	\$ (6.8)	\$ (4.0)	\$ (2.0)	
<b>2019 - 2028 RESIDENTIAL FUNDING REQUIREMENTS</b>											
- Child Care Services: Non Inflated	\$ 24.2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 24.2
- Child Care Services: Inflated	\$ 24.2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 24.2
<b>NEW RESIDENTIAL DEVELOPMENT</b>											
- Population Growth in New Units	357	370	383	249	256	261	266	271	189	189	2,791
<b>REVENUE</b>											
- DC Receipts: Inflated	\$ 3.6	\$ 3.8	\$ 4.0	\$ 2.6	\$ 2.8	\$ 2.9	\$ 3.0	\$ 3.1	\$ 2.2	\$ 2.3	\$ 30.2
<b>INTEREST</b>											
- Interest on Opening Balance	\$ -	\$ (1.2)	\$ (1.0)	\$ (0.9)	\$ (0.8)	\$ (0.6)	\$ (0.5)	\$ (0.4)	\$ (0.2)	\$ (0.1)	\$ (5.7)
- Interest on In-year Transactions	\$ (0.6)	\$ 0.1	\$ 0.1	\$ 0.0	\$ 0.0	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.0	\$ 0.0	\$ (0.1)
<b>TOTAL REVENUE</b>	\$ 3.0	\$ 2.7	\$ 3.0	\$ 1.8	\$ 2.1	\$ 2.3	\$ 2.5	\$ 2.8	\$ 2.0	\$ 2.2	\$ 24.5
CLOSING CASH BALANCE	\$ (21.2)	\$ (18.6)	\$ (15.5)	\$ (13.7)	\$ (11.6)	\$ (9.3)	\$ (6.8)	\$ (4.0)	\$ (2.0)	\$ 0.2	

<b>2019 Adjusted Charge Per Capita</b>	<b>\$10.00</b>
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<b>Allocation of Capital Program</b>	
Residential Sector	100.0%
Non-Residential Sector	0.0%
<b>Rates for 2019</b>	
Inflation Rate:	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

**APPENDIX B.5**

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***ADMINISTRATION SERVICES***

## APPENDIX B.5

### ADMINISTRATION SERVICES

Administration Services in North Perth include development-related studies, which are eligible for DC recovery.

**TABLE 1 2019 – 2028 DEVELOPMENT-RELATED CAPITAL PROGRAM & CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGE**

The Administration Services capital program totals \$464,000 and consists of various studies, including two Development Charges studies, a Zoning By-law, a Community Improvement Plan, Land Use Plans, a Library Feasibility Study, and a Master Growth Plan Update. No grants or subsidies are expected to offset any portion of the projects.

A benefit to existing share of \$35,000 related to the zoning by-law has been removed from the calculation, as well as \$42,900 related to the statutory ten per cent discount. The available Administration Services reserve fund balance of \$199,790 has been applied to the DC eligible costs, resulting in an in-period DC cost eligible for recovery of approximately \$186,300.

The total development-related cost is allocated 75 per cent against new residential development and 25 per cent against non-residential development. This yields an unadjusted development charge of \$50.07 per capita and \$0.70 per square metre.

**TABLE 3 CASH FLOW ANALYSIS**

After cash flow consideration, the residential charge and the non-residential charge remain the same. The following table summarizes the calculation of the Administration Services development charge.

ADMINISTRATION SERVICES SUMMARY					
2019 - 2028		Unadjusted		Adjusted	
Development-Related Capital Program		Development Charge		Development Charge	
Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$464,000	\$186,309	\$50.07	\$0.70	<b>\$50.00</b>	<b>\$0.70</b>

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APPENDIX B.5  
TABLE 1

MUNICIPALITY OF NORTH PERTH  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
ADMINISTRATION SERVICES

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs			Total DC Eligible Costs	DC Eligible Costs		
					BTE (%)	Replacement & BTE Shares	10% Reduction		Available DC Reserves	2019-2028	Post 2028
<b>5.0 ADMINISTRATION SERVICES</b>											
<b>5.1 Studies</b>											
5.1.1 Development Charges Study	2019	\$ 32,000	\$ -	\$ 32,000	0%	\$ -	\$ 3,200	\$ 28,800	\$ 28,800	\$ -	\$ -
5.1.2 Zoning By-law	2020	\$ 70,000	\$ -	\$ 70,000	50%	\$ 35,000	\$ 3,500	\$ 31,500	\$ 31,500	\$ -	\$ -
5.1.3 Community Improvement Plan	2020	\$ 30,000	\$ -	\$ 30,000	0%	\$ -	\$ 3,000	\$ 27,000	\$ 27,000	\$ -	\$ -
5.1.4 Land Use Plans (North East end of Listowel)	2022	\$ 110,000	\$ -	\$ 110,000	0%	\$ -	\$ 11,000	\$ 99,000	\$ 99,000	\$ -	\$ -
5.1.5 Development Charges Study	2024	\$ 32,000	\$ -	\$ 32,000	0%	\$ -	\$ 3,200	\$ 28,800	\$ 13,491	\$ 15,309	\$ -
5.1.6 Library Feasibility Study	2024	\$ 25,000	\$ -	\$ 25,000	0%	\$ -	\$ 2,500	\$ 22,500	\$ -	\$ 22,500	\$ -
5.1.7 Development Standards Manual (Update)	2025	\$ 25,000	\$ -	\$ 25,000	0%	\$ -	\$ 2,500	\$ 22,500	\$ -	\$ 22,500	\$ -
5.1.8 Land Use Plans (North West - Binning Street)	2025	\$ 110,000	\$ -	\$ 110,000	0%	\$ -	\$ 11,000	\$ 99,000	\$ -	\$ 99,000	\$ -
5.1.9 Master Growth Plan Update	2025	\$ 30,000	\$ -	\$ 30,000	0%	\$ -	\$ 3,000	\$ 27,000	\$ -	\$ 27,000	\$ -
<b>Subtotal Studies</b>		<b>\$ 464,000</b>	<b>\$ -</b>	<b>\$ 464,000</b>		<b>\$ 35,000</b>	<b>\$ 42,900</b>	<b>\$ 386,100</b>	<b>\$ 199,791</b>	<b>\$ 186,309</b>	<b>\$ -</b>
<b>TOTAL ADMINISTRATION SERVICES</b>		<b>\$ 464,000</b>	<b>\$ -</b>	<b>\$ 464,000</b>		<b>\$ 35,000</b>	<b>\$ 42,900</b>	<b>\$ 386,100</b>	<b>\$ 199,791</b>	<b>\$ 186,309</b>	<b>\$ -</b>

<b>Residential Development Charge Calculation</b>		
Residential Share of 2019 - 2028 DC Eligible Costs	75%	\$139,732
10-Year Growth in Population in New Units		2,791
Unadjusted Development Charge Per Capita		<b>\$50.07</b>
<b>Non-Residential Development Charge Calculation</b>		
Non-Residential Share of 2019 - 2028 DC Eligible Costs	25%	\$46,577
10-Year Growth in Square Metres		66,323
Unadjusted Development Charge Per Square Metre		<b>\$0.70</b>

Reserve Fund Balance	
Balance as at December 31, 2018	\$199,791

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**APPENDIX B.5**  
**TABLE 2**

**MUNICIPALITY OF NORTH PERTH**  
**CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE**  
**ADMINISTRATION SERVICES**  
**RESIDENTIAL DEVELOPMENT CHARGE**  
**(in \$000)**

<b>ADMINISTRATION SERVICES</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>TOTAL</b>
OPENING CASH BALANCE	\$ -	\$ 18.2	\$ 38.0	\$ 59.6	\$ 75.1	\$ 91.9	\$ 77.7	\$ (33.1)	\$ (19.0)	\$ (8.8)	
<b>2019 - 2028 RESIDENTIAL FUNDING REQUIREMENTS</b>											
- Administration Services: Non Inflated	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 28.4	\$ 111.4	\$ -	\$ -	\$ -	<b>139.7</b>
- Administration Services: Inflated	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 31.3	\$ 125.4	\$ -	\$ -	\$ -	<b>156.7</b>
<b>NEW RESIDENTIAL DEVELOPMENT</b>											
- Population Growth in New Units	357	370	383	249	256	261	266	271	189	189	<b>2,791</b>
<b>REVENUE</b>											
- DC Receipts: Inflated	\$ 17.9	\$ 18.9	\$ 19.9	\$ 13.2	\$ 13.9	\$ 14.4	\$ 15.0	\$ 15.6	\$ 11.1	\$ 11.3	<b>151.0</b>
<b>INTEREST</b>											
- Interest on Opening Balance	\$ -	\$ 0.6	\$ 1.3	\$ 2.1	\$ 2.6	\$ 3.2	\$ 2.7	\$ (1.8)	\$ (1.0)	\$ (0.5)	<b>9.3</b>
- Interest on In-year Transactions	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.2	\$ 0.2	\$ (0.5)	\$ (3.0)	\$ 0.3	\$ 0.2	\$ 0.2	<b>(1.4)</b>
<b>TOTAL REVENUE</b>	\$ 18.2	\$ 19.8	\$ 21.6	\$ 15.5	\$ 16.7	\$ 17.2	\$ 14.7	\$ 14.0	\$ 10.2	\$ 11.0	<b>158.9</b>
CLOSING CASH BALANCE	\$ 18.2	\$ 38.0	\$ 59.6	\$ 75.1	\$ 91.9	\$ 77.7	\$ (33.1)	\$ (19.0)	\$ (8.8)	\$ 2.2	

<b>2019 Adjusted Charge Per Capita</b>	<b>\$50.00</b>
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<b>Allocation of Capital Program</b>	
Residential Sector	75.0%
Non-Residential Sector	25.0%
<b>Rates for 2019</b>	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%



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APPENDIX B.5  
TABLE 2

**MUNICIPALITY OF NORTH PERTH  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE  
ADMINISTRATION SERVICES  
NON-RESIDENTIAL DEVELOPMENT CHARGE  
(in \$000)**

<b>ADMINISTRATION SERVICES</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>TOTAL</b>
OPENING CASH BALANCE	\$ -	\$ 5.5	\$ 11.4	\$ 17.7	\$ 23.0	\$ 28.7	\$ 24.1	\$ (12.8)	\$ (8.1)	\$ (4.1)	
<b>2019 - 2028 NON-RESIDENTIAL FUNDING REQUIREMENTS</b>											
- Administration Services: Non Inflated	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9.5	\$ 37.1	\$ -	\$ -	\$ -	\$ 46.6
- Administration Services: Inflated	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10.4	\$ 41.8	\$ -	\$ -	\$ -	\$ 52.2
<b>NON-RESIDENTIAL SPACE GROWTH</b>											
- Growth in Square Metres	7,709	7,827	7,946	6,268	6,340	6,413	6,487	6,561	5,361	5,411	66,323
<b>REVENUE</b>											
- DC Receipts: Inflated	\$ 5.4	\$ 5.6	\$ 5.8	\$ 4.7	\$ 4.8	\$ 5.0	\$ 5.1	\$ 5.3	\$ 4.4	\$ 4.5	\$ 50.5
<b>INTEREST</b>											
- Interest on Opening Balance	\$ -	\$ 0.2	\$ 0.4	\$ 0.6	\$ 0.8	\$ 1.0	\$ 0.8	\$ (0.7)	\$ (0.4)	\$ (0.2)	\$ 2.5
- Interest on In-year Transactions	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.1	\$ (0.2)	\$ (1.0)	\$ 0.1	\$ 0.1	\$ 0.1	\$ (0.5)
<b>TOTAL REVENUE</b>	\$ 5.5	\$ 5.9	\$ 6.3	\$ 5.4	\$ 5.7	\$ 5.8	\$ 4.9	\$ 4.7	\$ 4.0	\$ 4.4	\$ 52.5
CLOSING CASH BALANCE	\$ 5.5	\$ 11.4	\$ 17.7	\$ 23.0	\$ 28.7	\$ 24.1	\$ (12.8)	\$ (8.1)	\$ (4.1)	\$ 0.3	

**2019 Adjusted Charge Per Square Metre**                      **\$0.70**

<b>Allocation of Capital Program</b>	
Residential Sector	75.0%
Non-Residential Sector	25.0%
<b>Rates for 2019</b>	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

## **APPENDIX C**

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### ***MUNICIPAL-WIDE PROTECTION SERVICES TECHNICAL APPENDIX***

***APPENDIX C******MUNICIPAL-WIDE PROTECTION SERVICES TECHNICAL APPENDIX  
INTRODUCTION AND OVERVIEW***

The following appendix provides the detailed analysis undertaken to establish the development charge rates for protection services in the Municipality of North Perth. This consists of Fire Protection Services and Police Services. Protection Services are not subject to a statutory ten per cent discount.

An in-depth discussion of the calculation methodology and the purpose of each table can be found in the introduction to Appendix B.

## **APPENDIX C.1**

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### ***FIRE PROTECTION SERVICES***

## APPENDIX C.1

### FIRE PROTECTION SERVICES

The North Perth Fire Department is responsible for education, fire prevention, rescue operations, fire suppression, and basic life support services. The fire department is made up of mostly volunteers, and operates out of three stations. Development charges for Fire Protection Services are calculated on a benefiting period of 2019-2028. Fire Protection Services are considered Municipal-wide services for the purposes of calculating the development charge.

#### TABLE 1 2009-2018 HISTORICAL SERVICE LEVELS

The Fire Department operates three stations: Atwood, Listowel, and Monkton. These stations total nearly 25,000 square feet and are valued at \$6.49 million, and sit on 1.27 hectares of land valued at \$1.02 million. The Fire Department has 11 vehicles which include pumpers, tankers, an aerial, a ladder truck and pickups, and these have a replacement cost of \$5.22 million. In addition, equipment and gear add another \$1.49 million to the inventory.

The current replacement value of the Fire Protection Services inventory is \$14.22 million, which provides the Municipality with a ten-year historical average service level of \$635.12 per population and employment.

The calculated maximum allowable funding envelope that can be recovered through development charges over the 2019 to 2028 planning period is \$2.15 million (\$635.12 per population and employment x 3,387 net population and employment growth).

#### TABLE 2 2019 – 2028 DEVELOPMENT-RELATED CAPITAL PROGRAM & CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGE

The Fire Protection Services capital program totals \$2.73 million. Of this total, \$1.3 million is attributed to provision for new fire station space in 2027. A further provision is made for furnishings/equipment for this new space totaling \$200,000. The specific location of the new fire station space will be detailed and outlined following the completion of the Fire Master Plan in 2021. The Department will also require four new vehicles including a pick-up truck, pumper/rescue, command unit and econovan totaling \$925,000. Lastly, a provision for additional equipment and gear, in-vehicle electronics and the Fire Master Plan will cost \$260,000 over the ten-year period.

Lastly, about \$43,800 is related to the recovery of the negative reserve fund balance and this has been included for recovery in the capital program.

No grants are identified in the capital program. A benefit to existing share of \$576,000 has been removed from the calculation, as it relates to the replacement of a pumper/rescue vehicle with a higher capacity vehicle. Fire Protection Services does not require a statutory discount, therefore the resulting DC eligible cost is \$2.15 million. Just under \$1,700 has been attributed to development occurring beyond 2028, which may be recoverable under future by-laws. The net capital costs eligible for recovery in 2019-2028 therefore totals \$2.15 million.

The ten-year development-related net capital cost is allocated 75 per cent against residential development, and 25 per cent against non-residential. The allocation between residential and non-residential development is based on shares of 10-year growth in population in new units and employment growth. The resulting unadjusted development charge is \$578.06 per capita and \$8.11 per square metre.

### TABLE 3 CASH FLOW ANALYSIS

After cash flow consideration, the residential charge decreases slightly to \$557.00 per capita and the non-residential rate decreases to \$7.84 per square metre due to the timing of the capital program and development charges revenues. The following table summarizes the calculation of the Fire Protection Services development charge.

<b>FIRE PROTECTION SERVICES SUMMARY</b>						
10-year Hist. Service Level per pop & emp	2019 - 2028		Unadjusted		Adjusted	
	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$635.12	\$2,728,830	\$2,151,151	\$578.06	\$8.11	<b>\$557.00</b>	<b>\$7.84</b>

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TABLE 1

MUNICIPALITY OF NORTH PERTH  
INVENTORY OF CAPITAL ASSETS  
FIRE PROTECTION SERVICES

BUILDINGS Station Name	# of Square Feet										UNIT COST (\$/sq. ft.)	
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
Listowel Station	3,770	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	\$ 260
Atwood Station	3,120	3,120	3,120	3,120	3,120	3,120	3,120	3,120	3,120	3,120	3,120	\$ 260
Elma-Logan Monkton Station	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600	5,830	\$ 260
Satellite Office at Town Hall	144	144	-	-	-	-	-	-	-	-	-	\$ 180
<b>Total (sq.ft.)</b>	<b>10,634</b>	<b>22,864</b>	<b>22,720</b>	<b>22,720</b>	<b>22,720</b>	<b>22,720</b>	<b>22,720</b>	<b>22,720</b>	<b>22,720</b>	<b>22,720</b>	<b>24,950</b>	
<b>Total (\$000)</b>	<b>\$2,753.3</b>	<b>\$5,933.1</b>	<b>\$5,907.2</b>	<b>\$5,907.2</b>	<b>\$5,907.2</b>	<b>\$5,907.2</b>	<b>\$5,907.2</b>	<b>\$5,907.2</b>	<b>\$5,907.2</b>	<b>\$5,907.2</b>	<b>\$6,487.0</b>	

LAND Station Name	# of Hectares										UNIT COST (\$/ha)	
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
Listowel Station	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	\$800,000
Atwood Station	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	\$800,000
Elma-Logan Monkton Station	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	\$800,000
Satellite Office at Town Hall												
<b>Total (hectares)</b>	<b>1.27</b>	<b>1.27</b>	<b>1.27</b>	<b>1.27</b>	<b>1.27</b>	<b>1.27</b>	<b>1.27</b>	<b>1.27</b>	<b>1.27</b>	<b>1.27</b>	<b>1.27</b>	
<b>Total (\$000)</b>	<b>\$1,016.0</b>	<b>\$1,016.0</b>	<b>\$1,016.0</b>	<b>\$1,016.0</b>	<b>\$1,016.0</b>	<b>\$1,016.0</b>	<b>\$1,016.0</b>	<b>\$1,016.0</b>	<b>\$1,016.0</b>	<b>\$1,016.0</b>	<b>\$1,016.0</b>	

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MUNICIPALITY OF NORTH PERTH  
INVENTORY OF CAPITAL ASSETS  
FIRE PROTECTION SERVICES

VEHICLES Vehicle Type	# of Vehicles										UNIT COST (\$/vehicle)	
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
Pumper (Unit 12)	1	1	1	1	1	1	1	1	1	1	1	\$620,000
Pumper (Unit 22)	1	1	1	1	1	1	1	1	1	1	1	\$620,000
Pumper (Unit 23)	1	1	1	1	1	1	1	1	1	1	1	\$620,000
Tankers (Units 13 & 33)	2	2	2	2	2	2	2	2	2	2	2	\$450,000
Recue Unit (Unit 25)	1	1	1	1	1	1	1	1	1	1	1	\$325,000
Aerial (Unit 14)	1	1	1	1	1	1	1	1	1	1	1	\$285,000
Pumper Tanker (Unit 23)	1	1	1	1	1	1	1	1	1	1	1	\$450,000
1/2 Ton 4x4 Quad Cap Pickup Truck (Unit 10)	1	1	1	1	1	1	1	1	1	1	1	\$52,000
1/2 Ton 4x4 Quad Cap Pickup Truck (Unit 20)	-	-	-	-	1	1	1	1	1	1	1	\$52,000
Platform 100' Ladder Truck	-	-	-	-	-	1	1	1	1	1	1	\$1,300,000
<b>Total (#)</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>11</b>	
<b>Total (\$000)</b>	<b>\$3,872.0</b>	<b>\$3,872.0</b>	<b>\$3,872.0</b>	<b>\$3,872.0</b>	<b>\$3,924.0</b>	<b>\$5,224.0</b>	<b>\$5,224.0</b>	<b>\$5,224.0</b>	<b>\$5,224.0</b>	<b>\$5,224.0</b>	<b>\$5,224.0</b>	



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MUNICIPALITY OF NORTH PERTH  
INVENTORY OF CAPITAL ASSETS  
FIRE PROTECTION SERVICES

EQUIPMENT AND GEAR Description	# of Pieces of Equipment and Gear										UNIT COST (\$/unit)	
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
Equipped Firefighters	65	65	65	65	66	66	66	66	66	68	71	\$ 3,020
Thermal Image Camera	3	3	3	3	3	3	3	3	3	4	4	\$10,090
Air Compressor	1	1	1	1	1	1	1	1	1	1	1	\$28,790
Fill Station	1	1	1	1	1	1	1	1	1	1	1	\$7,120
Portable Generators	8	8	8	8	8	8	8	8	8	9	9	\$3,800
Portable Pumps	10	10	10	10	10	10	10	10	10	8	8	\$4,200
SCBA Packs	61	61	61	61	61	61	61	61	61	61	61	\$6,660
SCBA Cylinders (Composite)	28	28	28	28	28	28	28	28	28	28	123	\$1,200
SCBA Cylinders (Aluminum)	128	128	128	128	128	128	128	128	128	128	144	\$500
Jaws and Cutter	3	3	3	3	3	3	3	3	3	3	3	\$28,000
Hazmat Equipment	1	1	1	1	1	1	1	1	1	1	1	\$840
Air Bags	3	3	3	3	3	3	3	3	3	3	3	\$5,800
Saws	4	4	4	4	6	6	6	6	6	6	6	\$1,360
Large Generator	1	1	1	1	1	1	1	1	1	1	2	\$38,460
Defibrillators	-	-	-	-	3	3	3	3	3	3	3	\$2,200
Opticom System	-	2	2	2	2	2	2	2	2	2	2	\$17,900
Gas Detectors	3	-	-	-	5	5	5	8	8	8	10	\$1,590
38mm Nozzle	13	13	13	13	15	15	15	15	14	14	14	\$900
65mm Nozzle	8	8	8	8	8	8	8	8	6	6	6	\$1,300
WYE	7	7	7	7	8	8	8	8	8	3	3	\$670
Adapler	1	1	1	1	1	1	1	2	3	3	3	\$390
Floating Strainer	3	3	3	3	3	3	3	3	3	3	3	\$550
Foam Eductor	3	3	3	3	3	3	3	3	3	3	3	\$850
Gate Valve	8	8	8	8	8	8	8	8	7	7	7	\$660
Hard Suction Hose Support	2	2	2	2	2	2	2	2	1	1	1	\$160
Intake Valve	6	6	6	7	7	7	8	8	10	10	10	\$2,060
Low Level Strainer	2	3	3	3	3	3	3	3	4	4	4	\$1,050
Flashlight (Unit & Charger)	-	-	1	1	1	6	6	8	8	12	12	\$250
Portable Radios	24	24	30	36	38	38	40	40	42	42	42	\$1,100
38mm Hose	149	149	149	149	149	149	155	155	165	165	165	\$170
65mm Hose	139	139	139	139	139	138	136	129	125	123	123	\$430
100mm Hose	45	45	45	45	45	45	45	45	45	45	45	\$630
Piercing Nozzel	-	-	-	-	-	2	2	2	2	2	2	\$1,140
Porta Tanks	3	3	3	3	3	3	4	4	4	4	4	\$2,300
Pressure Washer	-	-	-	-	-	-	-	2	2	3	3	\$3,450
Snow Blower	-	-	-	-	-	-	1	1	1	1	1	\$1,100
Base radio	3	3	3	3	3	3	3	3	3	3	3	\$3,190
SCBA Charging Station	-	-	-	-	-	-	-	-	-	3	3	\$650
Positive Pressure Fan	-	-	2	2	3	3	4	4	4	4	4	\$1,600
Washing Machine	-	-	-	-	-	-	-	-	1	1	1	\$4,300
<b>Total (#)</b>	<b>736</b>	<b>736</b>	<b>745</b>	<b>752</b>	<b>769</b>	<b>775</b>	<b>785</b>	<b>786</b>	<b>796</b>	<b>914</b>		
<b>Total (\$000)</b>	<b>\$1,197.4</b>	<b>\$1,229.5</b>	<b>\$1,239.1</b>	<b>\$1,248.2</b>	<b>\$1,274.5</b>	<b>\$1,277.9</b>	<b>\$1,287.3</b>	<b>\$1,296.8</b>	<b>\$1,316.1</b>	<b>\$1,491.0</b>		



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TABLE 1

**MUNICIPALITY OF NORTH PERTH  
CALCULATION OF SERVICE LEVELS  
FIRE PROTECTION SERVICES**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Historical Population	12,479	12,539	12,600	12,698	12,797	12,897	12,998	13,100	13,405	13,718
Historical Employment	<u>6,687</u>	<u>6,633</u>	<u>6,580</u>	<u>6,625</u>	<u>6,671</u>	<u>6,717</u>	<u>6,763</u>	<u>6,810</u>	<u>6,911</u>	<u>7,013</u>
Total Historical Population & Employment	19,166	19,172	19,180	19,323	19,468	19,614	19,761	19,910	20,316	20,731

**INVENTORY SUMMARY (\$000)**

Buildings	\$2,753.3	\$5,933.1	\$5,907.2	\$5,907.2	\$5,907.2	\$5,907.2	\$5,907.2	\$5,907.2	\$5,907.2	\$6,487.0
Land	\$1,016.0	\$1,016.0	\$1,016.0	\$1,016.0	\$1,016.0	\$1,016.0	\$1,016.0	\$1,016.0	\$1,016.0	\$1,016.0
Vehicles	\$3,872.0	\$3,872.0	\$3,872.0	\$3,872.0	\$3,924.0	\$5,224.0	\$5,224.0	\$5,224.0	\$5,224.0	\$5,224.0
Equipment And Gear	\$1,197.4	\$1,229.5	\$1,239.5	\$1,248.2	\$1,274.8	\$1,277.9	\$1,287.3	\$1,296.8	\$1,316.1	\$1,491.0
<b>Total (\$000)</b>	<b>\$8,838.7</b>	<b>\$12,050.6</b>	<b>\$12,034.7</b>	<b>\$12,043.4</b>	<b>\$12,122.0</b>	<b>\$13,425.1</b>	<b>\$13,434.5</b>	<b>\$13,444.0</b>	<b>\$13,463.3</b>	<b>\$14,218.0</b>

SERVICE LEVEL (\$/pop. and emp.)											Average Service Level
Buildings	\$143.66	\$309.47	\$307.99	\$305.71	\$303.43	\$301.17	\$298.93	\$296.70	\$290.77	\$312.91	\$287.07
Land	\$53.01	\$52.99	\$52.97	\$52.58	\$52.19	\$51.80	\$51.41	\$51.03	\$50.01	\$49.01	\$51.70
Vehicles	\$202.02	\$201.96	\$201.88	\$200.38	\$201.56	\$266.34	\$264.36	\$262.38	\$257.14	\$251.99	\$231.00
Equipment And Gear	\$62.48	\$64.13	\$64.63	\$64.60	\$65.48	\$65.15	\$65.14	\$65.13	\$64.78	\$71.92	\$65.34
<b>Total (\$/pop and emp)</b>	<b>\$461.17</b>	<b>\$628.55</b>	<b>\$627.46</b>	<b>\$623.27</b>	<b>\$622.66</b>	<b>\$684.46</b>	<b>\$679.85</b>	<b>\$675.24</b>	<b>\$662.69</b>	<b>\$685.83</b>	<b>\$635.12</b>

**MUNICIPALITY OF NORTH PERTH  
CALCULATION OF MAXIMUM ALLOWABLE  
FIRE PROTECTION SERVICES**

10-Year Funding Envelope Calculation	
10 Year Average Service Level 2009 - 2018	\$635.12
Net Population & Employment Growth 2019 - 2028	3,387
Maximum Allowable Funding Envelope	\$2,151,151
<b>Discounted Maximum Allowable Funding Envelope</b>	<b>\$2,151,151</b>

MUNICIPALITY OF NORTH PERTH  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
FIRE PROTECTION SERVICES

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs			Total DC Eligible Costs	DC Eligible Costs		
					BTE (%)	Replacement & BTE Shares	0% Reduction		Available DC Reserves	2019-2028	Post 2028
<b>1.0 FIRE PROTECTION SERVICES</b>											
1.1 Recovery of Negative Reserve Fund Balance	2019	\$ 43,830	\$ -	\$ 43,830	0%	\$ -	\$ -	\$ 43,830	\$ -	\$ 43,830	\$ -
<b>1.2 Buildings, Land &amp; Furnishings</b>											
1.2.1 Provision for new Space (Location TBD)	2027	\$ 1,300,000	\$ -	\$ 1,300,000	0%	\$ -	\$ -	\$ 1,300,000	\$ -	\$ 1,300,000	\$ -
1.2.2 Provision for Furnishings/equipment at new station	2027	\$ 200,000	\$ -	\$ 200,000	0%	\$ -	\$ -	\$ 200,000	\$ -	\$ 200,000	\$ -
<b>Subtotal Buildings, Land &amp; Furnishings</b>		<b>\$ 1,500,000</b>	<b>\$ -</b>	<b>\$ 1,500,000</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ 1,500,000</b>	<b>\$ -</b>	<b>\$ 1,500,000</b>	<b>\$ -</b>
<b>1.3 Vehicles</b>											
1.3.1 Pick-Up Truck	2023	\$ 65,000	\$ -	\$ 65,000	0%	\$ -	\$ -	\$ 65,000	\$ -	\$ 65,000	\$ -
1.3.2 Pumper/Rescue Vehicle	2024	\$ 720,000	\$ -	\$ 720,000	80%	\$ 576,000	\$ -	\$ 144,000	\$ -	\$ 144,000	\$ -
1.3.3 Command Unit	2025	\$ 65,000	\$ -	\$ 65,000	0%	\$ -	\$ -	\$ 65,000	\$ -	\$ 65,000	\$ -
1.3.4 Econovan	2027	\$ 75,000	\$ -	\$ 75,000	0%	\$ -	\$ -	\$ 75,000	\$ -	\$ 75,000	\$ -
<b>Subtotal Vehicles</b>		<b>\$ 925,000</b>	<b>\$ -</b>	<b>\$ 925,000</b>		<b>\$ 576,000</b>	<b>\$ -</b>	<b>\$ 349,000</b>	<b>\$ -</b>	<b>\$ 349,000</b>	<b>\$ -</b>
<b>1.4 Fire Equipment and Studies</b>											
1.4.1 In-Vehicle Electronics	Various	\$ 40,000	\$ -	\$ 40,000	0%	\$ -	\$ -	\$ 40,000	\$ -	\$ 40,000	\$ -
1.4.2 Provision for additional equipment and gear	Various	\$ 150,000	\$ -	\$ 150,000	0%	\$ -	\$ -	\$ 150,000	\$ -	\$ 148,321	\$ 1,679
1.4.3 Fire Master Plan	2021	\$ 70,000	\$ -	\$ 70,000	0%	\$ -	\$ -	\$ 70,000	\$ -	\$ 70,000	\$ -
<b>Subtotal Fire Equipment and Studies</b>		<b>\$ 260,000</b>	<b>\$ -</b>	<b>\$ 260,000</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ 260,000</b>	<b>\$ -</b>	<b>\$ 258,321</b>	<b>\$ 1,679</b>
<b>TOTAL FIRE PROTECTION SERVICES</b>		<b>\$ 2,728,830</b>	<b>\$ -</b>	<b>\$ 2,728,830</b>		<b>\$ 576,000</b>	<b>\$ -</b>	<b>\$ 2,152,830</b>	<b>\$ -</b>	<b>\$ 2,151,151</b>	<b>\$ 1,679</b>

Residential Development Charge Calculation		
Residential Share of 2019 - 2028 DC Eligible Costs	75%	\$1,613,364
10-Year Growth in Population in New Units		2,791
Unadjusted Development Charge Per Capita		<b>\$578.06</b>
Non-Residential Development Charge Calculation		
Non-Residential Share of 2019 - 2028 DC Eligible Costs	25%	\$537,788
10-Year Growth in Square Metres		66,323
Unadjusted Development Charge Per Square Metre		<b>\$8.11</b>

2019 - 2028 Net Funding Envelope	\$2,151,151
Reserve Fund Balance	
Balance as at December 31, 2018	(\$43,830)

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MUNICIPALITY OF NORTH PERTH  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE  
FIRE PROTECTION SERVICES  
RESIDENTIAL DEVELOPMENT CHARGE  
(in \$000)

FIRE PROTECTION SERVICES	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL
OPENING CASH BALANCE	\$ -	\$ 154.5	\$ 359.1	\$ 527.0	\$ 680.0	\$ 791.6	\$ 845.4	\$ 972.7	\$ 1,166.7	\$ (104.8)	
2019 - 2028 RESIDENTIAL FUNDING REQUIREMENTS											
- Fire Protection Services: Non Inflated	\$ 47.0	\$ 14.1	\$ 66.6	\$ 14.1	\$ 62.9	\$ 122.1	\$ 62.9	\$ 14.1	\$ 1,195.4	\$ 14.1	\$ 1,613.4
- Fire Protection Services: Inflated	\$ 47.0	\$ 14.4	\$ 69.3	\$ 15.0	\$ 68.1	\$ 134.8	\$ 70.8	\$ 16.2	\$ 1,400.6	\$ 16.9	\$ 1,853.1
NEW RESIDENTIAL DEVELOPMENT											
- Population Growth in New Units	357	370	383	249	256	261	266	271	189	189	2,791
REVENUE											
- DC Receipts: Inflated	\$ 198.8	\$ 210.2	\$ 221.9	\$ 147.2	\$ 154.3	\$ 160.5	\$ 166.9	\$ 173.4	\$ 123.3	\$ 125.8	\$ 1,682.4
INTEREST											
- Interest on Opening Balance	\$ -	\$ 5.4	\$ 12.6	\$ 18.4	\$ 23.8	\$ 27.7	\$ 29.6	\$ 34.0	\$ 40.8	\$ (5.8)	\$ 186.6
- Interest on In-year Transactions	\$ 2.7	\$ 3.4	\$ 2.7	\$ 2.3	\$ 1.5	\$ 0.4	\$ 1.7	\$ 2.8	\$ (35.1)	\$ 1.9	\$ (15.8)
TOTAL REVENUE	\$ 201.5	\$ 219.0	\$ 237.2	\$ 167.9	\$ 179.7	\$ 188.7	\$ 198.1	\$ 210.2	\$ 129.1	\$ 122.0	\$ 1,853.3
CLOSING CASH BALANCE	\$ 154.5	\$ 359.1	\$ 527.0	\$ 680.0	\$ 791.6	\$ 845.4	\$ 972.7	\$ 1,166.7	\$ (104.8)	\$ 0.2	

2019 Adjusted Charge Per Capita \$557.00

<b>Allocation of Capital Program</b>	
Residential Sector	75.0%
Non-Residential Sector	25.0%
<b>Rates for 2019</b>	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

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**MUNICIPALITY OF NORTH PERTH  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE  
FIRE PROTECTION SERVICES  
NON-RESIDENTIAL DEVELOPMENT CHARGE  
(in \$000)**

<b>FIRE PROTECTION SERVICES</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>TOTAL</b>
OPENING CASH BALANCE	\$ -	\$ 45.6	\$ 106.0	\$ 152.1	\$ 205.4	\$ 244.2	\$ 263.5	\$ 307.0	\$ 372.4	\$ (43.7)	
<b>2019 - 2028 NON-RESIDENTIAL FUNDING REQUIREMENTS</b>											
- Fire Protection Services: Non Inflated	\$ 15.7	\$ 4.7	\$ 22.2	\$ 4.7	\$ 21.0	\$ 40.7	\$ 21.0	\$ 4.7	\$ 398.5	\$ 4.7	\$ 537.8
- Fire Protection Services: Inflated	\$ 15.7	\$ 4.8	\$ 23.1	\$ 5.0	\$ 22.7	\$ 44.9	\$ 23.6	\$ 5.4	\$ 466.9	\$ 5.6	\$ 617.7
<b>NEW NON-RESIDENTIAL DEVELOPMENT</b>											
- Growth in Square Metres	7,709	7,827	7,946	6,268	6,340	6,413	6,487	6,561	5,361	5,411	66,323
<b>REVENUE</b>											
- DC Receipts: Inflated	\$ 60.4	\$ 62.6	\$ 64.8	\$ 52.2	\$ 53.8	\$ 55.5	\$ 57.3	\$ 59.1	\$ 49.2	\$ 50.7	\$ 565.6
<b>INTEREST</b>											
- Interest on Opening Balance	\$ -	\$ 1.6	\$ 3.7	\$ 5.3	\$ 7.2	\$ 8.5	\$ 9.2	\$ 10.7	\$ 13.0	\$ (2.4)	\$ 57.0
- Interest on In-year Transactions	\$ 0.8	\$ 1.0	\$ 0.7	\$ 0.8	\$ 0.5	\$ 0.2	\$ 0.6	\$ 0.9	\$ (11.5)	\$ 0.8	\$ (5.1)
<b>TOTAL REVENUE</b>	\$ 61.2	\$ 65.2	\$ 69.2	\$ 58.3	\$ 61.5	\$ 64.2	\$ 67.1	\$ 70.8	\$ 50.8	\$ 49.1	\$ 617.5
CLOSING CASH BALANCE	\$ 45.6	\$ 106.0	\$ 152.1	\$ 205.4	\$ 244.2	\$ 263.5	\$ 307.0	\$ 372.4	\$ (43.7)	\$ (0.2)	

**2019 Adjusted Charge Per Square Metre**                      **\$7.84**

<b>Allocation of Capital Program</b>	
Residential Sector	75.0%
Non-Residential Sector	25.0%
<b>Rates for 2019</b>	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

**APPENDIX C.2**

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***POLICE SERVICES***

## APPENDIX C.2

### POLICE SERVICES

Policing for the Municipality of North Perth is provided by the Ontario Provincial Police. The North Perth detachment headquarters office is found on Wallace Avenue in Listowel. Development charges for Police Services is calculated on a ten-year benefitting period from 2019 to 2028. The benefits of Police Services are considered Municipal-wide for the purposes of calculating the development charge.

#### TABLE 1 2009-2018 HISTORICAL SERVICE LEVELS

The ten-year historical inventory of capital assets for the Police Department includes the 4,960 square foot police station valued at \$892,800. This provides a ten-year average historical service level of \$43.61 per population and employment. This average historical service level multiplied by the 10-year forecast growth in population and employment, results in a maximum allowable funding envelope of \$147,707 (\$43.61 per population and employment x 3,387 net population and employment growth).

#### TABLE 2 2019 – 2028 DEVELOPMENT-RELATED CAPITAL PROGRAM & CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGE

The Police Services capital program consists of the recovery of a negative reserve fund balance totalling \$81,680. No grants or benefit to existing shares are identified. The entirety of the sum will be eligible for DC recovery between 2019 and 2028.

The total development-related cost is allocated 75 per cent against new residential development and 25 per cent against non-residential development. This yields an unadjusted development charge of \$21.95 per capita and \$0.31 per square metre.

#### TABLE 3 CASH FLOW ANALYSIS

After cash flow consideration, the residential charge increases to \$26.00 per capita and the non-residential charge increases to \$0.36 per square metre.

The following table summarizes the calculation of the Police Services development charge.

<b>POLICE SERVICES SUMMARY</b>						
10-year Hist.	2019 - 2028		Unadjusted		Adjusted	
Service Level	Development-Related Capital Program		Development Charge		Development Charge	
per pop & emp	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$43.61	\$81,682	\$81,682	\$21.95	\$0.31	<b>\$26.00</b>	<b>\$0.36</b>



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 TABLE 1

MUNICIPALITY OF NORTH PERTH  
 INVENTORY OF CAPITAL ASSETS  
 POLICE SERVICES

BUILDINGS	# of Square Feet										2018	
	Station Name	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	UNIT COST (\$/sq. ft.)
North Perth Detachment	4,313	4,313	4,313	4,960	4,960	4,960	4,960	4,960	4,960	4,960	4,960	\$ 180
<b>Total (sq.ft.)</b>	<b>4,313</b>	<b>4,313</b>	<b>4,313</b>	<b>4,960</b>	<b>4,960</b>	<b>4,960</b>	<b>4,960</b>	<b>4,960</b>	<b>4,960</b>	<b>4,960</b>	<b>4,960</b>	
<b>Total (\$000)</b>	<b>\$776.3</b>	<b>\$776.3</b>	<b>\$776.3</b>	<b>\$892.8</b>	<b>\$892.8</b>	<b>\$892.8</b>	<b>\$892.8</b>	<b>\$892.8</b>	<b>\$892.8</b>	<b>\$892.8</b>	<b>\$892.8</b>	

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TABLE 1

**MUNICIPALITY OF NORTH PERTH  
CALCULATION OF SERVICE LEVELS  
POLICE SERVICES**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Historical Population	12,479	12,539	12,600	12,698	12,797	12,897	12,998	13,100	13,405	13,718
Historical Employment	<u>6,687</u>	<u>6,633</u>	<u>6,580</u>	<u>6,625</u>	<u>6,671</u>	<u>6,717</u>	<u>6,763</u>	<u>6,810</u>	<u>6,911</u>	<u>7,013</u>
Total Historical Population & Employment	19,166	19,172	19,180	19,323	19,468	19,614	19,761	19,910	20,316	20,731

**INVENTORY SUMMARY (\$000)**

Buildings	\$776.3	\$776.3	\$776.3	\$892.8	\$892.8	\$892.8	\$892.8	\$892.8	\$892.8	\$892.80
<b>Total (\$000)</b>	<b>\$776.3</b>	<b>\$776.3</b>	<b>\$776.3</b>	<b>\$892.8</b>	<b>\$892.8</b>	<b>\$892.8</b>	<b>\$892.8</b>	<b>\$892.8</b>	<b>\$892.8</b>	<b>\$892.8</b>

**SERVICE LEVEL (\$/pop. and emp.)**

												Average Service Level
Buildings	\$ 40.51	\$ 40.49	\$ 40.48	\$ 46.20	\$ 45.86	\$ 45.52	\$ 45.18	\$ 44.84	\$ 43.95	\$ 43.07		\$43.61
<b>Total (\$/pop and emp)</b>	<b>\$ 40.51</b>	<b>\$ 40.49</b>	<b>\$ 40.48</b>	<b>\$ 46.20</b>	<b>\$ 45.86</b>	<b>\$ 45.52</b>	<b>\$ 45.18</b>	<b>\$ 44.84</b>	<b>\$ 43.95</b>	<b>\$ 43.07</b>		<b>\$43.61</b>

**MUNICIPALITY OF NORTH PERTH  
CALCULATION OF MAXIMUM ALLOWABLE  
POLICE SERVICES**

<b>10-Year Funding Envelope Calculation</b>	
10 Year Average Service Level 2009 - 2018	\$43.61
Net Population & Employment Growth 2019 - 2028	3,387
Maximum Allowable Funding Envelope	\$147,707
<b>Discounted Maximum Allowable Funding Envelope</b>	<b>\$147,707</b>

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TABLE 2

MUNICIPALITY OF NORTH PERTH  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
POLICE SERVICES

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs			Total DC Eligible Costs	DC Eligible Costs		
					BTE (%)	Replacement & BTE Shares	0% Reduction		Available DC Reserves	2019-2028	Post 2028
<b>2.0 POLICE SERVICES</b>											
<b>2.1 Recovery of Negative Reserve Fund Balance</b>											
2.1.1 Recovery of Negative Reserve Fund Balance	2019	\$ 81,682	\$ -	\$ 81,682	0%	\$ -	\$ -	\$ 81,682	\$ -	\$ 81,682	\$ -
Subtotal Recovery of Negative Reserve Fund Balance		\$ 81,682	\$ -	\$ 81,682		\$ -	\$ -	\$ 81,682	\$ -	\$ 81,682	\$ -
<b>TOTAL POLICE SERVICES</b>		<b>\$ 81,682</b>	<b>\$ -</b>	<b>\$ 81,682</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ 81,682</b>	<b>\$ -</b>	<b>\$ 81,682</b>	<b>\$ -</b>

Residential Development Charge Calculation		
Residential Share of 2019 - 2028 DC Eligible Costs	75%	\$61,261
10-Year Growth in Population in New Units		2,791
Unadjusted Development Charge Per Capita		<b>\$21.95</b>
Non-Residential Development Charge Calculation		
Non-Residential Share of 2019 - 2028 DC Eligible Costs	25%	\$20,420
10-Year Growth in Square Metres		66,323
Unadjusted Development Charge Per Square Metre		<b>\$0.31</b>

2019 - 2028 Net Funding Envelope	\$177,000
Reserve Fund Balance	
Balance as at December 31, 2018	(\$81,682)

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TABLE 3

**MUNICIPALITY OF NORTH PERTH**  
**CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE**  
**POLICE SERVICES**  
**RESIDENTIAL DEVELOPMENT CHARGE**  
**(in \$000)**

<b>POLICE SERVICES</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>TOTAL</b>
OPENING CASH BALANCE	\$ -	\$ (53.4)	\$ (46.4)	\$ (38.3)	\$ (33.4)	\$ (27.9)	\$ (21.8)	\$ (15.1)	\$ (7.7)	\$ (2.2)	
<b>2019 - 2028 RESIDENTIAL FUNDING REQUIREMENTS</b>											
- Police Services: Non Inflated	\$ 61.3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 61.3
- Police Services: Inflated	\$ 61.3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 61.3
<b>NEW RESIDENTIAL DEVELOPMENT</b>											
- Population Growth in New Units	357	370	383	249	256	261	266	271	189	189	2,791
<b>REVENUE</b>											
- DC Receipts: Inflated	\$ 9.3	\$ 9.8	\$ 10.4	\$ 6.9	\$ 7.2	\$ 7.5	\$ 7.8	\$ 8.1	\$ 5.8	\$ 5.9	\$ 78.7
<b>INTEREST</b>											
- Interest on Opening Balance	\$ -	\$ (2.9)	\$ (2.5)	\$ (2.1)	\$ (1.8)	\$ (1.5)	\$ (1.2)	\$ (0.8)	\$ (0.4)	\$ (0.1)	\$ (13.5)
- Interest on In-year Transactions	\$ (1.4)	\$ 0.2	\$ 0.2	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.1	\$ (0.2)
<b>TOTAL REVENUE</b>	\$ 7.9	\$ 7.0	\$ 8.0	\$ 4.9	\$ 5.5	\$ 6.1	\$ 6.7	\$ 7.4	\$ 5.5	\$ 5.9	\$ 64.9
CLOSING CASH BALANCE	\$ (53.4)	\$ (46.4)	\$ (38.3)	\$ (33.4)	\$ (27.9)	\$ (21.8)	\$ (15.1)	\$ (7.7)	\$ (2.2)	\$ 3.7	

**2019 Adjusted Charge Per Capita** **\$26.00**

<b>Allocation of Capital Program</b>	
Residential Sector	75.0%
Non-Residential Sector	25.0%
<b>Rates for 2019</b>	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

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TABLE 3

MUNICIPALITY OF NORTH PERTH  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE  
POLICE SERVICES  
NON-RESIDENTIAL DEVELOPMENT CHARGE  
(in \$000)

POLICE SERVICES	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL
OPENING CASH BALANCE	\$ -	\$ (18.1)	\$ (16.2)	\$ (14.0)	\$ (12.3)	\$ (10.4)	\$ (8.5)	\$ (6.3)	\$ (3.9)	\$ (1.8)	
2019 - 2028 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Police Services: Non Inflated	\$ 20.4	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 20.4
- Police Services: Inflated	\$ 20.4	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 20.4
NON-RESIDENTIAL SPACE GROWTH											
- Growth in Square Metres	7,709	7,827	7,946	6,268	6,340	6,413	6,487	6,561	5,361	5,411	66,323
REVENUE											
- DC Receipts: Inflated	\$ 2.8	\$ 2.9	\$ 3.0	\$ 2.4	\$ 2.5	\$ 2.5	\$ 2.6	\$ 2.7	\$ 2.3	\$ 2.3	\$ 26.0
INTEREST											
- Interest on Opening Balance	\$ -	\$ (1.0)	\$ (0.9)	\$ (0.8)	\$ (0.7)	\$ (0.6)	\$ (0.5)	\$ (0.3)	\$ (0.2)	\$ (0.1)	\$ (5.0)
- Interest on In-year Transactions	\$ (0.5)	\$ 0.1	\$ 0.1	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ (0.1)
TOTAL REVENUE	\$ 2.3	\$ 2.0	\$ 2.2	\$ 1.7	\$ 1.9	\$ 2.0	\$ 2.2	\$ 2.4	\$ 2.1	\$ 2.2	\$ 20.9
CLOSING CASH BALANCE	\$ (18.1)	\$ (16.2)	\$ (14.0)	\$ (12.3)	\$ (10.4)	\$ (8.5)	\$ (6.3)	\$ (3.9)	\$ (1.8)	\$ 0.5	

2019 Adjusted Charge Per Square Metre \$0.36

<b>Allocation of Capital Program</b>	
Residential Sector	75.0%
Non-Residential Sector	25.0%
<b>Rates for 2019</b>	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

## **APPENDIX D**

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### ***MUNICIPAL-WIDE SERVICES RELATED TO A HIGHWAY TECHNICAL APPENDIX***

**APPENDIX D****MUNICIPAL-WIDE SERVICES RELATED TO A HIGHWAY TECHNICAL APPENDIX  
INTRODUCTION AND OVERVIEW**

This appendix provides a brief outline of the services related to a highway that are included in the development charges calculation, which are Roads & Related and Public Works. The following tables set out the capital program and the calculation of the development charge for these services. The cost, quantum and description of the projects included in the forecast are based upon servicing plans from the Municipality's engineering staff. This appendix includes all engineering projects that will meet the servicing demands within the Municipality.

The Roads & Related infrastructure projects are required to service the demands of population and employment growth from 2019 to 2041, while the Public Works projects are based on a ten-year forecast period from 2019 to 2028.

**APPENDIX D.1**

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***ROADS & RELATED***



## APPENDIX D.1

### ROADS AND RELATED

#### TABLE 1 2009-2018 HISTORICAL SERVICE LEVELS

The Roads & Related inventory includes five kilometers of urban arterial roads, as well as 441 kilometers of collector roads. The total replacement value of this infrastructure is \$276.80 million. This produces a ten-year historical service level of \$14,042.63 per population and employment. The resulting maximum allowable funding envelope is \$47.56 million.

#### TABLE 2 2019 – 2041 DEVELOPMENT-RELATED CAPITAL PROGRAM

Table 2 provides a summary of the development-related capital program for Roads and Related services. The gross Roads and Related capital program totals \$37.00 million. This includes the recovery of a \$819,770 negative reserve fund balance, a \$13.80 million rural paving program and a \$8.63 million urban paving program. Other roads projects include the Line 84 Expansion and two Transportation Master Plans.

One offsetting grant and contributions is expected: \$999,600 for the Line 84 Expansion project (Road 158 to 147 segment). This brings the net municipal cost down to \$36.00 million. Approximately, another \$23.93 million is removed from the calculation due to benefit to existing and replacement shares. The rural and urban paving programs have large replacement shares of 90 per cent, roadway expansion projects have a benefit to existing share of 20 per cent, and several other projects have replacement shares ranging from 50 to 75 per cent. The resulting total DC eligible cost is \$12.08 million.

The portion of projects expected to benefit development beyond 2041 have been removed from the calculation. These costs, which total \$2.57 million, may be recoverable under future DC by-laws. The remaining \$9.51 million are the DC costs eligible for recovery between 2019 and 2041.

#### TABLE 3 CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGES

Tables 3 displays the DC recoverable costs apportioned to the residential and non-residential sectors: 72 per cent to residential and 28 per cent to the non-residential, based on shares of anticipated shares of population and employment growth to 2041.

The residential sector's share of \$6.85 million in development-related net capital costs yields an "unadjusted" development charge of \$1,686.16 per capita. The non-residential sector's share of \$2.66 million in development-related net capital costs results in an unadjusted charge of \$24.19 per square metre of GFA for the non-residential sector.

**TABLE 4 CASH FLOW ANALYSIS**

After cash flow and reserve fund analysis, the residential and non-residential calculated charges both increase to \$1,843.00 per capita and \$27.40 per square metre, respectively. This is a reflection of the timing of the capital program and development charges revenues.

The following table summarizes the calculation of the Roads and Related development charge:

<b>ROADS &amp; RELATED SUMMARY</b>						
2019 - 2041		Unadjusted		Adjusted		
Development-Related Capital Program		Development Charge		Development Charge		
Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m	
\$ 37,002,282	\$9,510,439	\$1,686.16	\$24.19	\$1,843.00	\$27.40	

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TABLE 1

MUNICIPALITY OF NORTH PERTH  
INVENTORY OF CAPITAL ASSETS  
ROADS & RELATED

ROADS Road Type	# of Kilometers										UNIT COST (\$/km)	
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
<b>Arterial Roads</b>												
Rural Paved	20	20	20	20	20							\$1,200,000
Urban	10	10	10	10	10	5	5	5	5	5		\$1,200,000
<b>Collector Roads</b>												
Urban	48	48	48	50	50	59	59	59	59	59	59	\$1,200,000
Rural Paved	93	93	93	93	93	110	110	110	110	110	110	\$1,200,000
Rural Gravel	276	276	276	276	276	272	272	272	272	272	272	\$250,000
<b>Total (km)</b>	<b>447</b>	<b>447</b>	<b>447</b>	<b>449</b>	<b>449</b>	<b>446</b>	<b>446</b>	<b>446</b>	<b>446</b>	<b>446</b>	<b>446</b>	
<b>Total (\$000)</b>	<b>\$274,200.0</b>	<b>\$274,200.0</b>	<b>\$274,200.0</b>	<b>\$276,600.0</b>	<b>\$276,600.0</b>	<b>\$276,800.0</b>	<b>\$276,800.0</b>	<b>\$276,800.0</b>	<b>\$276,800.0</b>	<b>\$276,800.0</b>	<b>\$276,800.0</b>	

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TABLE 1

**MUNICIPALITY OF NORTH PERTH  
CALCULATION OF SERVICE LEVELS  
ROADS & RELATED**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Historical Population	12,479	12,539	12,600	12,698	12,797	12,897	12,998	13,100	13,405	13,718
Historical Employment	6,687	6,633	6,580	6,625	6,671	6,717	6,763	6,810	6,911	7,013
Total Historical Population & Employment	19,166	19,172	19,180	19,323	19,468	19,614	19,761	19,910	20,316	20,731

**INVENTORY SUMMARY (\$000)**

Roads	\$274,200.0	\$274,200.0	\$274,200.0	\$276,600.0	\$276,600.0	\$276,800.0	\$276,800.0	\$276,800.0	\$276,800.0	\$276,800.0
<b>Total (\$000)</b>	<b>\$274,200.0</b>	<b>\$274,200.0</b>	<b>\$274,200.0</b>	<b>\$276,600.0</b>	<b>\$276,600.0</b>	<b>\$276,800.0</b>	<b>\$276,800.0</b>	<b>\$276,800.0</b>	<b>\$276,800.0</b>	<b>\$276,800.0</b>

**SERVICE LEVEL (\$/pop. and emp.)**

											Average Service Level
Roads	\$14,306.58	\$14,302.11	\$14,296.14	\$14,314.55	\$14,207.93	\$14,112.37	\$14,007.39	\$13,902.56	\$13,624.73	\$13,351.98	\$14,042.63
<b>Total (\$/pop and emp)</b>	<b>\$14,306.58</b>	<b>\$14,302.11</b>	<b>\$14,296.14</b>	<b>\$14,314.55</b>	<b>\$14,207.93</b>	<b>\$14,112.37</b>	<b>\$14,007.39</b>	<b>\$13,902.56</b>	<b>\$13,624.73</b>	<b>\$13,351.98</b>	<b>\$14,042.63</b>

**MUNICIPALITY OF NORTH PERTH  
CALCULATION OF MAXIMUM ALLOWABLE  
ROADS & RELATED**

<b>10-Year Funding Envelope Calculation</b>	
10 Year Average Service Level 2009 - 2018	\$14,042.63
Net Population & Employment Growth 2019 - 2028	3,387
Maximum Allowable Funding Envelope	\$47,562,388
<b>Discounted Maximum Allowable Funding Envelope</b>	<b>\$47,562,388</b>

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TABLE 2

MUNICIPALITY OF NORTH PERTH  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
ROADS & RELATED

NO.	Infrastructure Requirement	Timing	Estimated Project Costs									
			Gross Cost	Other Contributions	Net Municipal Cost	Benefit to Existing Share	Total DC Eligible Cost	Available DC Reserves	Net Growth-Related	Post Period %	Post Period Allocation <sup>1</sup>	
<b>Municipal-Wide Roads Projects</b>												
1	Recovery of Negative Reserve Fund Balance	2019 - 2019	\$ 819,768	\$ -	\$ 819,768	0%	\$ -	\$ 819,768		\$ 819,768		\$ -
2	Rural Paving Program - Replacement and Upgrades	2019 - 2041	\$ 13,800,000	\$ -	\$ 13,800,000	90%	\$ 12,420,000	\$ 1,380,000		\$ 1,380,000		\$ -
3	Urban Paving Program	2019 - 2041	\$ 8,625,000	\$ -	\$ 8,625,000	90%	\$ 7,762,500	\$ 862,500		\$ 862,500		\$ -
4	Recovery for Roundabout at Mitchell Road S and Perth Line 86	2019 - 2019	\$ 1,927,514	\$ -	\$ 1,927,514	20%	\$ 385,503	\$ 1,542,011		\$ 1,542,011		\$ -
5	Provision for new Sidewalks	2019 - 2041	\$ 460,000	\$ -	\$ 460,000	0%	\$ -	\$ 460,000		\$ 460,000		\$ -
6	Line 84 Expansion - Urban Paving Bypass Plan	2020 - 2021	\$ 2,600,000	\$ -	\$ 2,600,000	20%	\$ 520,000	\$ 2,080,000		\$ 1,040,000	50%	\$ 1,040,000
7	Line 84 Expansion - Road 158 to 147	2020 - 2021	\$ 1,200,000	\$ 999,600	\$ 200,400	20%	\$ 40,080	\$ 160,320		\$ 80,160	50%	\$ 80,160
8	Road 157 Expansion - Urban Paving Bypass Plan - Line 87 to 86	2023 - 2024	\$ 1,000,000	\$ -	\$ 1,000,000	20%	\$ 200,000	\$ 800,000		\$ 400,000	50%	\$ 400,000
9	Line 87 from 165 to wallace avenue - Urban Paving Bypass Plan	2021 - 2022	\$ 1,600,000	\$ -	\$ 1,600,000	20%	\$ 320,000	\$ 1,280,000		\$ 640,000	50%	\$ 640,000
10	Road 165 Widening - Urban Paving Bypass Plan	2021 - 2021	\$ 265,000	\$ -	\$ 265,000	20%	\$ 53,000	\$ 212,000		\$ 106,000	50%	\$ 106,000
11	Line 87 from wallace avenue to Road 157 - Urban Paving Bypass Plan	2022 - 2023	\$ 750,000	\$ -	\$ 750,000	20%	\$ 150,000	\$ 600,000		\$ 300,000	50%	\$ 300,000
12	Traffic Calming Measures (wallace avenue south and tremain)	2021 - 2023	\$ 250,000	\$ -	\$ 250,000	50%	\$ 125,000	\$ 125,000		\$ 125,000		\$ -
13	Pedestrian Walkways	2019 - 2021	\$ 375,000		\$ 375,000	50%	\$ 187,500	\$ 187,500		\$ 187,500		\$ -
14	Davidson Street Bridge (Sidewalk widening and safety updates)	2020 - 2025	\$ 1,600,000		\$ 1,600,000	75%	\$ 1,200,000	\$ 400,000		\$ 400,000		\$ -
15	Urban Paving Bypass Plan - Land Acquisition	2019 - 2021	\$ 405,000		\$ 405,000	0%	\$ -	\$ 405,000		\$ 405,000		\$ -
16	Kincaide Traffic Signals	2019 - 2019	\$ 375,000		\$ 375,000	50%	\$ 187,500	\$ 187,500		\$ 187,500		\$ -
17	Provision for new Traffic Signals	2019 - 2035	\$ 750,000		\$ 750,000	50%	\$ 375,000	\$ 375,000		\$ 375,000		\$ -
18	Transportation Master Plan (2 studies)	2019 - 2041	\$ 200,000		\$ 200,000	0%	\$ -	\$ 200,000		\$ 200,000		\$ -
<b>Subtotal Municipal-Wide Roads Projects</b>			<b>\$ 37,002,282</b>	<b>\$ 999,600</b>	<b>\$ 36,002,682</b>		<b>\$ 23,926,083</b>	<b>\$ 12,076,599</b>	<b>\$ -</b>	<b>\$ 9,510,439</b>		<b>\$ 2,566,160</b>

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 TABLE 3

MUNICIPALITY OF NORTH PERTH  
 SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES  
 ROADS AND RELATED 2019-2041

23-Year Growth in Population in New Units	4,061
Employment Growth	1,417
23-Year Growth in Square Meters	110,099

	Growth-Related Capital Forecast						Residential Share		Non-Residential Share	
	Gross Project Cost (\$000)	Grants and Subsidies (\$000)	Benefit to Existing Share (\$000)	Available DC Reserves (\$000)	Post Period Allocation (\$000)	Total Net Capital Costs After Discount (\$000)	%	\$000	%	\$000
	<b>ROADS AND RELATED 2019-2041</b>									
Municipal-Wide Roads Projects	\$37,002.28	\$999.60	\$23,926.08	\$0.00	\$2,566.16	\$9,510.44	72%	\$6,847.52	28%	\$2,662.92
<b>TOTAL ROADS AND RELATED 2019-2041</b>	<b>\$37,002.28</b>	<b>\$999.60</b>	<b>\$23,926.08</b>	<b>\$0.00</b>	<b>\$2,566.16</b>	<b>\$9,510.44</b>		<b>\$6,847.52</b>		<b>\$2,662.92</b>
Unadjusted Development Charge Per Capita (\$)								<b>\$1,686.16</b>		
Unadjusted Development Charge Per Sq. M. (\$)										<b>\$24.19</b>

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TABLE 4

MUNICIPALITY OF NORTH PERTH  
ROADS AND RELATED 2019-2041  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE

ROADS: RESIDENTIAL	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
OPENING CASH BALANCE (\$000)	\$ -	\$ (1,465.7)	\$ (1,565.5)	\$ (2,005.5)	\$ (2,185.8)	\$ (2,267.4)	\$ (2,187.3)	\$ (1,923.2)	\$ (1,570.0)	\$ (1,368.3)	\$ (1,149.8)	\$ (902.0)
2019 to 2041 RESIDENTIAL FUNDING REQUIREMENTS												
Roads: Residential: Non Inflated	\$ 2,084.4	\$ 700.2	\$ 1,036.9	\$ 523.1	\$ 436.7	\$ 298.7	\$ 154.7	\$ 106.7	\$ 106.7	\$ 106.7	\$ 106.7	\$ 106.7
Roads: Residential: Inflated	\$ 2,084.4	\$ 714.2	\$ 1,078.8	\$ 555.2	\$ 472.7	\$ 329.8	\$ 174.3	\$ 122.6	\$ 125.1	\$ 127.6	\$ 130.1	\$ 132.7
NEW RESIDENTIAL DEVELOPMENT												
- Population Growth in New Units	357	370	383	249	256	261	266	271	189	189	194	197
REVENUE												
- DC Receipts: Inflated	\$ 658.0	\$ 695.5	\$ 734.4	\$ 487.0	\$ 510.7	\$ 531.1	\$ 552.1	\$ 573.7	\$ 408.1	\$ 416.3	\$ 435.8	\$ 451.4
INTEREST												
- Interest on Opening Balance	\$ -	\$ (80.6)	\$ (86.1)	\$ (110.3)	\$ (120.2)	\$ (124.7)	\$ (120.3)	\$ (105.8)	\$ (86.3)	\$ (75.3)	\$ (63.2)	\$ (49.6)
- Interest on In-year Transactions	\$ (39.2)	\$ (0.5)	\$ (9.5)	\$ (1.9)	\$ 0.7	\$ 3.5	\$ 6.6	\$ 7.9	\$ 5.0	\$ 5.1	\$ 5.3	\$ 5.6
TOTAL REVENUE	\$ 618.8	\$ 614.4	\$ 638.8	\$ 374.8	\$ 391.1	\$ 409.9	\$ 438.4	\$ 475.8	\$ 326.7	\$ 346.1	\$ 377.9	\$ 407.4
CLOSING CASH BALANCE	\$ (1,465.7)	\$ (1,565.5)	\$ (2,005.5)	\$ (2,185.8)	\$ (2,267.4)	\$ (2,187.3)	\$ (1,923.2)	\$ (1,570.0)	\$ (1,368.3)	\$ (1,149.8)	\$ (902.0)	\$ (627.4)

ROADS: RESIDENTIAL	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041 TOTAL	
OPENING CASH BALANCE (\$000)	\$ (627.4)	\$ (324.0)	\$ (266.4)	\$ (199.1)	\$ (126.6)	\$ (48.5)	\$ 61.0	\$ 51.5	\$ 41.4	\$ 30.8	\$ 19.5	
2019 to 2041 RESIDENTIAL FUNDING REQUIREMENTS												
Roads: Residential: Non Inflated	\$ 106.7	\$ 106.7	\$ 106.7	\$ 106.7	\$ 106.7	\$ 90.9	\$ 90.9	\$ 90.9	\$ 90.9	\$ 90.9	\$ 90.9	\$ 6,847.5
Roads: Residential: Inflated	\$ 135.4	\$ 138.1	\$ 140.8	\$ 143.7	\$ 146.5	\$ 127.2	\$ 129.8	\$ 132.4	\$ 135.0	\$ 137.7	\$ 140.5	\$ 7,554.6
NEW RESIDENTIAL DEVELOPMENT												
- Population Growth in New Units	\$ 200.0	\$ 89.0	\$ 91.0	\$ 91.0	\$ 91.0	\$ 92.0	\$ 45.0	\$ 45.0	\$ 45.0	\$ 45.0	\$ 45.0	\$ 4,061.0
REVENUE												
- DC Receipts: Inflated	\$ 467.5	\$ 212.2	\$ 221.3	\$ 225.7	\$ 230.2	\$ 237.4	\$ 118.5	\$ 120.8	\$ 123.2	\$ 125.7	\$ 128.2	\$ 8,664.8
INTEREST												
- Interest on Opening Balance	\$ (34.5)	\$ (17.8)	\$ (14.6)	\$ (11.0)	\$ (7.0)	\$ (2.7)	\$ 2.1	\$ 1.8	\$ 1.5	\$ 1.1	\$ 0.7	\$ (1,102.9)
- Interest on In-year Transactions	\$ 5.8	\$ 1.3	\$ 1.4	\$ 1.4	\$ 1.5	\$ 1.9	\$ (0.3)	\$ (0.3)	\$ (0.3)	\$ (0.3)	\$ (0.3)	\$ 0.3
TOTAL REVENUE	\$ 438.8	\$ 195.7	\$ 208.1	\$ 216.2	\$ 224.7	\$ 236.7	\$ 120.3	\$ 122.3	\$ 124.3	\$ 126.4	\$ 128.5	\$ 7,562.2
CLOSING CASH BALANCE	\$ (324.0)	\$ (266.4)	\$ (199.1)	\$ (126.6)	\$ (48.5)	\$ 61.0	\$ 51.5	\$ 41.4	\$ 30.8	\$ 19.5	\$ 7.6	

<b>2019 Adjusted Charge Per Capita</b>	<b>\$1,843.00</b>
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<b>Allocation of Capital Program</b>	
Residential Sector	72.0%
Non-Residential Sector	28.0%
<b>Rates for 2019</b>	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

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TABLE 4

MUNICIPALITY OF NORTH PERTH  
ROADS AND RELATED 2019-2041  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE

ROADS: NON-RESIDENTIAL	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
OPENING CASH BALANCE (\$000)	\$ -	\$ (615.9)	\$ (710.4)	\$ (947.9)	\$ (1,034.5)	\$ (1,087.2)	\$ (1,080.1)	\$ (1,004.8)	\$ (898.4)	\$ (822.2)	\$ (737.6)	\$ (644.1)
2019 to 2041 NON-RESIDENTIAL FUNDING REQUIREMENTS												
Roads: Non-Residential: Non Inflated	\$ 810.6	\$ 272.3	\$ 403.2	\$ 203.4	\$ 169.8	\$ 116.2	\$ 60.2	\$ 41.5	\$ 41.5	\$ 41.5	\$ 41.5	\$ 41.5
Roads: Non-Residential: Inflated	\$ 810.6	\$ 277.7	\$ 419.5	\$ 215.9	\$ 183.8	\$ 128.3	\$ 67.8	\$ 47.7	\$ 48.6	\$ 49.6	\$ 50.6	\$ 51.6
NON-RESIDENTIAL SPACE GROWTH												
- Growth in Square Metres	7,709	7,827	7,946	6,268	6,340	6,413	6,487	6,561	5,361	5,411	5,460	5,511
REVENUE												
- DC Receipts: Inflated	\$ 211.2	\$ 218.7	\$ 226.5	\$ 182.3	\$ 188.0	\$ 194.0	\$ 200.2	\$ 206.5	\$ 172.1	\$ 177.2	\$ 182.4	\$ 187.7
INTEREST												
- Interest on Opening Balance	\$ -	\$ (33.9)	\$ (39.1)	\$ (52.1)	\$ (56.9)	\$ (59.8)	\$ (59.4)	\$ (55.3)	\$ (49.4)	\$ (45.2)	\$ (40.6)	\$ (35.4)
- Interest on In-year Transactions	\$ (16.5)	\$ (1.6)	\$ (5.3)	\$ (0.9)	\$ 0.1	\$ 1.2	\$ 2.3	\$ 2.8	\$ 2.2	\$ 2.2	\$ 2.3	\$ 2.4
TOTAL REVENUE	\$ 194.7	\$ 183.2	\$ 182.1	\$ 129.2	\$ 131.2	\$ 135.4	\$ 143.1	\$ 154.0	\$ 124.8	\$ 134.2	\$ 144.1	\$ 154.7
CLOSING CASH BALANCE	\$ (615.9)	\$ (710.4)	\$ (947.9)	\$ (1,034.5)	\$ (1,087.2)	\$ (1,080.1)	\$ (1,004.8)	\$ (898.4)	\$ (822.2)	\$ (737.6)	\$ (644.1)	\$ (541.0)

ROADS: NON-RESIDENTIAL	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041 TOTAL	
OPENING CASH BALANCE (\$000)	\$ (541.0)	\$ (427.7)	\$ (358.4)	\$ (282.4)	\$ (199.3)	\$ (108.6)	\$ (1.0)	\$ (0.7)	\$ (0.2)	\$ 0.5	\$ 1.4	
2019 to 2041 NON-RESIDENTIAL FUNDING REQUIREMENTS												
Roads: Non-Residential: Non Inflated	\$ 41.5	\$ 41.5	\$ 41.5	\$ 41.5	\$ 41.5	\$ 35.3	\$ 35.3	\$ 35.3	\$ 35.3	\$ 35.3	\$ 35.3	\$ 2,662.9
Roads: Non-Residential: Inflated	\$ 52.6	\$ 53.7	\$ 54.8	\$ 55.9	\$ 57.0	\$ 49.5	\$ 50.5	\$ 51.5	\$ 52.5	\$ 53.6	\$ 54.6	\$ 2,937.9
NON-RESIDENTIAL SPACE GROWTH												
- Growth in Square Metres	\$ 5,561.5	\$ 4,086.8	\$ 4,114.5	\$ 4,142.3	\$ 4,170.3	\$ 4,198.5	\$ 1,300.5	\$ 1,303.4	\$ 1,306.2	\$ 1,309.1	\$ 1,311.9	\$ 110,098.8
REVENUE												
- DC Receipts: Inflated	\$ 193.3	\$ 144.9	\$ 148.8	\$ 152.8	\$ 156.9	\$ 161.1	\$ 50.9	\$ 52.0	\$ 53.2	\$ 54.4	\$ 55.6	\$ 3,570.7
INTEREST												
- Interest on Opening Balance	\$ (29.8)	\$ (23.5)	\$ (19.7)	\$ (15.5)	\$ (11.0)	\$ (6.0)	\$ (0.1)	\$ (0.0)	\$ (0.0)	\$ 0.0	\$ 0.0	\$ (632.6)
- Interest on In-year Transactions	\$ 2.5	\$ 1.6	\$ 1.6	\$ 1.7	\$ 1.7	\$ 2.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 2.2
TOTAL REVENUE	\$ 166.0	\$ 123.0	\$ 130.7	\$ 139.0	\$ 147.7	\$ 157.1	\$ 50.9	\$ 52.0	\$ 53.2	\$ 54.4	\$ 55.7	\$ 2,940.4
CLOSING CASH BALANCE	\$ (427.7)	\$ (358.4)	\$ (282.4)	\$ (199.3)	\$ (108.6)	\$ (1.0)	\$ (0.7)	\$ (0.2)	\$ 0.5	\$ 1.4	\$ 2.5	

2019 Adjusted Charge Per Capita	\$27.40
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<b>Allocation of Capital Program</b>	
Residential Sector	72.0%
Non-Residential Sector	28.0%
<b>Rates for 2019</b>	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%



## **APPENDIX D.2**

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### ***PUBLIC WORKS***

## APPENDIX D.2

### PUBLIC WORKS

Public Works in North Perth maintains roads, streets, sidewalks and municipal parking lots throughout the year. For the purposes of the development charges calculation, Public Works is deemed a Municipal-wide service that benefits the entire Municipality.

#### TABLE 1 2009-2018 HISTORICAL SERVICE LEVELS

The Public Works inventory includes three public works yards in Elma, Wallace and Listowel. It also includes an MTO depot. The combined square footage totals 21,810 and is valued at \$5.89 million. These buildings sit on 6.28 hectares of land, which has a replacement value of \$3.14 million. Vehicles such as plows and pickup trucks number 40 and are valued at \$8.00 million.

The total replacement value of this infrastructure is \$17.03 million. This produces a ten-year historical service level of \$831.07 per population and employment. The resulting maximum allowable funding envelope is \$2.81 million.

#### TABLE 2 2019 – 2028 DEVELOPMENT-RELATED CAPITAL PROGRAM

Table 2 provides a summary of the development-related capital program for Public Works services. The gross Public Works capital program totals \$2.44 million and is largely related to the construction of a \$1.80 million centralized public works facility in 2025. The capital program also includes for the recovery of a \$193,400 negative reserve fund balance and the acquisition of two new vehicles in 2021 for a combined cost of \$450,000. There are no offsetting grants or contributions expected to offset the program.

Recognizing that the new public works facility is mostly intended to centralize existing operations, a 75% (equal to \$1.35 million) benefit to existing/replacement share has been identified and this share of costs has been removed from the calculation. The total DC eligible costs are thus \$1.09 million, all of which is recoverable during the 2019 to 2028 period. This in-period DC eligible cost has been apportioned 75 per cent to residential development and 25 per cent non-residential development, based on the shares of 2019-2028 population and employment growth. The resulting unadjusted

residential charge is \$293.82 per capita and the resulting unadjusted non-residential charge is \$4.12 per square metre.

**TABLE 3 CASH FLOW ANALYSIS**

After cash flow and reserve fund analysis, the residential and non-residential calculated charges both increase to \$303.00 per capita and \$4.28 per square metre, respectively. This is a reflection of the timing of the capital program and development charges revenues.

The following table summarizes the calculation of the Public Works development charge:

<b>PUBLIC WORKS SUMMARY</b>						
10-year Hist.	2019 - 2028		Unadjusted		Adjusted	
Service Level	Development-Related Capital Program		Development Charge		Development Charge	
per pop & emp	Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$831.07	\$2,443,413	\$1,093,413	\$293.82	\$4.12	<b>\$303.00</b>	<b>\$4.28</b>

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TABLE 1

MUNICIPALITY OF NORTH PERTH  
INVENTORY OF CAPITAL ASSETS  
PUBLIC WORKS

BUILDINGS Facility Name	# of Square Feet										UNIT COST (\$/sq.ft.)	
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
Elma Yard - Garage & Shed	4,900	4,900	4,900	4,900	4,900	4,900	4,900	4,900	4,900	4,900	4,900	\$270
Wallace Yard	9,500	9,500	9,500	9,500	9,500	9,500	9,500	9,500	9,500	9,500	9,500	\$270
Listowel Yard	6,511	6,511	6,511	6,511	6,511	6,511	6,511	6,511	6,511	6,511	6,511	\$270
MTO Depot - 245 McDonald St E	-	-	-	900	900	900	900	900	900	900	900	\$270
<b>Total (acres)</b>	<b>20,911</b>	<b>20,911</b>	<b>20,911</b>	<b>21,811</b>	<b>21,811</b>	<b>21,811</b>	<b>21,811</b>	<b>21,811</b>	<b>21,811</b>	<b>21,811</b>	<b>21,811</b>	
<b>Total (\$000)</b>	<b>\$5,646.0</b>	<b>\$5,646.0</b>	<b>\$5,646.0</b>	<b>\$5,889.0</b>	<b>\$5,889.0</b>	<b>\$5,889.0</b>	<b>\$5,889.0</b>	<b>\$5,889.0</b>	<b>\$5,889.0</b>	<b>\$5,889.0</b>	<b>\$5,889.0</b>	

LAND Facility Name	# of Hectares										UNIT COST (\$/ha)	
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018		
Elma Yard - Garage & Shed	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	\$500,000
Wallace Yard	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	\$500,000
Listowel Yard	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	\$500,000
MTO Depot - 245 McDonald St E	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	2.32	\$500,000
<b>Total (acres)</b>	<b>6.28</b>	<b>6.28</b>	<b>6.28</b>	<b>6.28</b>	<b>6.28</b>	<b>6.28</b>	<b>6.28</b>	<b>6.28</b>	<b>6.28</b>	<b>6.28</b>	<b>6.28</b>	
<b>Total (\$000)</b>	<b>\$3,140.0</b>	<b>\$3,140.0</b>	<b>\$3,140.0</b>	<b>\$3,140.0</b>	<b>\$3,140.0</b>	<b>\$3,140.0</b>	<b>\$3,140.0</b>	<b>\$3,140.0</b>	<b>\$3,140.0</b>	<b>\$3,140.0</b>	<b>\$3,140.0</b>	

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APPENDIX D.2  
TABLE 1

MUNICIPALITY OF NORTH PERTH  
INVENTORY OF CAPITAL ASSETS  
PUBLIC WORKS

VEHICLES Description	# of Vehicles										UNIT COST (\$/unit)
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Road Graders	4	4	4	4	4	5	5	5	5	5	\$450,000
Heavy Duty Plow	2	2	2	2	2	3	3	3	3	3	\$260,000
Medium Duty Plow	2	2	2	2	2	1	1	1	1	1	\$206,000
Light Duty Plow	1	1	1	1	1	1	1	1	1	1	\$140,000
Pickup Trucks	6	6	6	6	6	10	10	10	10	10	\$52,000
1 Ton Trucks	4	4	4	4	4	4	4	4	4	4	\$650,000
Street Sweeper	1	1	1	1	1	1	1	1	1	1	\$260,000
Loader Tractors	2	2	2	2	2	3	3	3	3	3	\$140,000
Backhoe Loader	1	1	1	1	1	2	2	2	2	2	\$140,000
Sidewalk Cleaner	1	1	1	1	1	2	2	2	2	2	\$140,000
Mobile Generator	1	1	1	1	1	1	1	1	1	1	\$82,000
Line Painter	1	1	1	1	1	1	1	1	1	1	\$12,000
Sidewalk Gringer	1	1	1	1	1	1	1	1	1	1	\$6,000
Chipper	1	1	1	1	1	-	-	-	-	-	\$47,000
Front Loader Tractor	-	-	-	-	1	-	-	-	-	-	\$87,000
Mower						4	4	4	4	4	\$40,000
Wallace Yard Hoist	1	1	1	1	1	1	1	1	1	1	\$8,000
<b>Total (#)</b>	<b>29</b>	<b>29</b>	<b>29</b>	<b>29</b>	<b>30</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>40</b>	
<b>Total (\$000)</b>	<b>\$6,759.0</b>	<b>\$6,759.0</b>	<b>\$6,759.0</b>	<b>\$6,759.0</b>	<b>\$6,846.0</b>	<b>\$8,004.0</b>	<b>\$8,004.0</b>	<b>\$8,004.0</b>	<b>\$8,004.0</b>	<b>\$8,004.0</b>	<b>\$8,004.0</b>

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TABLE 1

MUNICIPALITY OF NORTH PERTH  
CALCULATION OF SERVICE LEVELS  
PUBLIC WORKS

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Historical Population	12,479	12,539	12,600	12,698	12,797	12,897	12,998	13,100	13,405	13,718
Historical Employment	6,687	6,633	6,580	6,625	6,671	6,717	6,763	6,810	6,911	7,013
Total Historical Population & Employment	19,166	19,172	19,180	19,323	19,468	19,614	19,761	19,910	20,316	20,731

INVENTORY SUMMARY (\$000)

Buildings	\$5,646.0	\$5,646.0	\$5,646.0	\$5,889.0	\$5,889.0	\$5,889.0	\$5,889.0	\$5,889.0	\$5,889.0	\$5,889.0
Land	\$3,140.0	\$3,140.0	\$3,140.0	\$3,140.0	\$3,140.0	\$3,140.0	\$3,140.0	\$3,140.0	\$3,140.0	\$3,140.0
Vehicles	\$6,759.0	\$6,759.0	\$6,759.0	\$6,759.0	\$6,846.0	\$8,004.0	\$8,004.0	\$8,004.0	\$8,004.0	\$8,004.0
<b>Total (\$000)</b>	<b>\$15,545.0</b>	<b>\$15,545.0</b>	<b>\$15,545.0</b>	<b>\$15,788.0</b>	<b>\$15,875.0</b>	<b>\$17,033.0</b>	<b>\$17,033.0</b>	<b>\$17,033.0</b>	<b>\$17,033.0</b>	<b>\$17,033.0</b>

SERVICE LEVEL (\$/pop. and emp.)

Average  
Service  
Level

Buildings	\$294.58	\$294.49	\$294.37	\$304.76	\$302.49	\$300.24	\$298.01	\$295.78	\$289.87	\$284.07	\$295.87
Land	\$163.83	\$163.78	\$163.71	\$162.50	\$161.29	\$160.09	\$158.90	\$157.71	\$154.56	\$151.46	\$159.78
Vehicles	\$352.66	\$352.55	\$352.40	\$349.79	\$351.65	\$408.08	\$405.04	\$402.01	\$393.98	\$386.09	\$375.42
<b>Total (\$/pop and emp)</b>	<b>\$811.07</b>	<b>\$810.82</b>	<b>\$810.48</b>	<b>\$817.06</b>	<b>\$815.44</b>	<b>\$868.41</b>	<b>\$861.95</b>	<b>\$855.50</b>	<b>\$838.40</b>	<b>\$821.62</b>	<b>\$831.07</b>

MUNICIPALITY OF NORTH PERTH  
CALCULATION OF MAXIMUM ALLOWABLE  
PUBLIC WORKS

10-Year Funding Envelope Calculation	
10 Year Average Service Level 2009 - 2018	\$831.07
Net Population & Employment Growth 2019 - 2028	3,387
Maximum Allowable Funding Envelope	\$2,814,834
<b>Discounted Maximum Allowable Funding Envelope</b>	<b>\$2,814,834</b>

MUNICIPALITY OF NORTH PERTH  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
PUBLIC WORKS

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs			Total DC Eligible Costs	DC Eligible Costs		
					BTE (%)	Replacement & BTE Shares	0% Reduction		Available DC Reserves	2019-2028	Post 2028
<b>2.0 PUBLIC WORKS</b>											
<b>2.1 Recovery of Negative Reserve Fund</b>	2019	\$ 193,413	\$ -	\$ 193,413	0%	\$ -	\$ -	\$ 193,413	\$ -	\$ 193,413	\$ -
<b>2.2 Buildings</b>											
2.2.1 Centralized Public Works Facility	2025	\$ 1,800,000	\$ -	\$ 1,800,000	75%	\$ 1,350,000	\$ -	\$ 450,000	\$ -	\$ 450,000	\$ -
Subtotal Buildings		\$ 1,800,000	\$ -	\$ 1,800,000		\$ 1,350,000	\$ -	\$ 450,000	\$ -	\$ 450,000	\$ -
<b>2.3 Vehicles and Equipment</b>											
2.3.1 Tandem Combo	2021	\$ 305,000	\$ -	\$ 305,000	0%	\$ -	\$ -	\$ 305,000	\$ -	\$ 305,000	\$ -
2.3.2 Sidewalk plow	2021	\$ 145,000	\$ -	\$ 145,000	0%	\$ -	\$ -	\$ 145,000	\$ -	\$ 145,000	\$ -
Subtotal Vehicles and Equipment		\$ 450,000	\$ -	\$ 450,000		\$ -	\$ -	\$ 450,000	\$ -	\$ 450,000	\$ -
<b>TOTAL PUBLIC WORKS</b>		<b>\$ 2,443,413</b>	<b>\$ -</b>	<b>\$ 2,443,413</b>		<b>\$ 1,350,000</b>	<b>\$ -</b>	<b>\$ 1,093,413</b>	<b>\$ -</b>	<b>\$ 1,093,413</b>	<b>\$ -</b>

Residential Development Charge Calculation		
Residential Share of 2019 - 2028 DC Eligible Costs	75%	\$820,060
10-Year Growth in Population in New Units		2,791
Unadjusted Development Charge Per Capita		<b>\$293.82</b>
Non-Residential Development Charge Calculation		
Non-Residential Share of 2019 - 2028 DC Eligible Costs	25%	\$273,353
10-Year Growth in Square Metres		66,323
Unadjusted Development Charge Per Square Metre		<b>\$4.12</b>

2019 - 2028 Net Funding Envelope	\$2,814,834
Reserve Fund Balance	
Balance as at December 31, 2018	(193,413)

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TABLE 3

**MUNICIPALITY OF NORTH PERTH  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE  
PUBLIC WORKS  
RESIDENTIAL DEVELOPMENT CHARGE  
(in \$000)**

PUBLIC WORKS	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL
OPENING CASH BALANCE	\$ -	\$ (37.9)	\$ 76.4	\$ (157.7)	\$ (84.9)	\$ (4.1)	\$ 84.5	\$ (209.8)	\$ (125.4)	\$ (64.0)	
<b>2019 - 2028 RESIDENTIAL FUNDING REQUIREMENTS</b>											
- Public Works: Non Inflated	\$ 145.1	\$ -	\$ 337.5	\$ -	\$ -	\$ -	\$ 337.5	\$ -	\$ -	\$ -	\$ 820.1
- Public Works: Inflated	\$ 145.1	\$ -	\$ 351.1	\$ -	\$ -	\$ -	\$ 380.1	\$ -	\$ -	\$ -	\$ 876.3
<b>NEW RESIDENTIAL DEVELOPMENT</b>											
- Population Growth in New Units	357	370	383	249	256	261	266	271	189	189	2,791
<b>REVENUE</b>											
- DC Receipts: Inflated	\$ 108.2	\$ 114.4	\$ 120.7	\$ 80.1	\$ 84.0	\$ 87.3	\$ 90.8	\$ 94.3	\$ 67.1	\$ 68.4	\$ 915.2
<b>INTEREST</b>											
- Interest on Opening Balance	\$ -	\$ (2.1)	\$ 2.7	\$ (8.7)	\$ (4.7)	\$ (0.2)	\$ 3.0	\$ (11.5)	\$ (6.9)	\$ (3.5)	\$ (32.0)
- Interest on In-year Transactions	\$ (1.0)	\$ 2.0	\$ (6.3)	\$ 1.4	\$ 1.5	\$ 1.5	\$ (8.0)	\$ 1.7	\$ 1.2	\$ 1.2	\$ (4.9)
<b>TOTAL REVENUE</b>	\$ 107.2	\$ 114.3	\$ 117.1	\$ 72.8	\$ 80.8	\$ 88.6	\$ 85.8	\$ 84.4	\$ 61.4	\$ 66.1	\$ 878.4
CLOSING CASH BALANCE	\$ (37.9)	\$ 76.4	\$ (157.7)	\$ (84.9)	\$ (4.1)	\$ 84.5	\$ (209.8)	\$ (125.4)	\$ (64.0)	\$ 2.1	

**2019 Adjusted Charge Per Capita** **\$303.00**

<b>Allocation of Capital Program</b>	
Residential Sector	75.0%
Non-Residential Sector	25.0%
<b>Rates for 2019</b>	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%



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TABLE 3

MUNICIPALITY OF NORTH PERTH  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE  
PUBLIC WORKS  
NON-RESIDENTIAL DEVELOPMENT CHARGE  
(in \$000)

PUBLIC WORKS	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL
OPENING CASH BALANCE	\$ -	\$ (15.8)	\$ 18.1	\$ (65.2)	\$ (39.8)	\$ (12.1)	\$ 18.1	\$ (79.3)	\$ (50.9)	\$ (26.3)	
2019 - 2028 NON-RESIDENTIAL FUNDING REQUIREMENTS											
- Public Works: Non Inflated	\$ 48.4	\$ -	\$ 112.5	\$ -	\$ -	\$ -	\$ 112.5	\$ -	\$ -	\$ -	\$ 273.4
- Public Works: Inflated	\$ 48.4	\$ -	\$ 117.0	\$ -	\$ -	\$ -	\$ 126.7	\$ -	\$ -	\$ -	\$ 292.1
NON-RESIDENTIAL SPACE GROWTH											
- Growth in Square Metres	7,709	7,827	7,946	6,268	6,340	6,413	6,487	6,561	5,361	5,411	66,323
REVENUE											
- DC Receipts: Inflated	\$ 33.0	\$ 34.2	\$ 35.4	\$ 28.5	\$ 29.4	\$ 30.3	\$ 31.3	\$ 32.3	\$ 26.9	\$ 27.7	\$ 308.8
INTEREST											
- Interest on Opening Balance	\$ -	\$ (0.9)	\$ 0.6	\$ (3.6)	\$ (2.2)	\$ (0.7)	\$ 0.6	\$ (4.4)	\$ (2.8)	\$ (1.4)	\$ (14.6)
- Interest on In-year Transactions	\$ (0.4)	\$ 0.6	\$ (2.2)	\$ 0.5	\$ 0.5	\$ 0.5	\$ (2.6)	\$ 0.6	\$ 0.5	\$ 0.5	\$ (1.6)
TOTAL REVENUE	\$ 32.6	\$ 33.9	\$ 33.8	\$ 25.4	\$ 27.7	\$ 30.2	\$ 29.3	\$ 28.5	\$ 24.6	\$ 26.7	\$ 292.5
CLOSING CASH BALANCE	\$ (15.8)	\$ 18.1	\$ (65.2)	\$ (39.8)	\$ (12.1)	\$ 18.1	\$ (79.3)	\$ (50.9)	\$ (26.3)	\$ 0.4	

2019 Adjusted Charge Per Square Metre \$4.28

<b>Allocation of Capital Program</b>	
Residential Sector	75.0%
Non-Residential Sector	25.0%
<b>Rates for 2019</b>	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

**APPENDIX E**

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***AREA- SPECIFIC ENGINEERED SERVICES  
TECHNICAL APPENDIX***

## APPENDIX E

### AREA-SPECIFIC ENGINEERED SERVICES TECHNICAL APPENDIX INTRODUCTION AND OVERVIEW

This appendix provides a brief outline of the area-specific engineered services that are included in the Development Charges Study: Water Services, Wastewater Services and Stormwater Management Services.

Water Services are charged in the urban areas of Listowel, Atwood, and Wallace Ward.

Wastewater Services are charged in the urban areas of Listowel and Atwood.

Stormwater Management Services are charged in the Listowel South East Drainage Area.

In addition, a new area-specific charge is proposed to recover for engineering related infrastructure costs associated with servicing the Northeast Master Plan area.

Key maps outlining the service area boundaries are included below as Figures 1 through 6.

The following tables set out the capital program and the calculation of the development charge for engineered services. The cost, quantum and description of the projects included in the forecast are based upon servicing plans from the Municipality's engineering staff and external engineering consultants. This appendix includes all engineering projects that will meet the servicing demands within the Municipality.

The development-related engineering infrastructure projects are required to service the demands of population and employment growth from 2019 to 2041.

**APPENDIX E.1**

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***WATER SERVICES***

## APPENDIX E.1

### WATER SERVICES

**TABLE 1      2019 – 2041 DEVELOPMENT-RELATED CAPITAL PROGRAM**

Table 1 provides a summary of the development-related capital program for Water Services.

As shown in Table 1, the gross Water Services capital program totals \$7.71 million. This includes \$1.16 million in linear infrastructure, as well as \$6.25 million for water facilities projects that will add an additional well and water tower. In addition, \$300,000 is allocated for servicing plans in Atwood and Listowel. It should be noted that the majority of the water facility projects are deemed to benefit development outside the planning period and will be considered for recovery in subsequent DC Studies.

There are no offsetting grants or contributions expected, so the net municipal cost remains \$7.71 million. Replacement and benefit to existing shares total \$30,500 and this share has been removed from the cost of the program bringing the total DC eligible cost to \$7.68 million.

The existing reserve fund balance of \$337,700 has been applied to projects occurring earliest in the forecast period. A further \$5.94 million is deemed a post-period benefit that will benefit development occurring beyond 2041. These shares are entirely related to the water well and water tower project, both of which will occur towards the end of the 2019-2041 period. The remaining \$1.40 million is the 2019-2041 development-related net capital cost.

**TABLE 2      CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGES**

Tables 2 displays the DC recoverable costs apportioned to the residential and non-residential sectors: 74 per cent to residential and 26 per cent to the non-residential, based on shares of anticipated shares of population and employment growth to 2041. The residential sector's share of \$1.04 million in development-related net capital costs yields an "unadjusted" development charge of \$267.35 per capita. The non-residential sector's share of \$364,200 in development-related net capital costs results in an unadjusted charge of \$3.36 per square metre of GFA for the non-residential sector.

**TABLE 3 CASH FLOW ANALYSIS**

After cash flow and reserve fund analysis, the residential and non-residential calculated charges both increase to \$270.00 per capita and \$3.50 per square metre, respectively. This is a reflection of the timing of the capital program and development charges revenues.

The following table summarizes the calculation of the Water Services development charge:

<b>WATER SERVICES SUMMARY</b>					
2019 - 2041		Unadjusted		Adjusted	
Development-Related Capital Program		Development Charge		Development Charge	
Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$7,706,486	\$1,400,804	\$267.35	\$3.36	\$270.00	\$3.50

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TABLE 1

MUNICIPALITY OF NORTH PERTH  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
WATER SERVICES

NO.	Infrastructure Requirement	Timing	Estimated Project Costs								
			Gross Cost	Direct Developer Contribution	Net Municipal Cost	Benefit to Existing Share		Total DC Eligible Cost	Available DC Reserves	Net Growth Related	Post Period Allocation
<b>Linear Infrastructure</b>											
1	South End Watermain Looping	2020 - 2020	\$ 305,000	\$ -	\$ 305,000	10%	\$ 30,500	\$ 274,500	\$ 274,500	\$ -	\$ -
2	Wallace Ave N Water Extension	2024 - 2025	\$ 500,000	\$ -	\$ 500,000	0%	\$ -	\$ 500,000		\$ 500,000	\$ -
3	Recovery of Highway 23 - Water Upsize (by Roundabout)	2019 - 2019	\$ 351,486	\$ -	\$ 351,486	0%	\$ -	\$ 351,486	\$ 63,182	\$ 288,304	\$ -
<b>Subtotal Linear Infrastructure</b>			<b>\$ 1,156,486</b>	<b>\$ -</b>	<b>\$ 1,156,486</b>		<b>\$ 30,500</b>	<b>\$ 1,125,986</b>	<b>\$ 337,682</b>	<b>\$ 788,304</b>	<b>\$ -</b>
<b>Water Facilities</b>											
1	Additional Well (Well No. 7)	2036 - 2041	\$ 2,375,000	\$ -	\$ 2,375,000	0%	\$ -	\$ 2,375,000	\$ -	\$ 118,750	\$ 2,256,250
2	Additional Water Tower	2036 - 2041	\$ 3,875,000	\$ -	\$ 3,875,000	0%	\$ -	\$ 3,875,000	\$ -	\$ 193,750	\$ 3,681,250
<b>Subtotal Linear Infrastructure</b>			<b>\$ 6,250,000</b>	<b>\$ -</b>	<b>\$ 6,250,000</b>		<b>\$ -</b>	<b>\$ 6,250,000</b>	<b>\$ -</b>	<b>\$ 312,500</b>	<b>\$ 5,937,500</b>
<b>Studies and Capacity Analyses</b>											
1	Atwood Servicing Plan	2021 - 2021	\$ 100,000	\$ -	\$ 100,000	0%	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ -
2	Listowel Servicing Plan	2023 - 2023	\$ 100,000	\$ -	\$ 100,000	0%	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ -
3	Listowel Servicing Plan	2031 - 2031	\$ 100,000	\$ -	\$ 100,000	0%	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ -
<b>Subtotal Linear Infrastructure</b>			<b>\$ 300,000</b>	<b>\$ -</b>	<b>\$ 300,000</b>		<b>\$ -</b>	<b>\$ 300,000</b>	<b>\$ -</b>	<b>\$ 300,000</b>	<b>\$ -</b>
<b>Subtotal Water Projects</b>			<b>\$ 7,706,486</b>	<b>\$ -</b>	<b>\$ 7,706,486</b>		<b>\$ 30,500</b>	<b>\$ 7,675,986</b>	<b>\$ 337,682</b>	<b>\$ 1,400,804</b>	<b>\$ 5,937,500</b>

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TABLE 2

MUNICIPALITY OF NORTH PERTH  
SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES  
WATER 2019-2041

23-Year Growth in Population in New Units	3,877
Employment Growth	1,368
23-Year Growth in Square Meters	108,328

	Growth-Related Capital Forecast						Residential Share		Non-Residential Share	
	Gross Project Cost (\$000)	Grants & Subsidies Contributions (\$000)	Benefit to Existing Share (\$000)	Available DC Reserves (\$000)	Post Period Allocation (\$000)	Total Net Capital Costs After Discount (\$000)	%	\$000	%	\$000
	<b>WATER 2019-2041</b>									
Linear Infrastructure	\$1,156.49	\$0.00	\$30.50	\$337.68	\$0.00	\$788.30	74%	\$583.34	26%	\$204.96
Water Facilities	\$6,250.00	\$0.00	\$0.00	\$0.00	\$5,937.50	\$312.50	74%	\$231.25	26%	\$81.25
Studies and Capacity Analyses	\$300.00	\$0.00	\$0.00	\$0.00	\$0.00	\$300.00	74%	\$222.00	26%	\$78.00
<b>TOTAL WATER 2019-2041</b>	<b>\$7,706.49</b>	<b>\$0.00</b>	<b>\$30.50</b>	<b>\$337.68</b>	<b>\$5,937.50</b>	<b>\$1,400.80</b>		<b>\$1,036.59</b>		<b>\$364.21</b>
<b>Unadjusted Development Charge Per Capita (\$)</b>								<b>\$267.35</b>		
<b>Unadjusted Development Charge Per Sq. M. (\$)</b>										<b>\$3.36</b>



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TABLE 3

MUNICIPALITY OF NORTH PERTH  
WATER 2019-2041  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE

WATER: RESIDENTIAL	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
OPENING CASH BALANCE (\$000)	\$ -	\$ (123.1)	\$ (30.8)	\$ (7.8)	\$ 63.9	\$ 59.6	\$ (69.4)	\$ (205.4)	\$ (132.4)	\$ (80.3)	\$ (23.2)	\$ 39.0
2019 to 2041 RESIDENTIAL FUNDING REQUIREMENTS												
Water: Residential: Non Inflated	\$ 213.3	\$ -	\$ 74.0	\$ -	\$ 74.0	\$ 185.0	\$ 185.0	\$ -	\$ -	\$ -	\$ -	\$ -
Water: Residential: Inflated	\$ 213.3	\$ -	\$ 77.0	\$ -	\$ 80.1	\$ 204.3	\$ 208.3	\$ -	\$ -	\$ -	\$ -	\$ -
NEW RESIDENTIAL DEVELOPMENT												
- Population Growth in New Units	346	354	361	247	252	257	262	267	185	187	190	192
REVENUE												
- DC Receipts: Inflated	\$ 93.5	\$ 97.4	\$ 101.3	\$ 70.9	\$ 73.7	\$ 76.7	\$ 79.7	\$ 82.8	\$ 58.4	\$ 60.4	\$ 62.4	\$ 64.5
INTEREST												
- Interest on Opening Balance	\$ -	\$ (6.8)	\$ (1.7)	\$ (0.4)	\$ 2.2	\$ 2.1	\$ (3.8)	\$ (11.3)	\$ (7.3)	\$ (4.4)	\$ (1.3)	\$ 1.4
- Interest on In-year Transactions	\$ (3.3)	\$ 1.7	\$ 0.4	\$ 1.2	\$ (0.2)	\$ (3.5)	\$ (3.5)	\$ 1.4	\$ 1.0	\$ 1.1	\$ 1.1	\$ 1.1
TOTAL REVENUE	\$ 90.2	\$ 92.3	\$ 100.0	\$ 71.7	\$ 75.8	\$ 75.3	\$ 72.3	\$ 73.0	\$ 52.1	\$ 57.0	\$ 62.2	\$ 67.0
CLOSING CASH BALANCE	\$ (123.1)	\$ (30.8)	\$ (7.8)	\$ 63.9	\$ 59.6	\$ (69.4)	\$ (205.4)	\$ (132.4)	\$ (80.3)	\$ (23.2)	\$ 39.0	\$ 106.0

WATER: RESIDENTIAL	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041 TOTAL	
OPENING CASH BALANCE (\$000)	\$ 106.0	\$ 81.7	\$ 115.0	\$ 150.0	\$ 186.9	\$ 225.8	\$ 211.6	\$ 174.6	\$ 135.6	\$ 94.2	\$ 50.5	
2019 to 2041 RESIDENTIAL FUNDING REQUIREMENTS												
Water: Residential: Non Inflated	\$ 74.0	\$ -	\$ -	\$ -	\$ -	\$ 38.5	\$ 38.5	\$ 38.5	\$ 38.5	\$ 38.5	\$ 38.5	\$ 1,036.6
Water: Residential: Inflated	\$ 93.8	\$ -	\$ -	\$ -	\$ -	\$ 54.0	\$ 55.0	\$ 56.1	\$ 57.3	\$ 58.4	\$ 59.6	\$ 1,217.3
NEW RESIDENTIAL DEVELOPMENT												
- Population Growth in New Units	\$ 194.5	\$ 85.7	\$ 85.7	\$ 85.7	\$ 85.7	\$ 85.7	\$ 30.9	\$ 30.9	\$ 30.9	\$ 30.9	\$ 30.9	\$ 3,877.3
REVENUE												
- DC Receipts: Inflated	\$ 66.6	\$ 29.9	\$ 30.5	\$ 31.1	\$ 31.8	\$ 32.4	\$ 11.9	\$ 12.2	\$ 12.4	\$ 12.6	\$ 12.9	\$ 1,206.0
INTEREST												
- Interest on Opening Balance	\$ 3.7	\$ 2.9	\$ 4.0	\$ 5.3	\$ 6.5	\$ 7.9	\$ 7.4	\$ 6.1	\$ 4.7	\$ 3.3	\$ 1.8	\$ 22.3
- Interest on In-year Transactions	\$ (0.7)	\$ 0.5	\$ 0.5	\$ 0.5	\$ 0.6	\$ (0.6)	\$ (1.2)	\$ (1.2)	\$ (1.2)	\$ (1.3)	\$ (1.3)	\$ (6.8)
TOTAL REVENUE	\$ 69.6	\$ 33.3	\$ 35.1	\$ 36.9	\$ 38.9	\$ 39.7	\$ 18.1	\$ 17.1	\$ 15.9	\$ 14.6	\$ 13.4	\$ 1,221.6
CLOSING CASH BALANCE	\$ 81.7	\$ 115.0	\$ 150.0	\$ 186.9	\$ 225.8	\$ 211.6	\$ 174.6	\$ 135.6	\$ 94.2	\$ 50.5	\$ 4.3	

2019 Adjusted Charge Per Capita	\$270.00
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<b>Allocation of Capital Program</b>	
Residential Sector	74.0%
Non-Residential Sector	26.0%
<b>Rates for 2019</b>	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

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TABLE 3

MUNICIPALITY OF NORTH PERTH  
WATER 2019-2041  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE

WATER: NON-RESIDENTIAL	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
OPENING CASH BALANCE (\$000)	\$ -	\$ (49.6)	\$ (24.1)	\$ (23.8)	\$ (1.7)	\$ (6.3)	\$ (55.3)	\$ (107.5)	\$ (86.9)	\$ (69.6)	\$ (50.7)	\$ (30.1)
2019 to 2041 NON-RESIDENTIAL FUNDING REQUIREMENTS												
Water: Non-Residential: Non Inflated	\$ 75.0	\$ -	\$ 26.0	\$ -	\$ 26.0	\$ 65.0	\$ 65.0	\$ -	\$ -	\$ -	\$ -	\$ -
Water: Non-Residential: Inflated	\$ 75.0	\$ -	\$ 27.1	\$ -	\$ 28.1	\$ 71.8	\$ 73.2	\$ -	\$ -	\$ -	\$ -	\$ -
NON-RESIDENTIAL SPACE GROWTH												
- Growth in Square Metres	7,632	7,750	7,869	6,191	6,263	6,336	6,410	6,484	5,284	5,334	5,383	5,434
REVENUE												
- DC Receipts: Inflated	\$ 26.7	\$ 27.7	\$ 28.7	\$ 23.0	\$ 23.7	\$ 24.5	\$ 25.3	\$ 26.1	\$ 21.7	\$ 22.3	\$ 23.0	\$ 23.6
INTEREST												
- Interest on Opening Balance	\$ -	\$ (2.7)	\$ (1.3)	\$ (1.3)	\$ (0.1)	\$ (0.3)	\$ (3.0)	\$ (5.9)	\$ (4.8)	\$ (3.8)	\$ (2.8)	\$ (1.7)
- Interest on In-year Transactions	\$ (1.3)	\$ 0.5	\$ 0.0	\$ 0.4	\$ (0.1)	\$ (1.3)	\$ (1.3)	\$ 0.5	\$ 0.4	\$ 0.4	\$ 0.4	\$ 0.4
TOTAL REVENUE	\$ 25.4	\$ 25.5	\$ 27.4	\$ 22.1	\$ 23.5	\$ 22.9	\$ 20.9	\$ 20.6	\$ 17.3	\$ 18.9	\$ 20.6	\$ 22.4
CLOSING CASH BALANCE	\$ (49.6)	\$ (24.1)	\$ (23.8)	\$ (1.7)	\$ (6.3)	\$ (55.3)	\$ (107.5)	\$ (86.9)	\$ (69.6)	\$ (50.7)	\$ (30.1)	\$ (7.7)

WATER: NON-RESIDENTIAL	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041 TOTAL	
OPENING CASH BALANCE (\$000)	\$ (7.7)	\$ (17.1)	\$ 0.5	\$ 19.5	\$ 39.6	\$ 61.0	\$ 64.4	\$ 53.0	\$ 41.1	\$ 28.4	\$ 15.0	
2019 to 2041 NON-RESIDENTIAL FUNDING REQUIREMENTS												
Water: Non-Residential: Non Inflated	\$ 26.0	\$ -	\$ -	\$ -	\$ -	\$ 13.5	\$ 13.5	\$ 13.5	\$ 13.5	\$ 13.5	\$ 13.5	\$ 364.2
Water: Non-Residential: Inflated	\$ 33.0	\$ -	\$ -	\$ -	\$ -	\$ 19.0	\$ 19.3	\$ 19.7	\$ 20.1	\$ 20.5	\$ 20.9	\$ 427.7
NON-RESIDENTIAL SPACE GROWTH												
- Growth in Square Metres	\$ 5,484.5	\$ 4,009.8	\$ 4,037.4	\$ 4,065.3	\$ 4,093.3	\$ 4,121.5	\$ 1,223.5	\$ 1,226.3	\$ 1,229.2	\$ 1,232.0	\$ 1,234.9	\$ 108,327.5
REVENUE												
- DC Receipts: Inflated	\$ 24.3	\$ 18.2	\$ 18.6	\$ 19.1	\$ 19.7	\$ 20.2	\$ 6.1	\$ 6.3	\$ 6.4	\$ 6.5	\$ 6.7	\$ 448.4
INTEREST												
- Interest on Opening Balance	\$ (0.4)	\$ (0.9)	\$ 0.0	\$ 0.7	\$ 1.4	\$ 2.1	\$ 2.3	\$ 1.9	\$ 1.4	\$ 1.0	\$ 0.5	\$ (17.9)
- Interest on In-year Transactions	\$ (0.2)	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.0	\$ (0.4)	\$ (0.4)	\$ (0.4)	\$ (0.4)	\$ (0.4)	\$ (1.9)
TOTAL REVENUE	\$ 23.6	\$ 17.6	\$ 18.9	\$ 20.1	\$ 21.4	\$ 22.4	\$ 8.0	\$ 7.8	\$ 7.5	\$ 7.1	\$ 6.8	\$ 428.6
CLOSING CASH BALANCE	\$ (17.1)	\$ 0.5	\$ 19.5	\$ 39.6	\$ 61.0	\$ 64.4	\$ 53.0	\$ 41.1	\$ 28.4	\$ 15.0	\$ 0.9	

2019 Adjusted Charge Per Capita \$3.50

Allocation of Capital Program  
Residential Sector 74.0%  
Non-Residential Sector 26.0%

Rates for 2019  
Inflation Rate 2.0%  
Interest Rate on Positive Balances 3.5%  
Interest Rate on Negative Balances 5.5%

**APPENDIX E.2**

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***WASTEWATER SERVICES***

## APPENDIX E.2

### WASTEWATER SERVICES

**TABLE 1      2019 – 2041 DEVELOPMENT-RELATED CAPITAL PROGRAM**

The gross development-related capital program for Wastewater Services amounts to \$21.49 million. Of that, \$6.19 million is related to linear infrastructure and pumping stations. Another \$14.87 million is related to wastewater facilities such as headworks upgrades and an aerobic digester system. The final \$434,000 is related to studies and a Listowel collection system analysis.

Grants, subsidies and other contributions amount to \$3.90 million, all of which relate to wastewater facilities projects. The largest such contribution is \$2.09 million for headworks upgrades. The wastewater treatment plan upgrades are required to facilitate future plant expansion works; however, those works have not been included in the capital program at this time. As a result, the net municipal cost is reduced to \$17.60 million.

Benefit to existing and replacement shares of projects amount to \$8.93 million and largely relate to the 50 per cent share applied to each of the wastewater facility projects. Furthermore, 68 per cent of the pumping stations project and 72 per cent of the inflow and infiltration study have also been deemed benefit to existing or replacement shares. After accounting for these deductions, the total DC eligible amount is \$8.66 million.

Available reserve funds totalling \$176,840 have been applied to a project occurring in 2019. No projects have a post-period share, and so \$8.49 million will be recoverable during the 2019-2041 period.

**TABLE 2      CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGES**

The in-period DC-eligible cost is allocated 74 per cent to the residential sector and 26 per cent to the non-residential sector (based on shares of future population and employment growth). As such, the residential sector bears \$6.28 million of the development-related capital program. This cost, divided by the anticipated population growth in new units yields a calculated charge of \$1,622.44 per capita. The non-residential costs of \$2.21 million is divided by the anticipated new non-residential floor space, which yields a charge of \$20.37 per square metre.

**TABLE 3 CASH FLOW ANALYSIS**

After cash flow and reserve fund analysis, the residential calculated charge increases to \$1,978.00 per capita and the non-residential calculated charge increases to \$25.86 per square metre. This is a reflection of the timing of the capital program and development charges revenues.

The following table summarizes the calculation of the Wastewater Supply Services development charge:

<b>WASTEWATER SERVICES SUMMARY</b>					
2019 - 2041		Unadjusted		Adjusted	
Development-Related Capital Program		Development Charge		Development Charge	
Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$21,494,774	\$8,487,668	\$1,622.44	\$20.37	\$1,978.00	\$25.86

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TABLE 1

MUNICIPALITY OF NORTH PERTH  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
WASTEWATER SERVICES

NO.	Infrastructure Requirement	Timing	Estimated Project Costs								
			Gross Cost	Grants and Subsidies	Net Municipal Cost	Benefit to Existing Share	Total DC Eligible	Available DC Reserves	Net Growth-Related	Post Period Allocation	
<b>Linear Infrastructure and Pump Station</b>											
1	Trunk Sewer (Listowel South)	2019 - 2025	\$ 1,086,000	\$ -	\$ 1,086,000	0%	\$ -	\$ 1,086,000		\$ 1,086,000	\$ -
2	Binning Street Sewer Upsize	2020 - 2021	\$ 102,000	\$ -	\$ 102,000	0%	\$ -	\$ 102,000		\$ 102,000	\$ -
3	Pumping Stations	2020 - 2021	\$5,000,000	\$ -	\$ 5,000,000	68%	\$3,375,000	\$ 1,625,000		\$ 1,625,000	\$ -
<b>Subtotal Linear Infrastructure and Pump Station</b>			<b>\$ 6,188,000</b>	<b>\$ -</b>	<b>\$ 6,188,000</b>		<b>\$ 3,375,000</b>	<b>\$ 2,813,000</b>	<b>\$ -</b>	<b>\$ 2,813,000</b>	<b>\$ -</b>
<b>Facilities</b>											
1	New 500 mm forcemain and modifications to existing forcemains	2019 - 2019	\$ 1,017,340	\$ 529,815	\$ 487,525	50%	\$ 243,762	\$ 243,762	\$ 176,842	\$ 66,920	\$ -
2	Headworks Upgrades	2019 - 2019	\$ 4,013,245	\$ 2,090,038	\$ 1,923,207	50%	\$ 961,604	\$ 961,604		\$ 961,604	\$ -
3	Diesel generator and fuel storage for plant standby power	2019 - 2019	\$ 748,270	\$ 389,688	\$ 358,582	50%	\$ 179,291	\$ 179,291		\$ 179,291	\$ -
4	New UV disinfection system	2019 - 2019	\$ 473,545	\$ 246,615	\$ 226,930	50%	\$ 113,465	\$ 113,465		\$ 113,465	\$ -
5	Administration Building Expansion	2019 - 2019	\$ 1,409,910	\$ -	\$ 1,409,910	50%	\$ 704,955	\$ 704,955		\$ 704,955	\$ -
6	New aerobic digester system and sludge storage lagoon	2019 - 2019	\$ 3,740,480	\$ 639,153	\$ 3,101,327	50%	\$ 1,550,664	\$ 1,550,664		\$ 1,550,664	\$ -
7	new transformer substation to accommodate additional loads	2019 - 2019	\$ 595,560	\$ -	\$ 595,560	50%	\$ 297,780	\$ 297,780		\$ 297,780	\$ -
8	Hwy 23 SPS Upgrades	2019 - 2019	\$ 382,650	\$ -	\$ 382,650	50%	\$ 191,325	\$ 191,325		\$ 191,325	\$ -
9	SCADA Integration	2019 - 2019	\$ 87,950	\$ -	\$ 87,950	50%	\$ 43,975	\$ 43,975		\$ 43,975	\$ -
10	Engineering	2019 - 2019	\$ 2,403,824	\$ -	\$ 2,403,824	50%	\$ 1,201,912	\$ 1,201,912		\$ 1,201,912	\$ -
<b>Subtotal Facilities</b>			<b>\$ 14,872,774</b>	<b>\$ 3,895,309</b>	<b>\$ 10,977,465</b>		<b>\$ 5,488,733</b>	<b>\$ 5,488,733</b>	<b>\$ 176,842</b>	<b>\$ 5,311,891</b>	<b>\$ -</b>
<b>Studies and Capacity Analyses</b>											
1	Hydraulic Capacity Study	2020 - 2020	\$ 235,000	\$ -	\$ 235,000	0%	\$ -	\$ 235,000		\$ 235,000	\$ -
2	Listowel Collection System Analysis	2021 - 2021	\$ 100,000	\$ -	\$ 100,000	0%	\$ -	\$ 100,000		\$ 100,000	\$ -
3	Inflow and Infiltration Study	2020 - 2020	\$ 99,000	\$ -	\$ 99,000	72%	\$ 71,222	\$ 27,778		\$ 27,778	\$ -
<b>Subtotal Studies and Capacity Analyses</b>			<b>\$ 434,000</b>	<b>\$ -</b>	<b>\$ 434,000</b>		<b>\$ 71,222</b>	<b>\$ 362,778</b>	<b>\$ -</b>	<b>\$ 362,778</b>	<b>\$ -</b>
<b>Subtotal Wastewater Projects</b>			<b>\$ 21,494,774</b>	<b>\$ 3,895,309</b>	<b>\$ 17,599,465</b>		<b>\$ 8,934,955</b>	<b>\$ 8,664,510</b>	<b>\$ 176,842</b>	<b>\$ 8,487,668</b>	<b>\$ -</b>

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TABLE 2

MUNICIPALITY OF NORTH PERTH  
SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES  
WASTEWATER SERVICES 2019-2041

23-Year Growth in Population in New Units	3,871
Employment Growth	1,368
23-Year Growth in Square Meters	108,328

	Development-Related Capital Forecast						Residential Share		Non-Residential Share	
	Gross Project Cost (\$000)	Grants & Subsidies Contributions (\$000)	Benefit to Existing Share (\$000)	Available DC Reserves (\$000)	Post Period Allocation (\$000)	Total Net Capital Costs After Discount (\$000)	%	\$000	%	\$000
	<b>WASTEWATER SERVICES 2019-2041</b>									
Linear Infrastructure and Pump Station Facilities	\$6,188.00	\$0.00	\$3,375.00	-	\$0.00	\$2,813.00	74%	\$2,081.62	26%	\$731.38
Facilities	\$14,872.77	\$3,895.31	\$5,488.73	\$176.84	\$0.00	\$5,311.89	74%	\$3,930.80	26%	\$1,381.09
Studies and Capacity Analyses	\$434.00	\$0.00	\$71.22	\$0.00	\$0.00	\$362.78	74%	\$268.46	26%	\$94.32
<b>TOTAL WASTEWATER SERVICES 2019-2041</b>	<b>\$21,494.77</b>	<b>\$3,895.31</b>	<b>\$8,934.95</b>	<b>\$176.84</b>	<b>\$0.00</b>	<b>\$8,487.67</b>		<b>\$6,280.87</b>		<b>\$2,206.79</b>
<b>Unadjusted Development Charge Per Capita (\$)</b>								<b>\$1,622.44</b>		
<b>Unadjusted Development Charge Per Sq. M. (\$)</b>										<b>\$20.37</b>

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TABLE 3

MUNICIPALITY OF NORTH PERTH  
WASTEWATER SERVICES 2019-2041  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE

WASTEWATER: RESIDENTIAL	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
OPENING CASH BALANCE (\$000)	\$ -	\$ (3,459.4)	\$ (3,916.4)	\$ (4,253.8)	\$ (4,083.4)	\$ (3,884.7)	\$ (3,655.8)	\$ (3,394.3)	\$ (2,963.6)	\$ (2,691.3)	\$ (2,389.4)	\$ (2,055.8)
2019 to 2041 RESIDENTIAL FUNDING REQUIREMENTS												
Wastewater: Residential: Non Inflated	\$ 4,045.6	\$ 948.3	\$ 827.8	\$ 114.8	\$ 114.8	\$ 114.8	\$ 114.8	\$ -	\$ -	\$ -	\$ -	\$ -
Wastewater: Residential: Inflated	\$ 4,045.6	\$ 967.2	\$ 861.2	\$ 121.8	\$ 124.3	\$ 126.8	\$ 129.3	\$ -	\$ -	\$ -	\$ -	\$ -
NEW RESIDENTIAL DEVELOPMENT												
- Population Growth in New Units	343	351	361	247	252	257	262	267	185	187	190	192
REVENUE												
- DC Receipts: Inflated	\$ 678.8	\$ 707.6	\$ 742.5	\$ 519.3	\$ 540.2	\$ 561.7	\$ 583.9	\$ 606.8	\$ 427.8	\$ 442.2	\$ 457.0	\$ 472.2
INTEREST												
- Interest on Opening Balance	\$ -	\$ (190.3)	\$ (215.4)	\$ (234.0)	\$ (224.6)	\$ (213.7)	\$ (201.1)	\$ (186.7)	\$ (163.0)	\$ (148.0)	\$ (131.4)	\$ (113.1)
- Interest on In-year Transactions	\$ (92.6)	\$ (7.1)	\$ (3.3)	\$ 7.0	\$ 7.3	\$ 7.6	\$ 8.0	\$ 10.6	\$ 7.5	\$ 7.7	\$ 8.0	\$ 8.3
TOTAL REVENUE	\$ 586.2	\$ 510.2	\$ 523.8	\$ 292.3	\$ 322.9	\$ 355.7	\$ 390.8	\$ 430.7	\$ 272.3	\$ 301.9	\$ 333.6	\$ 367.4
CLOSING CASH BALANCE	\$ (3,459.4)	\$ (3,916.4)	\$ (4,253.8)	\$ (4,083.4)	\$ (3,884.7)	\$ (3,655.8)	\$ (3,394.3)	\$ (2,963.6)	\$ (2,691.3)	\$ (2,389.4)	\$ (2,055.8)	\$ (1,688.4)

WASTEWATER: RESIDENTIAL	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041 TOTAL	
OPENING CASH BALANCE (\$000)	\$ (1,688.4)	\$ (1,284.9)	\$ (1,132.5)	\$ (967.3)	\$ (788.5)	\$ (595.2)	\$ (386.5)	\$ (318.9)	\$ (245.9)	\$ (167.0)	\$ (82.0)	
2019 to 2041 RESIDENTIAL FUNDING REQUIREMENTS												
Wastewater: Residential: Non Inflated	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,280.9
Wastewater: Residential: Inflated	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,376.2
NEW RESIDENTIAL DEVELOPMENT												
- Population Growth in New Units	\$ 194.5	\$ 85.7	\$ 85.7	\$ 85.7	\$ 85.7	\$ 85.7	\$ 30.9	\$ 30.9	\$ 30.9	\$ 30.9	\$ 30.9	\$ 3,871.3
REVENUE												
- DC Receipts: Inflated	\$ 487.9	\$ 219.2	\$ 223.6	\$ 228.0	\$ 232.6	\$ 237.3	\$ 87.3	\$ 89.0	\$ 90.8	\$ 92.6	\$ 94.5	\$ 8,822.8
INTEREST												
- Interest on Opening Balance	\$ (92.9)	\$ (70.7)	\$ (62.3)	\$ (53.2)	\$ (43.4)	\$ (32.7)	\$ (21.3)	\$ (17.5)	\$ (13.5)	\$ (9.2)	\$ (4.5)	\$ (2,442.3)
- Interest on In-year Transactions	\$ 8.5	\$ 3.8	\$ 3.9	\$ 4.0	\$ 4.1	\$ 4.2	\$ 1.5	\$ 1.6	\$ 1.6	\$ 1.6	\$ 1.7	\$ 5.4
TOTAL REVENUE	\$ 403.6	\$ 152.4	\$ 165.2	\$ 178.8	\$ 193.3	\$ 208.7	\$ 67.6	\$ 73.0	\$ 78.9	\$ 85.0	\$ 91.6	\$ 6,385.9
CLOSING CASH BALANCE	\$ (1,284.9)	\$ (1,132.5)	\$ (967.3)	\$ (788.5)	\$ (595.2)	\$ (386.5)	\$ (318.9)	\$ (245.9)	\$ (167.0)	\$ (82.0)	\$ 9.7	

2019 Adjusted Charge Per Capita \$1,978.00

Allocation of Capital Program  
Residential Sector 74.0%  
Non-Residential Sector 26.0%

Rates for 2019  
Inflation Rate 2.0%  
Interest Rate on Positive Balances 3.5%  
Interest Rate on Negative Balances 5.5%



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TABLE 3

MUNICIPALITY OF NORTH PERTH  
WASTEWATER SERVICES 2019-2041  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE

WASTEWATER: NON-RESIDENTIAL	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
OPENING CASH BALANCE (\$000)	\$ -	\$ (1,257.7)	\$ (1,466.0)	\$ (1,640.0)	\$ (1,600.9)	\$ (1,555.0)	\$ (1,501.8)	\$ (1,440.7)	\$ (1,323.9)	\$ (1,233.9)	\$ (1,134.0)	\$ (1,023.7)
2019 to 2041 NON-RESIDENTIAL FUNDING REQUIREMENTS												
Wastewater: Non-Residential: Non Infl	\$ 1,421.4	\$ 333.2	\$ 290.8	\$ 40.3	\$ 40.3	\$ 40.3	\$ 40.3	\$ -	\$ -	\$ -	\$ -	\$ -
Wastewater: Non-Residential: Inflated	\$ 1,421.4	\$ 339.8	\$ 302.6	\$ 42.8	\$ 43.7	\$ 44.5	\$ 45.4	\$ -	\$ -	\$ -	\$ -	\$ -
NON-RESIDENTIAL SPACE GROWTH												
- Growth in Square Metres	7,632	7,750	7,869	6,191	6,263	6,336	6,410	6,484	5,284	5,334	5,383	5,434
REVENUE												
- DC Receipts: Inflated	\$ 197.4	\$ 204.4	\$ 211.7	\$ 169.9	\$ 175.3	\$ 180.9	\$ 186.7	\$ 192.6	\$ 160.1	\$ 164.8	\$ 169.7	\$ 174.7
INTEREST												
- Interest on Opening Balance	\$ -	\$ (69.2)	\$ (80.6)	\$ (90.2)	\$ (88.1)	\$ (85.5)	\$ (82.6)	\$ (79.2)	\$ (72.8)	\$ (67.9)	\$ (62.4)	\$ (56.3)
- Interest on In-year Transactions	\$ (33.7)	\$ (3.7)	\$ (2.5)	\$ 2.2	\$ 2.3	\$ 2.4	\$ 2.5	\$ 3.4	\$ 2.8	\$ 2.9	\$ 3.0	\$ 3.1
TOTAL REVENUE	\$ 163.7	\$ 131.5	\$ 128.6	\$ 81.9	\$ 89.6	\$ 97.8	\$ 106.6	\$ 116.7	\$ 90.1	\$ 99.8	\$ 110.3	\$ 121.5
CLOSING CASH BALANCE	\$ (1,257.7)	\$ (1,466.0)	\$ (1,640.0)	\$ (1,600.9)	\$ (1,555.0)	\$ (1,501.8)	\$ (1,440.7)	\$ (1,323.9)	\$ (1,233.9)	\$ (1,134.0)	\$ (1,023.7)	\$ (902.3)

WASTEWATER: NON-RESIDENTIAL	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041 TOTAL	
OPENING CASH BALANCE (\$000)	\$ (902.3)	\$ (768.9)	\$ (674.7)	\$ (571.6)	\$ (459.1)	\$ (336.5)	\$ (203.2)	\$ (168.3)	\$ (130.6)	\$ (89.7)	\$ (45.5)	
2019 to 2041 NON-RESIDENTIAL FUNDING REQUIREMENTS												
Wastewater: Non-Residential: Non Infl	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,206.8
Wastewater: Non-Residential: Inflated	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,240.3
NON-RESIDENTIAL SPACE GROWTH												
- Growth in Square Metres	\$ 5,484.5	\$ 4,009.8	\$ 4,037.4	\$ 4,065.3	\$ 4,093.3	\$ 4,121.5	\$ 1,223.5	\$ 1,226.3	\$ 1,229.2	\$ 1,232.0	\$ 1,234.9	\$ 108,327.5
REVENUE												
- DC Receipts: Inflated	\$ 179.9	\$ 134.1	\$ 137.8	\$ 141.5	\$ 145.3	\$ 149.2	\$ 45.2	\$ 46.2	\$ 47.2	\$ 48.3	\$ 49.4	\$ 3,312.3
INTEREST												
- Interest on Opening Balance	\$ (49.6)	\$ (42.3)	\$ (37.1)	\$ (31.4)	\$ (25.2)	\$ (18.5)	\$ (11.2)	\$ (9.3)	\$ (7.2)	\$ (4.9)	\$ (2.5)	\$ (1,074.0)
- Interest on In-year Transactions	\$ 3.1	\$ 2.3	\$ 2.4	\$ 2.5	\$ 2.5	\$ 2.6	\$ 0.8	\$ 0.8	\$ 0.8	\$ 0.8	\$ 0.9	\$ 4.3
TOTAL REVENUE	\$ 133.4	\$ 94.2	\$ 103.1	\$ 112.5	\$ 122.6	\$ 133.3	\$ 34.8	\$ 37.7	\$ 40.8	\$ 44.2	\$ 47.8	\$ 2,242.5
CLOSING CASH BALANCE	\$ (768.9)	\$ (674.7)	\$ (571.6)	\$ (459.1)	\$ (336.5)	\$ (203.2)	\$ (168.3)	\$ (130.6)	\$ (89.7)	\$ (45.5)	\$ 2.2	

2019 Adjusted Charge Per Capita	\$25.86
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<b>Allocation of Capital Program</b>	
Residential Sector	74.0%
Non-Residential Sector	26.0%
<b>Rates for 2019</b>	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

**APPENDIX E.3**

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***STORMWATER SERVICES***

### APPENDIX E.3

#### STORMWATER MANAGEMENT SERVICES

**TABLE 1      2019 – 2041 DEVELOPMENT-RELATED CAPITAL PROGRAM**

The capital program for Stormwater Management Services amounts to \$968,400. Roughly, \$565,000 is related to the Listowel South East Drainage Area debt principal and the rest is related to the debt interest. This share of cost is considered the development charge eligible share of costs.

No grants, subsidies or other contributions are expected, and so the net municipal cost of the capital program remains \$968,400.

**TABLE 2      CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGES**

In total, \$968,400 is brought forward to the DC calculation, to be allocated 89 per cent to the residential sector and 11 per cent to the non-residential sector based on the shares of population and employment growth in the Listowel South East Drainage Area. This yields a calculated charge of \$622.91 per capita and \$8.02 per square metre.

<b>STORMWATER MANAGEMENT SERVICES SUMMARY</b>					
2019 - 2041		Unadjusted		Adjusted	
Development-Related Capital Program		Development Charge		Development Charge	
Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$968,399	\$968,399	\$622.91	\$8.02	\$622.91	\$8.02

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 APPENDIX E.3  
 TABLE 1

MUNICIPALITY OF NORTH PERTH  
 DEVELOPMENT-RELATED CAPITAL PROGRAM  
 STORMWATER MANAGEMENT SERVICES

NO.	Infrastructure Requirement	Timing	Estimated Project Costs								
			Gross Cost	Grants/ Subsidies and other Recoveries	Net Municipal	Benefit to Existing Share	Net DC Eligible	Available DC Reserves	Net Growth-Related	Post Period Allocation	
<b>Stormwater Projects</b>											
1	Listowel South East Drainage Area - Debt Principal	2019 - 2041	\$564,964.48	\$ -	\$ 564,964	0%	\$ -	\$ 564,964		\$ 564,964	\$ -
2	Listowel South East Drainage Area - Debt Interest	2019 - 2041	\$403,434.18	\$ -	\$ 403,434	0%	\$ -	\$ 403,434		\$ 403,434	\$ -
<b>Subtotal Stormwater Projects</b>			<b>\$ 968,399</b>	<b>\$ -</b>	<b>\$ 968,399</b>		<b>\$ -</b>	<b>\$ 968,399</b>		<b>\$ -</b>	<b>\$ -</b>

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 APPENDIX E.3  
 TABLE 2

MUNICIPALITY OF NORTH PERTH  
 SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES  
 STORMWATER SERVICE 2019-2041

23-Year Growth in Population in New Units	1,377
Employment Growth	178
23-Year Growth in Square Meters	13,798

	Growth-Related Capital Forecast						Residential Share		Non-Residential Share	
	Gross Project Cost (\$000)	Direct Developer Contributions (\$000)	Benefit to Existing Share (\$000)	Available DC Reserves (\$000)	Post Period Allocation (\$000)	Total Net Capital Costs After Discount (\$000)	%	\$000	%	\$000
	<b>STORMWATER SERVICE 2019-2041</b>									
Stormwater Projects	\$968.40	\$0.00	\$0.00	\$0.00	\$0.00	\$968.40	89%	\$857.78	11%	\$110.62
<b>TOTAL STORMWATER SERVICE 2019-2041</b>	<b>\$968.40</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$968.40</b>		<b>\$857.78</b>		<b>\$110.62</b>
Unadjusted Development Charge Per Capita (\$)								<b>\$622.91</b>		
Unadjusted Development Charge Per Sq. M. (\$)										<b>\$8.02</b>

**APPENDIX E.4**

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***NORTHEAST MASTER PLAN AREA***

## APPENDIX E.4

### NORTHEAST MASTER PLAN AREA

**TABLE 1      2019 – 2041 DEVELOPMENT-RELATED CAPITAL PROGRAM**

The capital program for the Northeast Master Plan area amounts to \$1.51 Million and largely relates to the provision of stormwater management infrastructure and road and related work directly associated with the site. The capital program only reflects the share of costs that can be attributable for development charge recovery in this area. It is noted that over \$13 million in works is to be funded from other non-DC sources and not included for in the calculation of the charges.

**TABLE 2      CALCULATION OF THE UNADJUSTED DEVELOPMENT CHARGES**

In total, \$1.51 million is brought forward to the DC calculation and allocated 72 per cent to the residential sector and 28 per cent to the non-residential sector based on the shares of population and employment growth. This yields a calculated charge of \$1,614.01 per capita and \$20.76 per square metre.

**TABLE 3      CASH FLOW ANALYSIS**

After cash flow and reserve fund analysis, the residential calculated charge increases to \$2,115 per capita and the non-residential calculated charge increases to \$27.20 per square metre. This is a reflection of the timing of the capital program and development charges revenues.

The following table summarizes the calculation of the area-specific development charges in the Northeast Master Plan area:

NORTH EAST MASTER PLAN SUMMARY					
		Unadjusted		Adjusted	
Development-Related Capital Program		Development Charge		Development Charge	
Total	Net DC Recoverable	\$/capita	\$/sq.m	\$/capita	\$/sq.m
\$1,515,375	\$1,515,375	\$1,614.01	\$20.76	\$2,115.00	\$27.20

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TABLE 1

MUNICIPALITY OF NORTH PERTH  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
NORTHEAST MASTER PLAN (NEMP)

NO.	Infrastructure Requirement	Timing	Estimated Project Costs									
			Gross Cost	Grants/ Subsidies and other Recoveries	Net Municipal	Benefit to Existing Share	Net DC Eligible	Available DC Reserves	Net Growth-Related	Post Period Allocation		
<b>NEMP Projects</b>												
1	Stormwater Management	2019 - 2024	\$584,125	\$ -	\$ 584,125	0%	\$ -	\$ 584,125	\$ -	\$ 584,125	\$ -	
2	Utilities	2019 - 2024	\$102,500	\$ -	\$ 102,500	0%	\$ -	\$ 102,500	\$ -	\$ 102,500	\$ -	
3	Roads & Grading	2019 - 2024	\$597,500	\$ -	\$ 597,500	0%	\$ -	\$ 597,500	\$ -	\$ 597,500	\$ -	
4	Storm	2019 - 2024	\$231,250	\$ -	\$ 231,250	0%	\$ -	\$ 231,250	\$ -	\$ 231,250	\$ -	
<b>Subtotal NEMP Projects</b>			<b>\$ 1,515,375</b>	<b>\$ -</b>	<b>\$ 1,515,375</b>	<b>\$ -</b>	<b>\$ 1,515,375</b>	<b>\$ -</b>	<b>\$ 1,515,375</b>	<b>\$ -</b>		

*Note: Only development-related costs are included in the capital program. Approximately \$13 million of additional capital work will be required and is to be funded by non-DC sources.*



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**TABLE 2**

**MUNICIPALITY OF NORTH PERTH**  
**SUMMARY OF UNADJUSTED RESIDENTIAL AND NON-RESIDENTIAL DEVELOPMENT CHARGES**  
**NORTHEAST MASTER PLAN (NEMP)**

Growth in Population in New Units to Build-Out	676
Employment Growth	263
Growth in Square Meters to Build-Out	20,435

	Growth-Related Capital Forecast						Residential Share		Non-Residential Share	
	Gross Project Cost (\$000)	Grants Subsidy Contributions (\$000)	Benefit to Existing Share (\$000)	Available DC Reserves (\$000)	Post Period Allocation (\$000)	Total Net Capital Costs After Discount (\$000)	%	\$000	%	\$000
	<b>NORTHEAST MASTER PLAN (NEMP)</b> NEMP Projects	\$1,515.38	\$0.00	\$0.00	\$0.00	\$0.00	\$1,515.37	72%	\$1,091.07	28%
<b>TOTAL NORTHEAST MASTER PLAN (NEMP)</b>	<b>\$1,515.38</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$1,515.37</b>		<b>\$1,091.07</b>		<b>\$424.30</b>
<b>Unadjusted Development Charge Per Capita (\$)</b>								<b>\$1,614.01</b>		
<b>Unadjusted Development Charge Per Sq. M. (\$)</b>										<b>\$20.76</b>

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TABLE 3

MUNICIPALITY OF NORTH PERTH  
NORTHEAST MASTER PLAN (NEMP)  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE

NEMP: RESIDENTIAL	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
OPENING CASH BALANCE (\$000)	\$ -	\$ (123.0)	\$ (255.2)	\$ (397.1)	\$ (549.5)	\$ (712.8)	\$ (887.8)	\$ (865.4)	\$ (840.3)	\$ (812.5)	\$ (781.5)	\$ (747.4)
2019 to 2041 RESIDENTIAL FUNDING REQUIREMENTS												
Nemp Residential: Non Inflated	\$ 181.8	\$ 181.8	\$ 181.8	\$ 181.8	\$ 181.8	\$ 181.8	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Nemp Residential: Inflated	\$ 181.8	\$ 185.5	\$ 189.2	\$ 193.0	\$ 196.8	\$ 200.8	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
NEW RESIDENTIAL DEVELOPMENT												
- Population Growth in New Units	29	29	29	29	29	29	29	29	29	29	29	29
REVENUE												
- DC Receipts: Inflated	\$ 62.2	\$ 63.4	\$ 64.7	\$ 66.0	\$ 67.3	\$ 68.6	\$ 70.0	\$ 71.4	\$ 72.8	\$ 74.3	\$ 75.8	\$ 77.3
INTEREST												
- Interest on Opening Balance	\$ -	\$ (6.8)	\$ (14.0)	\$ (21.8)	\$ (30.2)	\$ (39.2)	\$ (48.8)	\$ (47.6)	\$ (46.2)	\$ (44.7)	\$ (43.0)	\$ (41.1)
- Interest on In-year Transactions	\$ (3.3)	\$ (3.4)	\$ (3.4)	\$ (3.5)	\$ (3.6)	\$ (3.6)	\$ 1.2	\$ 1.2	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.4
TOTAL REVENUE	\$ 58.9	\$ 53.3	\$ 47.2	\$ 40.6	\$ 33.5	\$ 25.8	\$ 22.4	\$ 25.1	\$ 27.9	\$ 30.9	\$ 34.1	\$ 37.5
CLOSING CASH BALANCE	\$ (123.0)	\$ (255.2)	\$ (397.1)	\$ (549.5)	\$ (712.8)	\$ (887.8)	\$ (865.4)	\$ (840.3)	\$ (812.5)	\$ (781.5)	\$ (747.4)	\$ (709.9)

NEMP: RESIDENTIAL	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041 TOTAL	
OPENING CASH BALANCE (\$000)	\$ (709.9)	\$ (668.7)	\$ (623.7)	\$ (574.5)	\$ (521.0)	\$ (462.8)	\$ (399.7)	\$ (331.4)	\$ (257.4)	\$ (177.6)	\$ (91.5)	
2019 to 2041 RESIDENTIAL FUNDING REQUIREMENTS												
Nemp Residential: Non Inflated	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,091.1
Nemp Residential: Inflated	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,147.1
NEW RESIDENTIAL DEVELOPMENT												
- Population Growth in New Units	\$ 29.4	\$ 29.4	\$ 29.4	\$ 29.4	\$ 29.4	\$ 29.4	\$ 29.4	\$ 29.4	\$ 29.4	\$ 29.4	\$ 29.4	\$ 676.0
REVENUE												
- DC Receipts: Inflated	\$ 78.8	\$ 80.4	\$ 82.0	\$ 83.7	\$ 85.3	\$ 87.0	\$ 88.8	\$ 90.6	\$ 92.4	\$ 94.2	\$ 96.1	\$ 1,793.1
INTEREST												
- Interest on Opening Balance	\$ (39.0)	\$ (36.8)	\$ (34.3)	\$ (31.6)	\$ (28.7)	\$ (25.5)	\$ (22.0)	\$ (18.2)	\$ (14.2)	\$ (9.8)	\$ (5.0)	\$ (648.5)
- Interest on In-year Transactions	\$ 1.4	\$ 1.4	\$ 1.4	\$ 1.5	\$ 1.5	\$ 1.5	\$ 1.6	\$ 1.6	\$ 1.6	\$ 1.6	\$ 1.7	\$ 3.8
TOTAL REVENUE	\$ 41.2	\$ 45.0	\$ 49.2	\$ 53.5	\$ 58.2	\$ 63.1	\$ 68.4	\$ 73.9	\$ 79.8	\$ 86.1	\$ 92.8	\$ 1,148.3
CLOSING CASH BALANCE	\$ (668.7)	\$ (623.7)	\$ (574.5)	\$ (521.0)	\$ (462.8)	\$ (399.7)	\$ (331.4)	\$ (257.4)	\$ (177.6)	\$ (91.5)	\$ 1.2	

2019 Adjusted Charge Per Capita	\$2,115.00
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<b>Allocation of Capital Program</b>	
Residential Sector	72.0%
Non-Residential Sector	28.0%
<b>Rates for 2019</b>	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

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TABLE 3

MUNICIPALITY OF NORTH PERTH  
NORTHEAST MASTER PLAN (NEMP)  
CASHFLOW AND DETERMINATION OF DEVELOPMENT CHARGE

NEMP: NON-RESIDENTIAL	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
OPENING CASH BALANCE (\$000)	\$ -	\$ (47.8)	\$ (99.2)	\$ (154.5)	\$ (213.7)	\$ (277.3)	\$ (345.3)	\$ (336.6)	\$ (326.9)	\$ (316.1)	\$ (304.0)	\$ (290.8)
2019 to 2041 NON-RESIDENTIAL FUNDING REQUIREMENTS												
Nemp Non-Residential: Non Inflated	\$ 70.7	\$ 70.7	\$ 70.7	\$ 70.7	\$ 70.7	\$ 70.7	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Nemp Non-Residential: Inflated	\$ 70.7	\$ 72.1	\$ 73.6	\$ 75.0	\$ 76.5	\$ 78.1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
NON-RESIDENTIAL SPACE GROWTH												
- Growth in Square Metres	888	888	888	888	888	888	888	888	888	888	888	888
REVENUE												
- DC Receipts: Inflated	\$ 24.2	\$ 24.6	\$ 25.1	\$ 25.6	\$ 26.2	\$ 26.7	\$ 27.2	\$ 27.8	\$ 28.3	\$ 28.9	\$ 29.5	\$ 30.0
INTEREST												
- Interest on Opening Balance	\$ -	\$ (2.6)	\$ (5.5)	\$ (8.5)	\$ (11.8)	\$ (15.2)	\$ (19.0)	\$ (18.5)	\$ (18.0)	\$ (17.4)	\$ (16.7)	\$ (16.0)
- Interest on In-year Transactions	\$ (1.3)	\$ (1.3)	\$ (1.3)	\$ (1.4)	\$ (1.4)	\$ (1.4)	\$ 0.5	\$ 0.5	\$ 0.5	\$ 0.5	\$ 0.5	\$ 0.5
TOTAL REVENUE	\$ 22.9	\$ 20.7	\$ 18.4	\$ 15.8	\$ 13.0	\$ 10.0	\$ 8.7	\$ 9.7	\$ 10.8	\$ 12.0	\$ 13.3	\$ 14.6
CLOSING CASH BALANCE	\$ (47.8)	\$ (99.2)	\$ (154.5)	\$ (213.7)	\$ (277.3)	\$ (345.3)	\$ (336.6)	\$ (326.9)	\$ (316.1)	\$ (304.0)	\$ (290.8)	\$ (276.2)

NEMP: NON-RESIDENTIAL	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041 TOTAL	
OPENING CASH BALANCE (\$000)	\$ (276.2)	\$ (260.2)	\$ (242.7)	\$ (223.6)	\$ (202.8)	\$ (180.2)	\$ (155.7)	\$ (129.2)	\$ (100.4)	\$ (69.4)	\$ (36.0)	
2019 to 2041 NON-RESIDENTIAL FUNDING REQUIREMENTS												
Nemp Non-Residential: Non Inflated	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 424.3
Nemp Non-Residential: Inflated	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 446.1
NON-RESIDENTIAL SPACE GROWTH												
- Growth in Square Metres	\$ 888.5	\$ 888.5	\$ 888.5	\$ 888.5	\$ 888.5	\$ 888.5	\$ 888.5	\$ 888.5	\$ 888.5	\$ 888.5	\$ 888.5	\$ 20,434.8
REVENUE												
- DC Receipts: Inflated	\$ 30.6	\$ 31.3	\$ 31.9	\$ 32.5	\$ 33.2	\$ 33.8	\$ 34.5	\$ 35.2	\$ 35.9	\$ 36.6	\$ 37.4	\$ 697.1
INTEREST												
- Interest on Opening Balance	\$ (15.2)	\$ (14.3)	\$ (13.4)	\$ (12.3)	\$ (11.2)	\$ (9.9)	\$ (8.6)	\$ (7.1)	\$ (5.5)	\$ (3.8)	\$ (2.0)	\$ (252.4)
- Interest on In-year Transactions	\$ 0.5	\$ 0.5	\$ 0.6	\$ 0.6	\$ 0.6	\$ 0.6	\$ 0.6	\$ 0.6	\$ 0.6	\$ 0.6	\$ 0.7	\$ 1.5
TOTAL REVENUE	\$ 16.0	\$ 17.5	\$ 19.1	\$ 20.8	\$ 22.6	\$ 24.5	\$ 26.6	\$ 28.7	\$ 31.0	\$ 33.5	\$ 36.0	\$ 446.1
CLOSING CASH BALANCE	\$ (260.2)	\$ (242.7)	\$ (223.6)	\$ (202.8)	\$ (180.2)	\$ (155.7)	\$ (129.2)	\$ (100.4)	\$ (69.4)	\$ (36.0)	\$ 0.1	

2019 Adjusted Charge Per Capita	\$27.20
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<b>Allocation of Capital Program</b>	
Residential Sector	72.0%
Non-Residential Sector	28.0%
<b>Rates for 2019</b>	
Inflation Rate	2.0%
Interest Rate on Positive Balances	3.5%
Interest Rate on Negative Balances	5.5%

Figure 1: Listowel South East Drainage Service Area Map



Figure 2: Atwood - Elma Ward Service Area Map

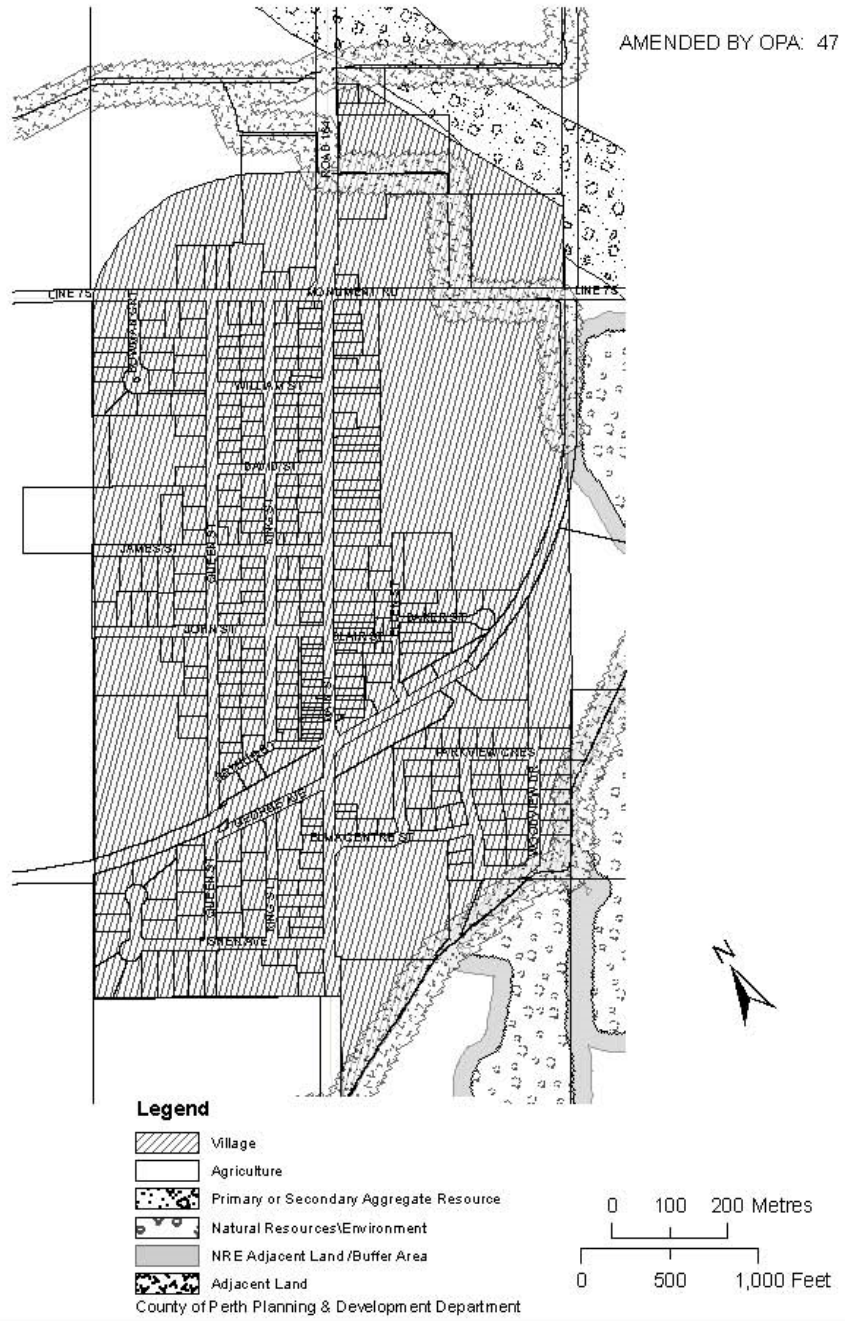
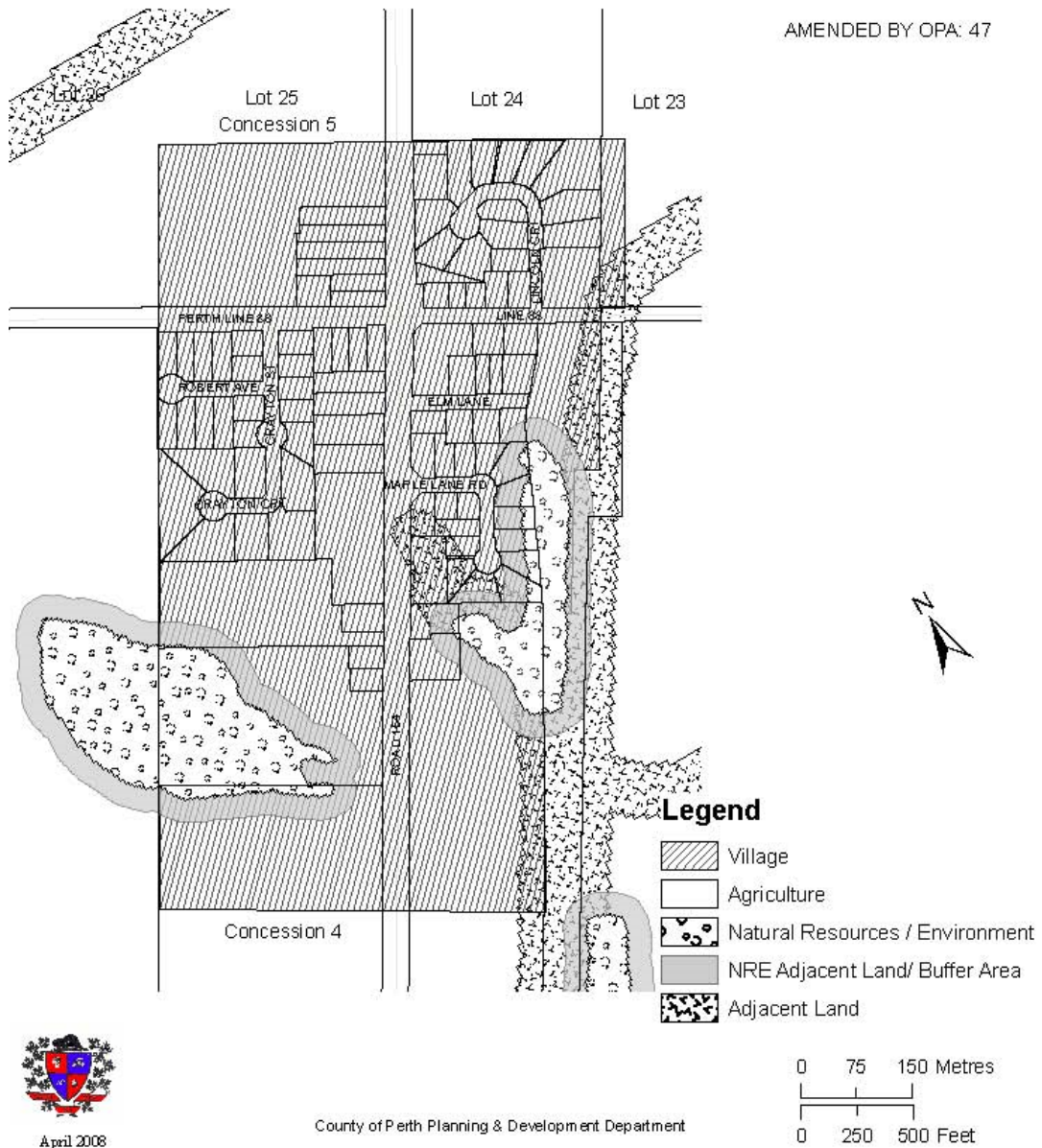


Figure 3: Gowanstown - Wallace Ward Service Area Map



County of Perth Planning & Development Department

Figure 4: Wallace Ward Service Area Map

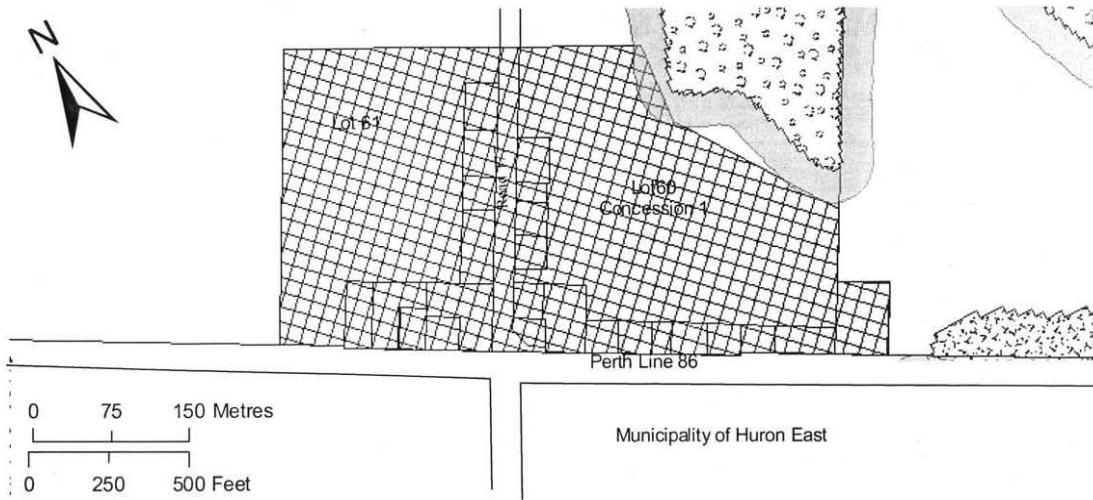


Figure 5: Listowel South Drainage Service Area Map

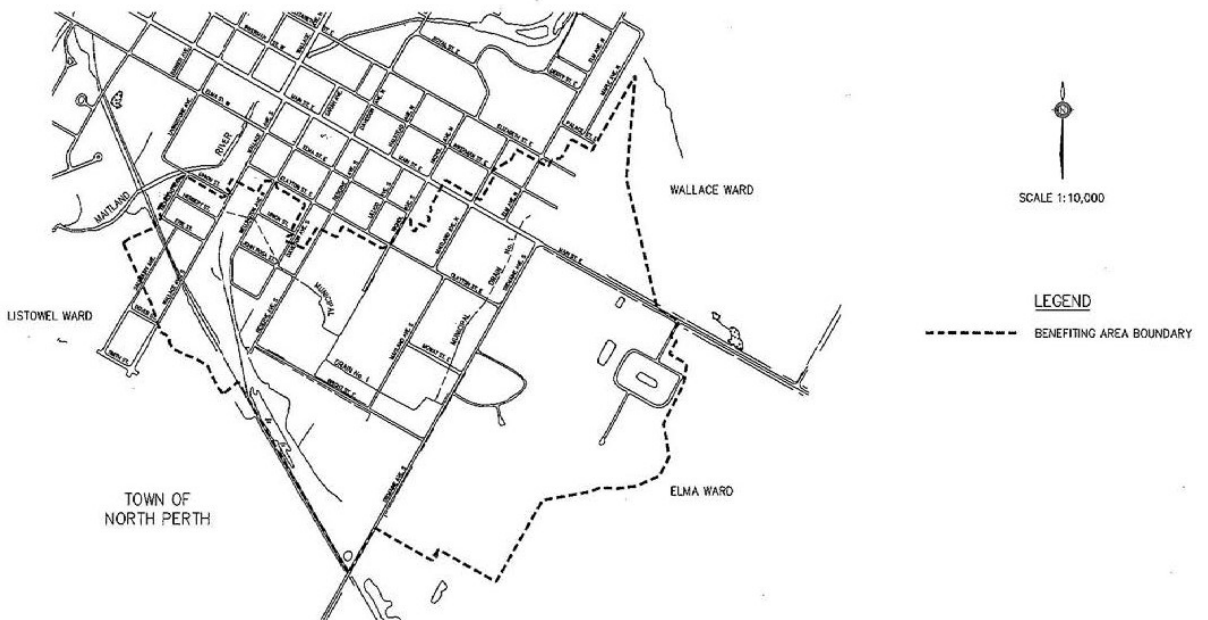
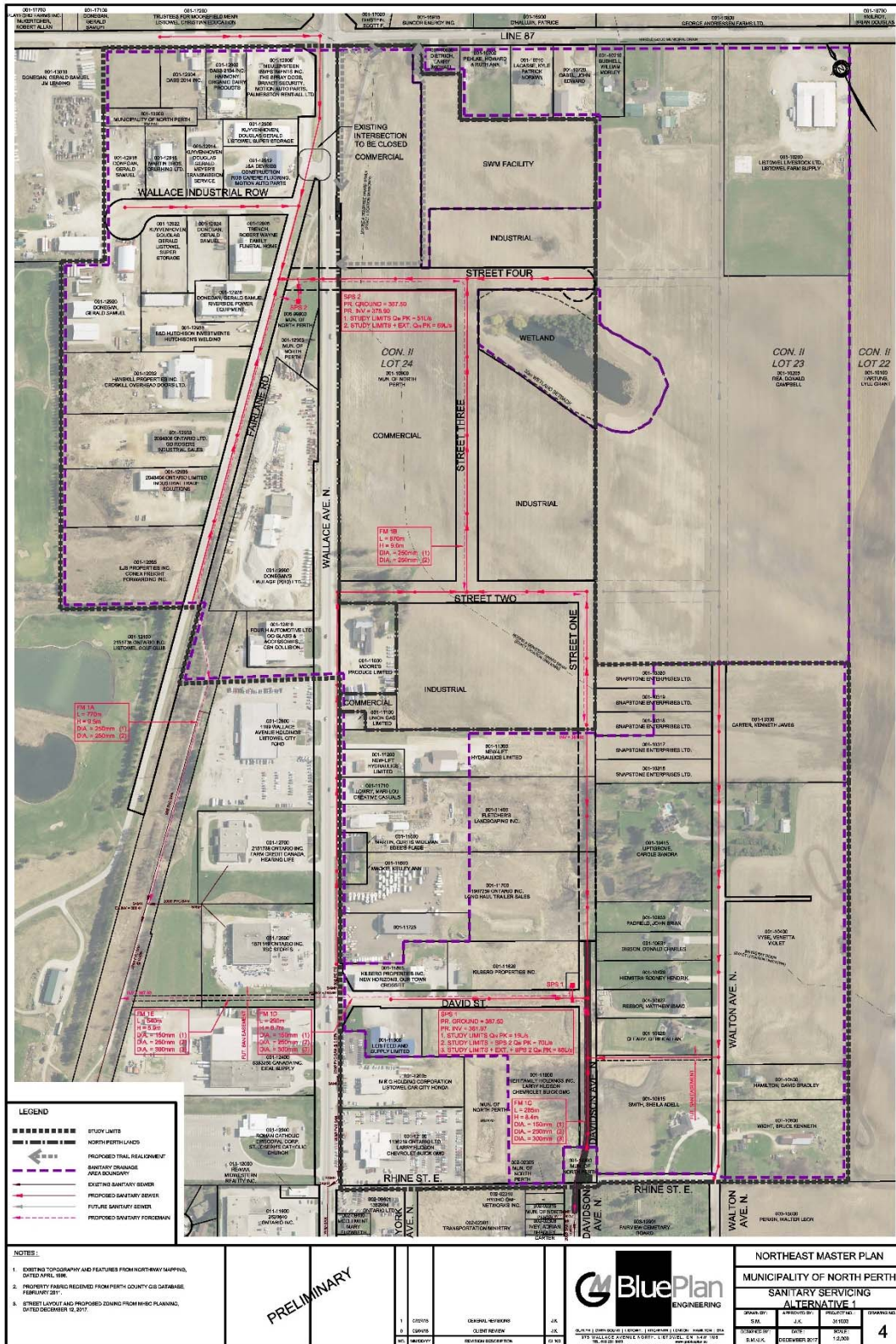


Figure 6: Northeast Master Plan Map





**APPENDIX F**

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***RESERVE FUND BALANCES***

## APPENDIX F

### DEVELOPMENT CHARGES RESERVE FUND UNALLOCATED BALANCES

The DCA requires that a reserve fund be established for each service for which development charges are collected. Table 1 presents the uncommitted reserve fund balances that are available to help fund the growth-related net capital costs identified in this study. The opening balances of the development charges reserve funds as of December 31, 2018 have been adjusted to account for existing commitments and adjustments to reserve fund projects as well as outstanding intra fund borrowing.

As shown on Table 1, the December 31, 2018 total adjusted reserve fund balance was in a positive position of \$923,418. The application of the available uncommitted balance in each of the reserve funds is discussed in the appendix section related to each service. The funds are assigned to projects in the initial years of the capital program for each service. This has the effect of reducing and deferring capital costs brought forward to the development charges calculation and the cash flow analysis.

**APPENDIX F  
TABLE 1**

**MUNICIPALITY OF NORTH PERTH  
DEVELOPMENT CHARGE RESERVE FUND BALANCE BY ACCOUNT  
YEAR ENDING DECEMBER 31, 2018**

<b>Service</b>	<b>Reserve Fund Balance as at Dec. 31, 2018</b>
Library Services	308,972.38
Fire Protection Services	(43,830.07)
Police Services	(81,681.91)
Indoor Recreation Services	695,303.73
Outdoor Recreation Services	367,756.68
Child Care Services	(24,237.45)
Administration Services	199,790.86
Water Services	337,682.46
Wastewater Services	176,841.92
Roads & Related	(819,767.50)
Public Works	(193,412.70)
Stormwater Management Services	0.01
<b>Total Development Charge Reserves</b>	<b>923,418.42</b>

## APPENDIX G

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### *COST OF GROWTH*

## APPENDIX G

### COST OF GROWTH ANALYSIS

#### ASSET MANAGEMENT PLAN

The DCA now requires that municipalities complete an Asset Management Plan before passing a development charges by-law. A key function of the Asset Management Plan is to demonstrate that all assets funded under the development charges by-law are financially sustainable over their full life cycle.

#### ASSET TYPES

A summary of the future municipal-owned assets and estimated useful life assumptions for eligible DC services considered as part of the study are outlined in Table 1 and Table 2. The useful lives, where possible, have been sourced from the Municipality's Asset Management Plan. Although all capital assets considered in the study have been identified, not all assets necessitate future replacement or ongoing maintenance activities. The exception and the justification is as follows:

- Some of the works identified may represent one-time expenditures and may be temporary in nature. Therefore, the assets would not be required to be replaced and no ongoing operation and maintenance costs exist. Such assets are identified as “not a long-term asset” in the table.
- Some projects do not relate to the emplacement of a tangible capital asset—some examples include the acquisition of land or the undertaking of development-related studies. These projects/costs do not necessarily require future replacement or ongoing maintenance. Such projects are identified as “not infrastructure” in the table.
- For assets that have been constructed (i.e. recovery of past commitments) it is assumed that the related contribution is already included within the Municipality's annual provision. As such, these projects are identified as “not applicable” in the table.

It should be noted that the capital cost estimates prepared for each of the projects identified in this section include grouped costs of various individual elements, which, as a stand-alone item, may have its own useful life (ex. New buildings include: HVAC, structural elements, roof, etc.). Accordingly, the average useful life assumptions noted below are applicable to all project components.

<b>Table 1 – Summary of 10-Year Municipal Assets</b>	
<b>Service and Amenities</b>	<b>Estimated Useful Life</b>
<b>Fire Services</b> <ul style="list-style-type: none"> <li>• Recovery of Negative Reserve Fund</li> <li>• Buildings</li> <li>• Vehicles</li> <li>• Equipment</li> </ul>	Not applicable 50 years 15 years 15 years
<b>Library</b> <ul style="list-style-type: none"> <li>• Buildings</li> <li>• Collection materials</li> </ul>	50 years 10 years
<b>Indoor Recreation</b> <ul style="list-style-type: none"> <li>• Facilities</li> </ul>	50 years
<b>Outdoor Recreation</b> <ul style="list-style-type: none"> <li>• Park development</li> <li>• Fleet and equipment</li> </ul>	25 years 15 years
<b>Child Care</b> <ul style="list-style-type: none"> <li>• Buildings</li> <li>• Recovery of Negative Reserve Fund</li> <li>• Program costs</li> </ul>	50 years Not applicable Not applicable
<b>Administration</b> <ul style="list-style-type: none"> <li>• Studies</li> </ul>	Not infrastructure
<b>Police Services</b> <ul style="list-style-type: none"> <li>• Recovery of Negative Reserve Fund</li> </ul>	Not applicable
<b>Public Works</b> <ul style="list-style-type: none"> <li>• Debt Recovery</li> <li>• Vehicles</li> <li>• Buildings</li> </ul>	Not applicable 15 years 50 years

<b>Table 2 – Summary of 23-Year Municipal Assets</b>	
<b>Capital Project Description</b>	<b>Estimated Useful Life</b>
<b>Roads and Related</b> <ul style="list-style-type: none"> <li>• Linear Roads Infrastructure</li> <li>• Intersection Improvements</li> <li>• Sidewalks</li> <li>• Studies</li> </ul>	40 years 40 years 40 years Not infrastructure
<b>Water Services</b> <ul style="list-style-type: none"> <li>• Linear Water Infrastructure</li> <li>• Water Facilities</li> <li>• Studies</li> </ul>	75 years 75 years Not infrastructure
<b>Wastewater Services</b> <ul style="list-style-type: none"> <li>• Wastewater Infrastructure</li> <li>• Wastewater Facilities</li> <li>• Buildings</li> <li>• Studies and Engineering</li> </ul>	75 years 75 years 50 years Not infrastructure
<b>Stormwater Management</b> <ul style="list-style-type: none"> <li>• Debt Recovery</li> <li>• Studies</li> </ul>	Not applicable Not infrastructure
<b>Northeast Master Plan Area</b> <ul style="list-style-type: none"> <li>• Stormwater</li> <li>• Roads and Grading</li> </ul>	75 years 40 years

## ANNUAL PROVISION

When assets require rehabilitation or are due for replacement, the source of funds is limited to reserves or contributions from operating. Capital expenditures to carry out the rehabilitation and replacement of aging infrastructure are not growth-related and are therefore not eligible for funding through development charge revenues or other developer contributions.

Based on the information obtained from Municipal staff regarding useful life assumptions and the capital cost of acquiring and/or emplacing each asset, a provision for infrastructure replacement has been calculated for both the general and engineered services. Provisions for infrastructure replacement are initially calculated for each asset based on their useful life and the anticipated cost of replacement. The aggregate of all individual provisions form the required annual capital provision. In calculating the annual provisions, a number of assumptions are made to account for inflation (2.0 per cent) and interest (3.5 per cent).

Consistent with the requirements of the DCA, assets that are proposed to be funded under the development charges by-law have been included in the analysis. As a result, the total calculated annual provision for development charge related infrastructure has been netted down to consider the replacement of existing infrastructure or benefit-to-existing development. However, for reference, the annual replacement provisions associated with the non-development charge funded costs; including costs related to benefit-to-existing and post-period benefit have also been calculated.

Table 3 and 4 provides the calculated annual asset management contribution for both the gross capital expenditures and the share related to the 2019-2028 (10-year services) and 2019-2041 (23-year services) DC recoverable portion. The year 2029 and 2042 have been included to calculate the annual contribution for the 2019-2028 and 2019-2042 periods respectively, as the expenditures in 2028 and 2041 will not trigger asset management contributions until 2029 and 2042 respectively.

As shown in Table 3, by 2029, the Municipality will need to fund an additional \$379,800 per annum in order to properly fund the full life cycle costs of the new assets related to general and protection services supported under the development charges by-law (10-year services). Table 4 provides a separate analysis of the annual provisions required for the engineered services capital program as the program extends to 2041.

As shown in Table 4, the annual provision in 2042 amounts to \$238,000 for roads and related, \$20,000 for water services, \$93,000 for wastewater and \$26,000 for the Northeast Master Plan infrastructure. No provision is identified for stormwater services as the DC eligible is related to debt for infrastructure already employed.

Table 3 Calculated Annual AMP Provision: 10-Year Services				
10-Year Services: General, Public Works and Protection Services	2019-2028 Capital Program		Annual AMP Provision by 2029	
	DC-Eligible	Non DC-Eligible	DC-Related	Non DC-Related
Library Services	\$797,600	\$2,225,000	\$58,200	\$16,900
Fire Protection Services	\$577,700	\$2,615,000	\$73,900	\$43,000
Indoor Recreation Services	\$18,037,500	\$23,600,000	\$129,400	\$74,100
Police Services	\$81,700	\$0	\$0	\$0
Outdoor Recreation Services	\$0	\$1,985,000	\$76,700	\$0
Child Care Services	\$1,790,000	\$1,790,000	\$0	\$36,200
Administration Services	\$0	\$0	\$0	\$0
Public Works	\$1,350,000	\$2,250,000	\$41,600	\$30,200
<b>Total</b>	<b>\$22,634,500</b>	<b>\$34,465,000</b>	<b>\$379,800</b>	<b>\$200,400</b>

Table 4 Calculated Annual AMP Provision: 23-Year Services				
23-Year Services: Roads & Related and Area-Specific Engineered Services	2019-2041 Capital Program		Annual AMP Provision by 2042	
	DC-Eligible	Non DC-Eligible	DC-Related	Non DC-Related
Roads & Related	\$9,510,000	\$27,492,000	\$238,000	\$699,000
Water Services	\$1,738,000	\$5,968,000	\$20,000	\$102,000
Wastewater Services	\$8,302,000	\$12,759,000	\$93,000	\$148,000
Stormwater Management Services	\$968,000	\$0	\$0	\$0
Northeast Master Plan	\$1,515,375	\$0	\$26,312	\$0
<b>Total</b>	<b>\$22,033,375</b>	<b>\$46,219,000</b>	<b>\$377,312</b>	<b>\$949,000</b>

## FINANCIAL SUSTAINABILITY OF THE PROGRAM

### *Future Revenue Growth*

The calculated annual funding provision should be considered within the context of the Municipality's projected growth. Over the next ten years (to 2028) the Municipality is projected to increase by approximately 1,110 households. In addition, the Municipality will also add 850 new employees that will result in approximately 66,320 square metres of additional non-residential building space. By 2041, there will be an increase of 1,670 new dwelling units and 110,100 square metres of non-residential building space. This growth will have the effect of increasing the overall assessment base and additional user fee and charges revenues to offset the capital asset provisions required to replace the infrastructure proposed to be funded under the



development charges by-law. The collection of these funds is intended to be allocated to the Municipality's reserves for the future replacement of these assets.

#### **LONG-TERM CAPITAL AND OPERATING IMPACT ANALYSIS**

As shown in Table 5, by 2028, the Municipality's net operating costs are estimated to increase by \$1.74 million for property tax supported ten-year general services, public works and roads and related. Increases in net operating costs will be experienced as new facilities such as the proposed fire space and public works facility open. Operating and maintenance costs will also increase as additions to the Municipality's road network are made. Water and Wastewater capital expenditures are expected to be offset by water/wastewater rates rather than property taxes and therefore no impact is reflected in the analysis.

Table 6 summarizes the components of the development-related capital forecast that will require funding from non-DC sources. For general services with a ten-year benefitting period, \$8.45 million will need to be financed from non-DC sources as it relates to benefit to existing shares and \$1.98 million related to the statutory service discount will also require non-DC funding. In addition, \$11.12 million in interim DC financing related to post-period shares of projects may be required. However, because DC by-laws must be revisited at least every five years, it is difficult to determine the quantum of interim financing that may be necessary.

For engineered services with a benefitting period to 2041, \$32.89 million will need to be financed from non-DC sources over the 2019-2041 planning period, which is entirely related to the replacement of existing infrastructure that will benefit the existing community. In addition, \$8.50 million in interim DC financing may be necessary for post-period shares of projects.

#### **THE PROGRAM IS DEEMED FINANCIALLY SUSTAINABLE**

In summary, the asset management plan and long-term capital and operating analysis included in this appendix demonstrates that the Municipality can invest and operate the identified general and engineered services infrastructure over the ten-year and long-term planning period. Importantly, the Municipality's annual budget review allows staff to continue to monitor and implement mitigating measures should the program become less sustainable.

## APPENDIX G

## TABLE 5

**MUNICIPALITY OF NORTH PERTH  
ESTIMATED NET OPERATING COST OF THE PROPOSED  
DEVELOPMENT-RELATED CAPITAL PROGRAM  
(in constant 2019 dollars)**

	Net Cost (in 2019\$)	Estimated Operating Costs (\$000) 2028
<b>Library Services</b>		<b>\$187.5</b>
Monkton Library Relocation	\$65 per sq.ft. added	\$87.9
Atwood Library Relocation	\$65 per sq.ft. added	\$99.7
<b>Fire Services</b>		<b>\$261.9</b>
New Fire Space	\$ 40.0 per sq.ft. added	\$200.0
New Vehicle Acquisitions	\$ 0.07 per \$1.00 of new infrastructure	\$61.9
<b>Police Services</b>		<b>\$0.0</b>
- No additional operating costs		\$0.0
<b>Indoor Recreation</b>		<b>\$350.0</b>
Steve Kerr Recreation Centre	\$10.00 per sq.ft. added	\$350.0
<b>Outdoor Recreation</b>		<b>\$496.3</b>
Parkland Development	\$0.25 per \$1.00 of new infrastructure	\$483.8
Equipment and Fleet	\$0.25 per \$1.00 of new infrastructure	\$12.5
<b>Child Care</b>		<b>\$0.0</b>
New Child Care Facility	-	\$0.0
<b>Administration Services</b>		<b>\$0.0</b>
No additional operating costs	-	\$0.0
<b>Public Works</b>		<b>\$225.0</b>
New Public Works Infrastructure	\$0.10 per \$1.00 of new infrastructure	\$225.0
<b>Roads and Related</b>		<b>\$222.8</b>
- Development-Related Roads Infrastructure	\$200 per household	\$222.8
<b>TOTAL ESTIMATED OPERATING COSTS</b>		<b>\$1,743.5</b>

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APPENDIX G  
TABLE 6

**MUNICIPALITY OF NORTH PERTH**  
**SUMMARY OF DEVELOPMENT-RELATED CAPITAL PROGRAM**  
**FOR GENERAL AND ENGINEERED SERVICES**  
(in \$000)

General Services (2019-2028)	Development-Related Capital Program (2019-2028)					
	Net Municipal Cost (\$000)	Replacement & Benefit to Existing (\$000)	Legislated Service Discount (\$000)	Available DC Reserves (\$000)	Post-2028 Benefit (\$000)	Total DC Eligible Costs for Recovery (\$000)
1.0 LIBRARY SERVICES	\$2,225.0	\$797.6	\$142.7	\$309.0	\$0.0	\$975.7
2.0 INDOOR RECREATION SERVICES	\$23,650.0	\$5,687.5	\$1,796.3	\$695.3	\$11,115.0	\$4,355.9
3.0 OUTDOOR RECREATION SERVICES	\$2,060.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
4.0 CHILD CARE SERVICES	\$26.9	\$0.0	\$2.7	\$0.0	\$0.0	\$24.2
5.0 ADMINISTRATION SERVICES	\$464.0	\$35.0	\$42.9	\$199.8	\$0.0	\$186.3
6.0 FIRE PROTECTION SERVICES	\$2,728.8	\$576.0	\$0.0	\$0.0	\$1.7	\$2,151.2
7.0 POLICE SERVICES	\$81.7	\$0.0	\$0.0	\$0.0	\$0.0	\$81.7
8.0 PUBLIC WORKS	\$2,443.4	\$1,350.0	\$0.0	\$0.0	\$0.0	\$1,093.4
<b>TOTAL - GENERAL SERVICES (2019-2028)</b>	<b>\$33,679.9</b>	<b>\$8,446.1</b>	<b>\$1,984.6</b>	<b>\$1,204.1</b>	<b>\$11,116.7</b>	<b>\$8,868.4</b>

Engineered Services (2019-2041)	Development-Related Capital Program (2019-2041)					
	Net Municipal Cost (\$000)	Replacement & Benefit to Existing (\$000)	Legislated Service Discount (\$000)	Available DC Reserves (\$000)	Post-2041 Benefit (\$000)	Total DC Eligible Costs for Recovery (\$000)
1.0 ROADS & RELATED	\$36,002.7	\$23,926.1	\$0.0	\$0.0	\$2,566.2	\$9,510.4
2.0 WATER SERVICES	\$7,706.5	\$30.5	\$0.0	\$337.7	\$5,937.5	\$1,400.8
3.0 WASTEWATER SERVICES	\$17,599.5	\$8,935.0	\$0.0	\$176.8	\$0.0	\$8,487.7
4.0 STORMWATER MANAGEMENT SERVICES	\$968.4	\$0.0	\$0.0	\$0.0	\$0.0	\$968.4
5.0 ENGINEERED INFRASTRUCTURE (NEMP)	\$1,515.4	\$0.0	\$0.0	\$0.0	\$0.0	\$1,515.4
<b>TOTAL - ENGINEERED SERVICES (2019-2041)</b>	<b>\$63,792.4</b>	<b>\$32,891.5</b>	<b>\$0.0</b>	<b>\$514.5</b>	<b>\$8,503.7</b>	<b>\$21,882.7</b>