

# 2017 -2021 Financial Plan

Presentation – February 23, 2017



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# Utilities Overview & Highlights

- 2015 03 to 2016 09 the Intergroup completed a Utility Rate Review
- Looked at Electric, Sanitary Sewer and Water
- Work done with assistance from City staff, a Focus Group and Public Consultation
- The work lead to the adoption of 5 year Utility Rates (2016 – 2020) into the Fees and Charges Bylaw



# Utilities Overview & Highlights

## The New Utility Rates:

- Move the City Utility Rates toward sustainability;
- Will need to revisit Utility Rates in 2018 to address Asset Management Investment requirements;
- Adjusted the distribution of Administration Charges:
  - Reduced for Electric;
  - Increased for Water; and
  - Increased for Sanitary Sewer.



# Utilities Overview & Highlights

## The New Utility Rates:

- Electric Dividend made consistent with the industry, based on 7% of net book value of the electrical assets;
- Shifted costs, based on a cost of service analysis:
  - Electrical cost shift from commercial / industrial to residential;
  - Water cost shift from commercial / industrial to residential; and
  - Sanitary sewer shift from residential to commercial / industrial;
- Adjustments to Administration Charges, Electric Dividend and cost of service shifts are phased in over a five year period;



# Utilities Overview & Highlights

## The New Utility Rates:

- Created a new rate structure for sanitary sewer consistent with that used in other locations, based on water use not the number of fixtures, land and property values;
- The new sanitary sewer rate has:
  - A fixed component applied during the summer months (April to September);
  - A variable component based on water used during the winter months (October to March)
  - Mechanism for commercial establishments to apply for a reduction if they meet certain criteria.
- Moved to monthly billing for all Utilities



# Utilities Overview & Highlights

For 2017 Rates are estimated to increase as follows:

Utility	Estimated Average Monthly Increase 2016 to 2017		
	Residential	Small Commercial	Large Commercial Industrial
Electrical	\$ 5.00	\$ 9.00	\$ 81.00
Sanitary Sewer	\$ -	\$ 50.00	-\$ 79.00
Water	\$ 5.00	\$ 22.00	\$ 64.00
<b>TOTAL</b>	<b>\$ 10.00</b>	<b>\$ 81.00</b>	<b>\$ 66.00</b>

Notes: Source Intergroup Consultants 2015 11 Report Electric and Water  
 Source Intergroup Consultants 2017 02 Email Sanitary

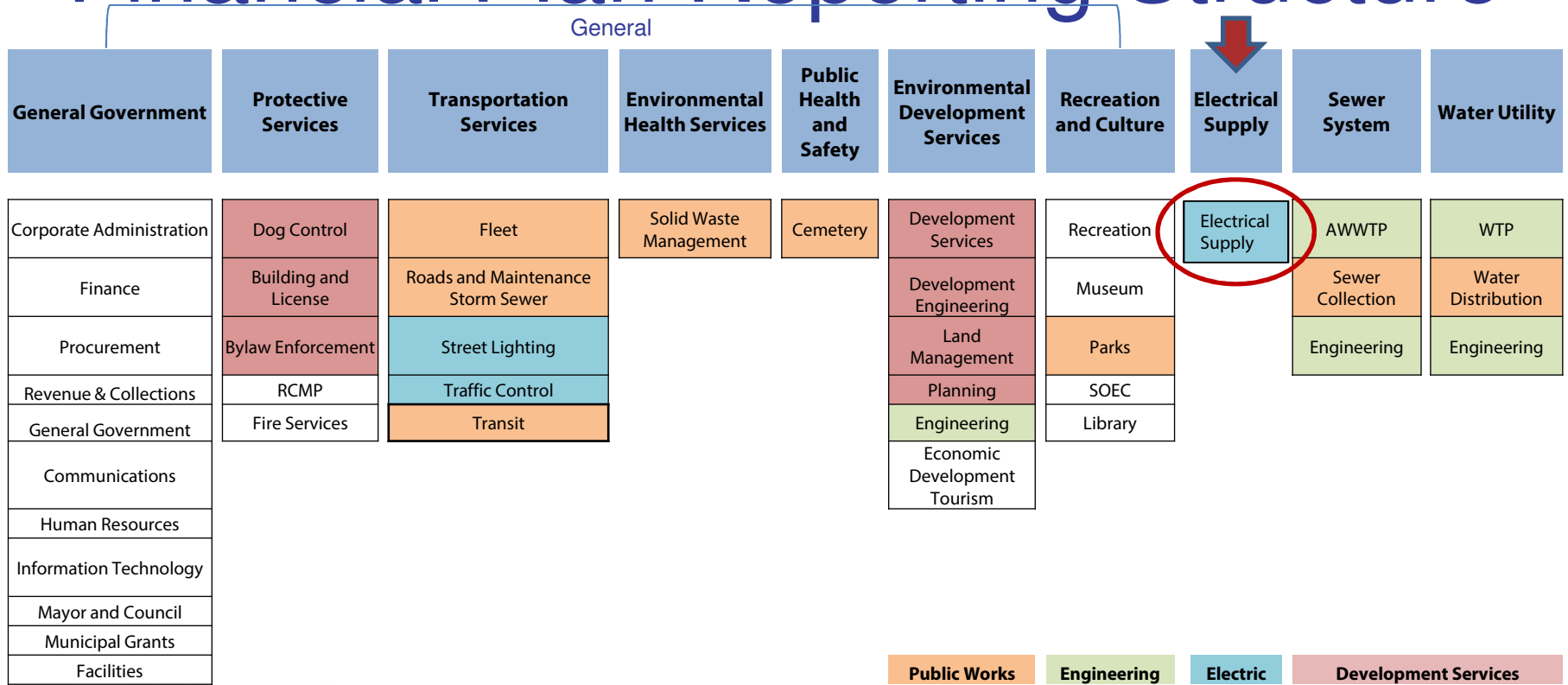


# Questions



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# Financial Plan Reporting Structure





# Electrical Supply: Electrical



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# Overview

- The Electric Department is responsible for providing safe, efficient, and reliable electrical service to residential, commercial and industrial customers within the municipal boundaries of the City of Penticton

17,373 active customer accounts  
4 substations feeding 17 distribution circuits  
3,999 power poles (3,061 wood, 938 Steel)

2,719 Distribution Transformers  
272 kms of overhead power lines  
86 kms of Underground cables



# Staffing

## *Electrical Supply Electrical*

<u>2015</u>	<u>2016</u>	<u>2017</u>
15	15	15



# 2017 Highlights

*Electrical Supply  
Electrical*

		% change	Trend
Total Expense	35,674,020		↑
Total Revenues	42,040,580		↑
Total Internal Allocation	in 2,075,116 out 11,400		↓ →
Net Operating Surplus	4,302,844	-42.9%	
Capital	3,715,085		



# 2017 Budget

## Electrical Supply Electrical

Expenses	2016 Budget	2016 Forecast	2017 Budget	2018 Budget	2019 Budget	2020 Budget	2021 Budget
Goods and Services	29,162,260	<b>27,210,890</b>	<b>34,212,174</b>	34,313,869	34,634,089	36,780,238	39,060,184
Fleet	63,494	-	<b>51,895</b>	51,895	51,895	51,895	51,895
Salaries and Benefits	1,460,854	<b>1,349,114</b>	<b>1,409,951</b>	1,438,435	1,467,528	1,497,249	1,527,620
Revenues	(40,967,152)	<b>(38,295,178)</b>	<b>(42,040,580)</b>	(43,581,176)	(45,191,504)	(46,851,877)	(48,573,329)
Internal Allocation In	2,241,873	<b>2,212,164</b>	<b>2,075,116</b>	1,888,230	1,709,949	1,528,633	1,482,522
Internal Allocation Out	(11,400)	<b>(10,539)</b>	<b>(11,400)</b>	(11,717)	(12,043)	(12,378)	(12,723)
Net Operating Surplus	(8,050,071)	<b>(7,533,549)</b>	<b>(4,302,844)</b>	(5,900,464)	(7,340,086)	(7,006,240)	(6,463,831)



# 2017 Capital Budget

*Electrical Supply  
Electrical*

Description	2017 Budget	Comments
Non-Discretionary	209,600	New Services, Road Projects, Emergency Replacement of Failed Equipment and Legislated Compliance
Sustainment	3,115,485	Distribution System Rebuild, System Planning and Planned Upgrades
Enhancement	270,000	SCADA, Reliability & Power Quality Improvements
Expansion	60,000	Peak Shaving & Renewable Energy studies
Departmental Tools	<u>60,000</u>	Capital Tool Replacements
<b>Total</b>	<b>3,715,085</b>	



# 2017 Capital Budget

*Electrical Supply  
Electrical*

Non-Discretionary		
Description	2017 Budget	Comments
New Services & Service Upgrades	49,600	\$350,400k of new connections paid for by customers
New UG Subdivisions	-	\$100k paid for by developers
City Road Projects	100,000	New UG electrical infrastructure during road reconstruction
Emergency Replacement	<u>60,000</u>	Unplanned replacements of failed equipment
<b>Total</b>	<b>209,600</b>	\$660k Gross w/ \$450.4k Contributions



# 2017 Capital Budget

*Electrical Supply  
Electrical*

Sustainment		
Description	2017 Budget	Comments
Distribution System Rebuild	1,200,485	Pole & #6 Copper Replacements, Voltage Conversion & AMR
Substation Rebuild	1,725,000	Carmi Substation re-build
System Planning & System Upgrades	<u>190,000</u>	Cap. Replacement of aged equipment, Digital Radios & GIS
<b>Total</b>	<b>3,115,485</b>	





# 2017 Capital Budget

*Electrical Supply  
Electrical*

Enhancement		
Description	2017 Budget	Comments
SCADA	130,000	Install Faulted circuit indicators & Implement fixed meter reads vs. drive-by
Reliability Improvements	100,000	Replacement of Load Break Switches & Conductor Size Upgrades
Power Quality Improvements	<u>40,000</u>	Power factor improvement initiatives
<b>Total</b>	<b>270,000</b>	



# Summary

- Increase in expense mainly covers the cost of energy and Carmi substation; internal allocations for admin costs have decreased slightly
- Planned capital expense \$3,715,085 primarily for the Carmi substation and the voltage conversion program

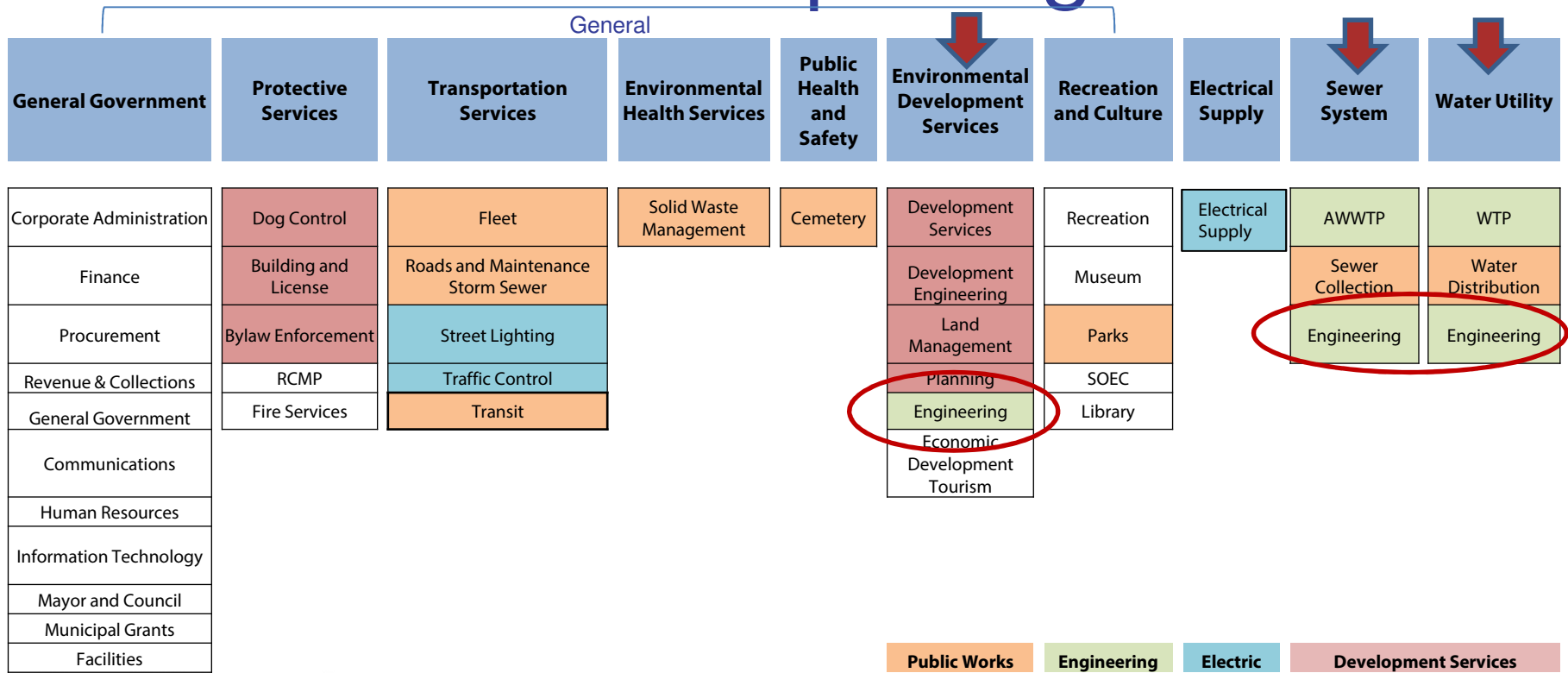


# Questions



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# Financial Plan Reporting Structure



# Environmental Development Services: Engineering



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## 2016

- \$7.6M invested during 2016 in new and replacement infrastructure projects including:
  - \$3.95M in Downtown Revitalization.
  - \$2.7M in water main, sewer, storm and road infrastructure upgrades including SOEC parking lot and Brandon Avenue Oxbow restoration.
- Also commenced Asset Management and GIS systems to improve infrastructure investment/planning.



# 2017

- Planning to spend \$7.3M during 2017 and maintain level of investment during following years.



# 2017 Capital Budget

Project description	Budget	Source			Comments
		Water	General	Sewer	
GIS & Asset Management Plan Support	10,000	10,000	-	-	Develop tools to improve GIS functionality for newly created water GIS system
Orchard Avenue road, drainage & water design	60,000	30,000	30,000	-	Design and replace water main, install new storm sewers, and make intersection improvements at Eckhardt Ave, Orchard Ave, and Caribou Street intersection
Woodstock Road upgrade	150,000		150,000		Replacement saving fund to replace Woodstock Road in 2020 (\$400,000 in Bank after 2017, 2020 \$1,000,000 Capital Project)
Timmins Street road, drainage & water upgrades	955,000*	260,000	509,000 55,000*	131,000	Replace water main, install new storm drainage works, new curb and gutter, and new asphalt roadway. * Also includes \$55,000 from Developer
Pre-Design of Water Projects	45,000	45,000			Design projects for 2018
100mm Water Main Replacements	1,145,000	930,000		215,000	Replace water mains and do sanitary sewer repairs on Nelson Avenue from Main St to Government Street and Forestbrook Avenue from Manitoba St to Government St. Scott Avenue from Moosejaw St to Argyle St





# 2017 Capital Budget

Project description	Budget	Source			Comments
		Water	General	Sewer	
PZ 555 Carmi Reservoir Expansion	1,500,000*	1,500,000*		-	A storage expansion of Carmi Reservoir is required to address a capacity issue for fire flow storage requirements. * Source is debt financing. Note that an application for grant funding had been made.
Industrial Area Fire Flow Improvements	9,000	9,000			Change valve arrangement Warren Avenue and Camrose Street to improve Industrial Area fire flows.
Ridgedale Avenue water and sewer main upgrades	1,760,000*	1,302,521 237,479*		220,000	Replacement of aging water main, installation of new direct feed main to Ridgedale Reservoir and replacement of old sanitary sewer infrastructure within road corridor. Includes bypass of failing isolation valve at Duncan reservoir. * Includes \$237,479 from DCC funding.
Aging sewer main upgrades	605,000			605,000	Replacement of aging AC sanitary sewer in Ridgedale area concurrently with utility work on Ridgedale Avenue.
North Penticton Interceptor	50,000			50,000	Design of new main servicing north end of the City.



# 2017 Capital Budget

## Environmental Development Services Engineering

Project description	Budget	Source			Comments
		Water	General	Sewer	
Sanitary Sewer Upsizing	100,000			100,000	Fund additional costs to upsize sewer infrastructure for future servicing needs beyond that needed for a specific development
Lawrence Avenue Storm Diversion	100,000		100,000		Install storm sewer on Lawrence Avenue to alleviate capacity issues in the storm drainage system concurrent with Columbia School traffic calming.
Point Intersection and Galt Avenue Design	85,000	35,000	15,000	35,000	Design of Point Intersection and Galt Avenue to alleviate congestion and traffic issues at the Kinney Avenue, South Main, and Skaha Lake Road Point Intersection. (construct in 2020)
Traffic Warrants	20,000		20,000		Consulting to review various traffic change / complaints from the Transportation Safety Policy received throughout the year
Traffic Calming	160,000		160,000		Columbia School – Continuation of the City's traffic calming program in school zones



# 2017 Capital Budget

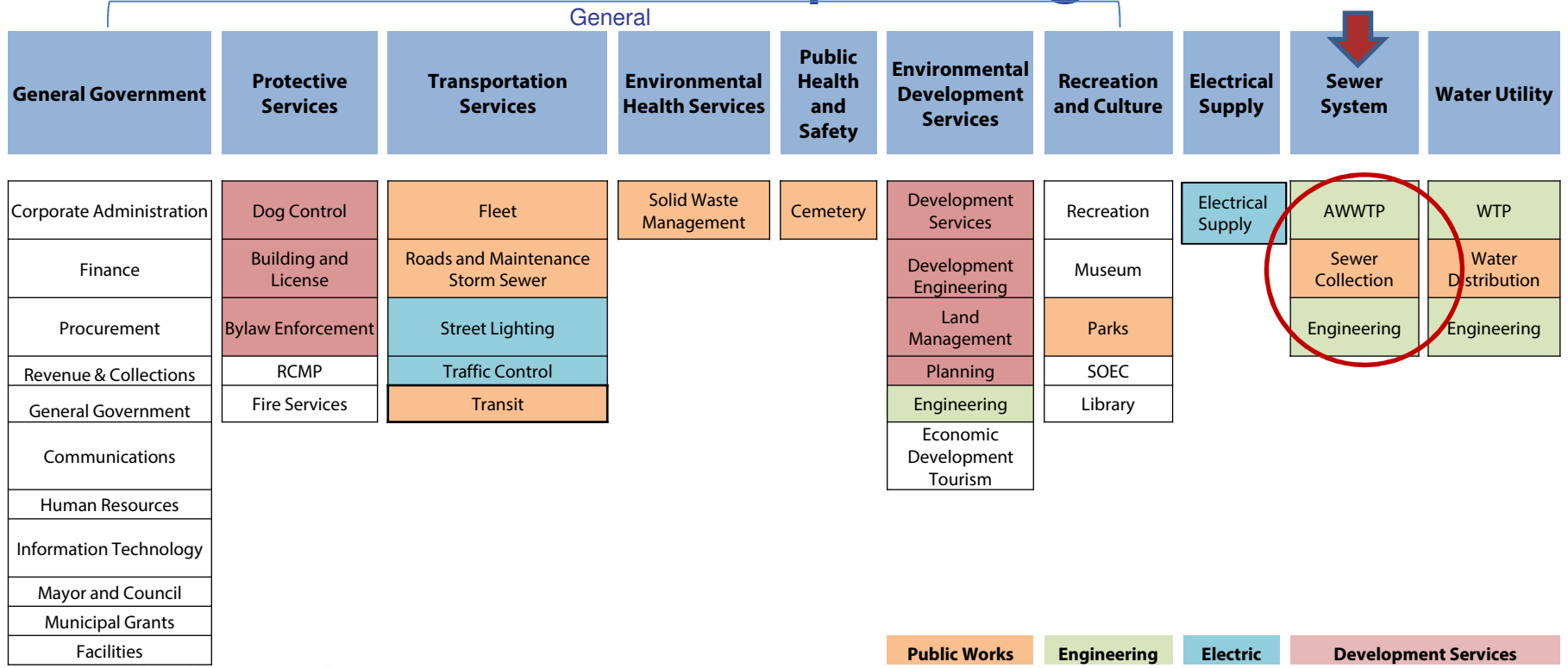
Project description	Budget	Source			Comments
		Water	General	Sewer	
Intersection Improvements	42,500		42,500		Make minor improvements to intersections that are have non-standard line markings and improve safety
Penticton Creek Restoration	<u>500,000*</u>		250,000 <u>250,000*</u>		Construct next section of Penticton Creek Restoration as defined by the Penticton Creek Master Plan. * Includes \$250,000 Grant.
Sub-total	7,296,500	4,359,000	1,581,500	1,356,000	Includes \$2,042,479 funded from other sources.
Funded by other sources	<u>-2,042,479</u>	<u>-1,737,479</u>	<u>-305,000</u>	_____ -	
<b>Total Capital</b>	<b>5,254,021</b>	<b>2,621,521</b>	<b>1,276,500</b>	<b>1,356,000</b>	



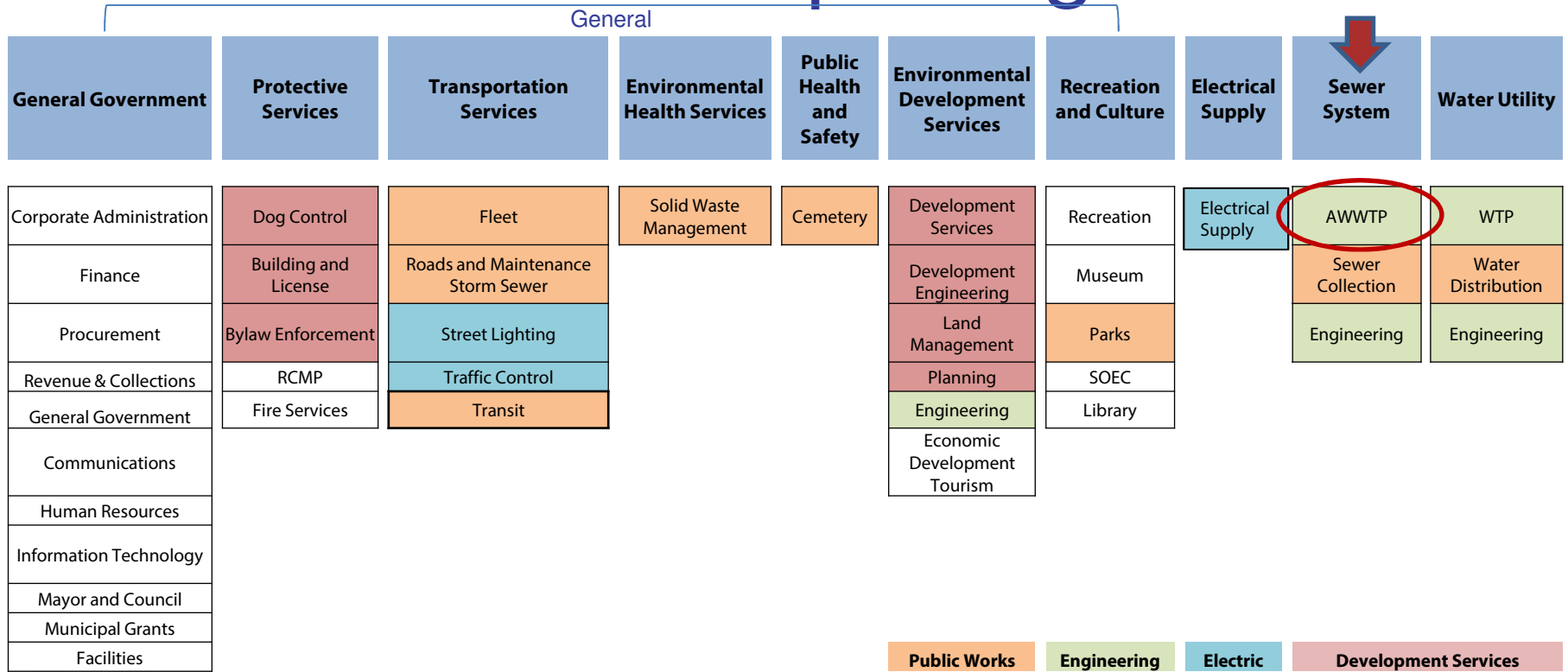
# Questions



# Financial Plan Reporting Structure



# Financial Plan Reporting Structure



# Overview

- Our primary purpose is to receive and treat waste water and dispose of treated effluent and bio-solids

<u>2015</u>	<u>2016</u>	<u>2017</u>
11 FTE	11 FTE	11 FTE

3.8 Billion litres of waste water treated	Processed 6.45 million kg of bio solids, approx. 190kg per person
633 Million litres of treated effluent used to irrigate sports fields and a golf course	



# 2017 Highlights

## *Sewer Utility Advanced Waste Water Treatment Plant*

		% change	Trend
Total Expense	2,071,527		↑
Total Revenue	5,418,890		↓
Net Operating Surplus	3,347,363	-25.5%	
Capital	640,000		





# 2017 Budget

## Sewer Utility Advanced Waste Water Treatment Plant

Expenses	2016 Budget	2016 Forecast	2017 Budget	2018 Budget	2019 Budget	2020 Budget	2021 Budget
AWWTP	1,621,502	<b>1,477,705</b>	<b>1,869,024</b>	1,767,715	1,690,291	1,920,079	1,934,795
Pumps, Stations & Sewers	109,027	<b>105,737</b>	<b>124,507</b>	129,106	132,674	136,268	139,116
Septage	33,738	<b>28,450</b>	<b>47,996</b>	33,827	35,080	35,460	36,346
Parks	-	-	<b>30,000</b>	33,900	38,985	44,833	46,000
Asset Management Plan	-	-	-	-	-	-	50,000
Revenue	<u>(6,135,983)</u>	<u><b>(6,102,328)</b></u>	<u><b>(5,418,890)</b></u>	<u>(5,931,723)</u>	<u>(6,487,348)</u>	<u>(6,959,953)</u>	<u>(6,977,442)</u>
Net Operating Surplus	(4,371,716)	<b>(4,490,436)</b>	<b>(3,347,363)</b>	(3,967,175)	(4,590,318)	(4,823,313)	(4,771,185)



# 2017 Capital Budget

## *Sewer Utility Advanced Waste Water Treatment Plant*

Project description	Budget	Source	Comments
Bio-Reactor Upgrades	35,000	Sewer Fund	Complete Bio-Reactor Upgrades that were deferred in 2016. \$390K CF from 2016.
Reclaimed Water Intermediate Pump – North Irrigation System	20,000	Sewer Fund	Existing pumps are not properly sized due to changing demands. New pump is required to address varying flow demands and to provide reliable service.
UV Building Crane	25,000	Sewer Fund	New building crane to eliminate safety issues associated in moving heavy equipment.
Density Meters	65,000	Sewer Fund	Two new meters required for plant operations
Security CCTV Upgrades	30,000	Sewer Fund	Expand and upgrade existing security systems to help mitigate and increase in trespassing and theft
Lift Station Equipment	30,000	Sewer Fund	Non-destructive testing to determine and prioritize replacement of unreliable and aging lift station equipment.



# 2017 Capital Budget

## *Sewer Utility Advanced Waste Water Treatment Plant*

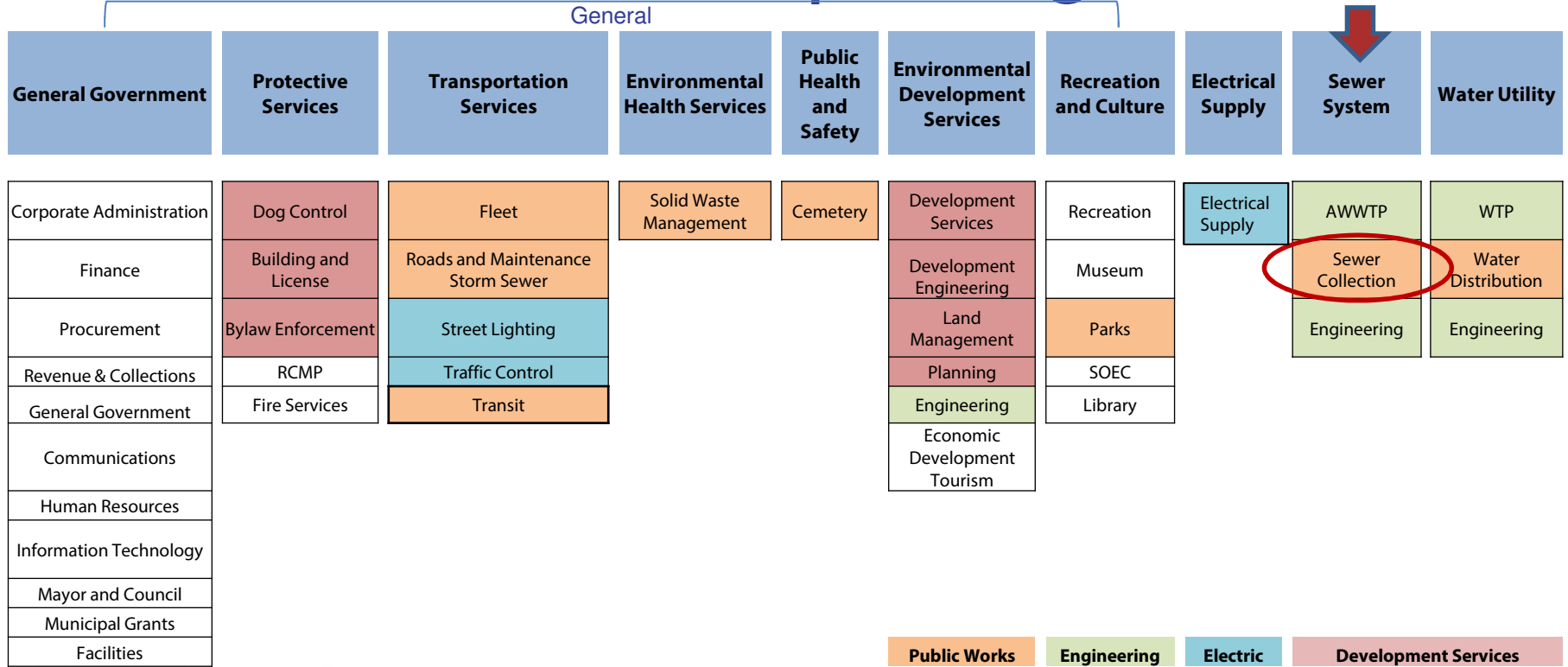
Project description	Budget	Source	Comments
SCADA Wonderware Upgrades	60,000	Sewer Fund	Upgrade SCADA to increase plant efficiencies.
Fermenter Pump Replacement	85,000	Sewer Fund	Replace undersized fermenter pumps to eliminate capacity limitations.
Reclaimed Irrigation Water Reservoir	70,000	Sewer Fund	Convert unused tanks to store reclaimed irrigation water to meet demands that are now exceeding capacity at peak usage times.
Roof Replacement	160,000	Sewer Fund	Replacement of 5 remaining roofs on existing AWWTP buildings.
DAF Pump Upgrade	<u>60,000</u>	Sewer Fund	Upgrade with new high efficiency technology to reduce operational costs.
<b>Total</b>	<b>640,000</b>		



# Questions



# Financial Plan Reporting Structure



# Sewer Utility: Sewer Collection



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# Overview

- Maintenance of sewer collection systems and the operation of a bio-solids compost facility.

**171 kms of Sanitary Sewer Pipe with  
8,500 service connections**

**5.4 kms of Sewer effluent irrigation pipe  
4,000 cubic meters of finished compost / year**



# Highlights

## *Sewer Utility Sewer Collection*

		% change	Trend
Net Operating Expense	655,857	3.5%	
Capital	50,000		





# 2017 Budget

## Sewer Utility Sewer Collection System

Expenses	2016 Budget	2016 Forecast	2017 Budget	2018 Budget	2019 Budget	2020 Budget	2021 Budget
Sewer Operations	345,800	<b>346,850</b>	<b>360,407</b>	363,217	366,339	369,522	372,770
Compost Operations	283,000	<b>252,700</b>	<b>271,700</b>	271,980	272,266	272,557	272,854
Support Services	42,300	<b>44,250</b>	<b>38,750</b>	39,010	39,275	39,546	39,822
Total Operating Expense	671,100	<b>643,800</b>	<b>670,857</b>	674,207	677,879	681,625	685,445
Compost Sales	(15,000)	<b>(10,000)</b>	<b>(15,000)</b>	(15,000)	(15,000)	(15,000)	(15,000)
Net Operating expense	656,100	<b>633,800</b>	<b>655,857</b>	659,207	662,879	666,625	670,445



# 2017 Capital Budget

## *Sewer Utility Sewer Collection*

Project description	Budget	Comments
Compost Site Improvements	50,000	Work with the RDOS to implement a leachate control system for the Compost Facility.



# Summary

- Planned Capital Expense \$50,000 for Compost Site improvements

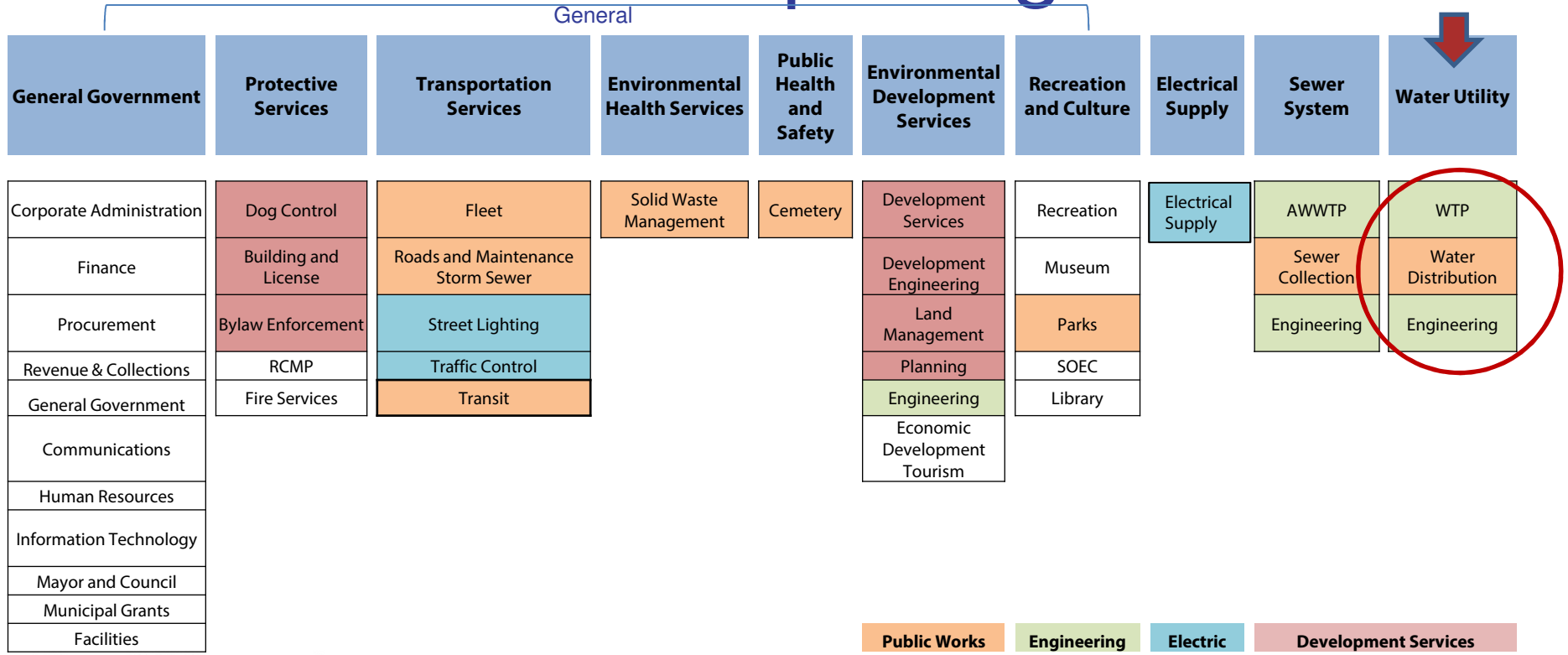


# Questions

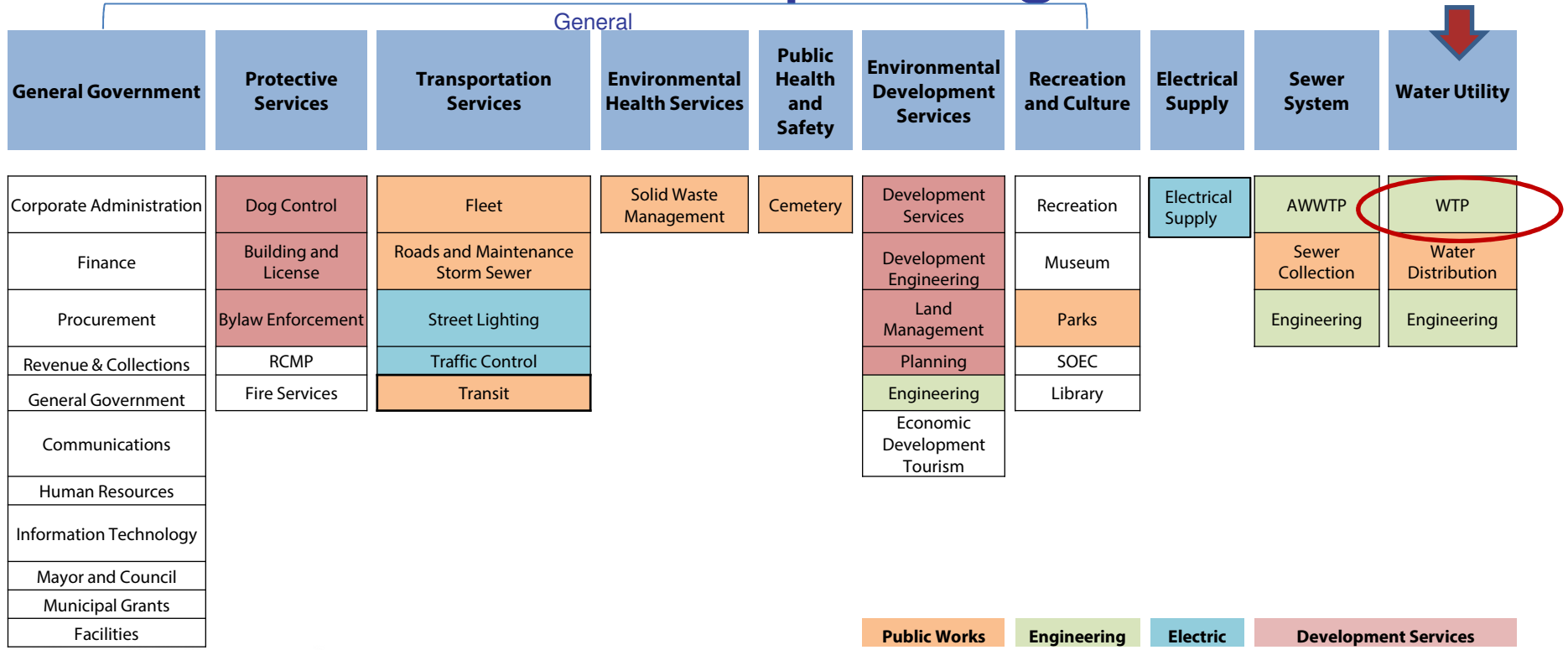


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# Financial Plan Reporting Structure



# Financial Plan Reporting Structure



# Overview

- Our primary purpose is to treat raw water for domestic consumption.

<u>2015</u>	<u>2016</u>	<u>2017</u>
7	8	8

Operates water treatment plant, 6 reservoirs and 5 pump stations  
Treated 6.3 billion litres of lake water  
Treated 302 million litres of creek water

Average day demand was 528 litres per person per day  
Peak summer demand was 1,063 litres per person per day



# 2017 Highlights

## *Water Utility Water Treatment Plant*

		% change	Trend
Total Expense	1,555,387		↑
Total Revenue	8,050,014		↑
Net Operating Surplus	6,494,627	14.7%	
Capital	258,500		





# 2017 Budget

## *Water Utility Water Treatment Plant*

Expenses	2016 Budget	2016 Forecast	2017 Budget	2018 Budget	2019 Budget	2020 Budget	2021 Budget
WTP	1,121,504	<b>1,025,603</b>	<b>1,040,875</b>	1,058,452	1,088,761	1,091,361	1,107,260
Pump Stations	271,783	<b>284,266</b>	<b>280,017</b>	304,069	328,668	336,738	346,626
Reservoirs and Warren Ave well	45,479	<b>41,014</b>	<b>46,194</b>	47,716	49,390	50,215	51,171
Conservation & Cross Connection	107,318	<b>96,756</b>	<b>106,977</b>	108,156	109,359	110,586	111,838
Parks	55,000	<b>55,000</b>	<b>31,325</b>	34,041	36,879	39,841	42,935
Drought Management Plan	-	-	<b>50,000</b>	-	-	-	-
Revenue	<u>(7,164,766)</u>	<u><b>(7,164,766)</b></u>	<u><b>(8,050,014)</b></u>	<u>(8,451,584)</u>	<u>(8,903,307)</u>	<u>(9,379,530)</u>	<u>(9,997,579)</u>
Net Operating Surplus	(5,563,682)	<b>(5,662,126)</b>	<b>(6,494,627)</b>	(6,899,149)	(7,290,250)	(7,750,789)	(8,337,749)



# 2017 Capital Budget

## Water Utility Water Treatment Plant

Project description	Budget	Comments
Water Treatment Plant Optimization	40,000	Improve plant efficiency through consideration of operational and process changes and upgrading equipment incorporating latest technology.
Upgrade PLC Equipment	40,000	Replace obsolete and unsupported PLC modules that automate and control plant operation – final year of 4 year programme.
Warren Ave Well roof replacement	12,000	Replace failing roof for the building over the Warren Avenue well.
WTP Equipment Replacement	35,000	Replace or rebuild aging equipment at the treatment plant or pump stations. 2017 projects include chlorine analysers and Rotork valves.
Okanagan Lake Pump Station Electrical Upgrades	100,000	Replace electrical equipment in the Okanagan Lake Pump Station in 2022. \$100,000 a year until the necessary \$700,000 is saved.
Security Systems	7,500	Upgrade the security equipment at the water treatment plant.



# 2017 Capital Budget

## Water Utility Water Treatment Plant

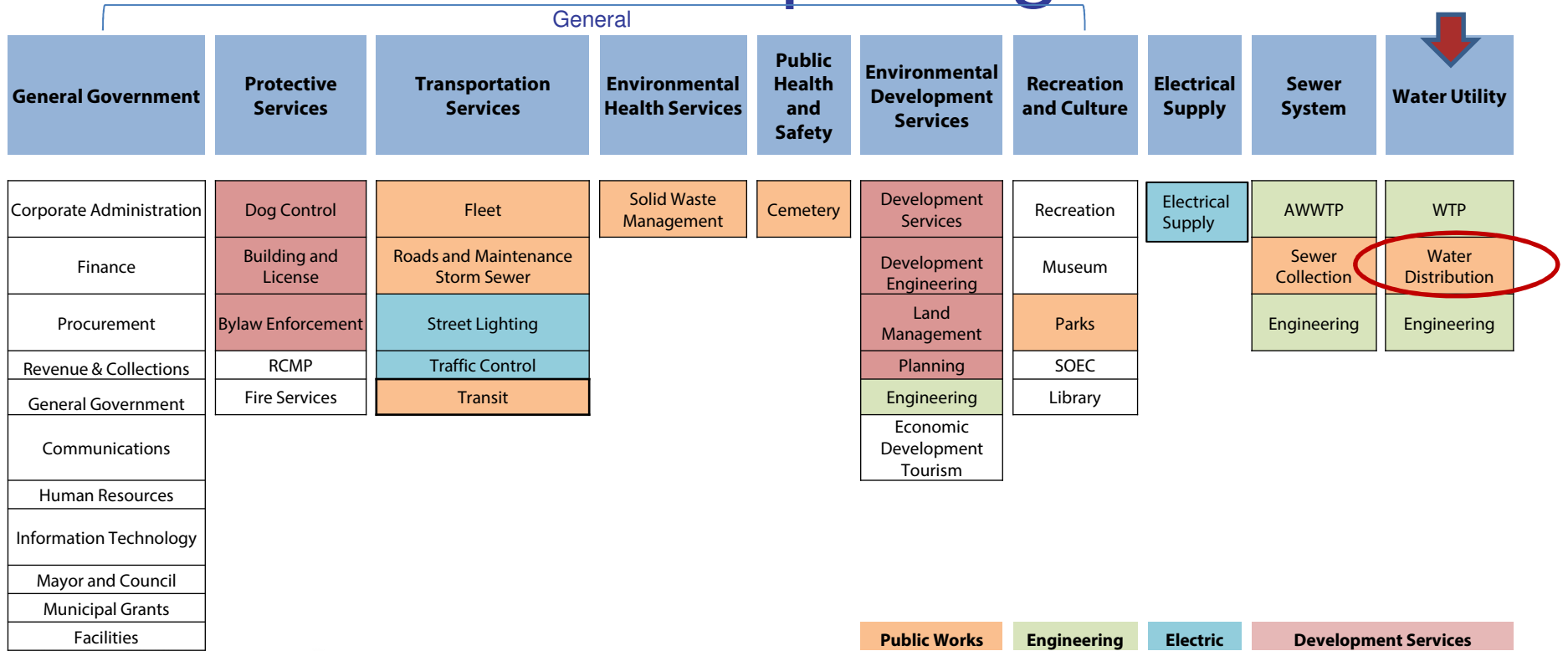
Project description	Budget	Comments
WTP Gate Installation	<u>24,000</u>	Install a gate to allow for process changes within the plant to optimize operations in the winter months for cost savings on power and chemicals and to reduce wear on equipment.
<b>Total</b>	<b>258,500</b>	



# Questions



# Financial Plan Reporting Structure



# Water Utility: Water Distribution



# Overview

## *Water Utility* **Water Distribution**

- Maintenance of dams and water distribution systems

192 kms of Domestic Water Pipe  
33 kms of Agricultural Irrigation water mains  
with 350 connections

8,653 Water Meters  
985 Fire Hydrants  
6 in-service dams & 6 out of service dams



# 2017 Highlights

## *Water Utility Water Distribution*

		% change	Trend
Net Operating Expense	722,650	2.0%	
Capital	665,000		





# 2017 Budget

## Water Utility Water Distribution

Expenses	2016 Budget	2016 Forecast	2017 Budget	2018 Budget	2019 Budget	2020 Budget	2021 Budget
Domestic Water Operations	412,600	<b>367,100</b>	<b>373,300</b>	377,569	381,923	386,365	390,895
Water Metering Operations	152,200	<b>170,100</b>	<b>176,900</b>	179,094	181,332	183,615	185,943
Agricultural Water Operations	72,500	<b>80,500</b>	<b>70,500</b>	71,500	72,520	73,560	74,622
Dam and Reservoir Operations	85,350	<b>70,300</b>	<b>77,550</b>	78,465	79,500	80,556	81,633
Support Services	<u>25,500</u>	<b><u>25,500</u></b>	<b><u>28,500</u></b>	<u>28,610</u>	<u>28,722</u>	<u>28,837</u>	<u>28,953</u>
Total Operating Expense	748,150	<b>713,500</b>	<b>726,750</b>	735,238	743,998	752,933	762,046
Recoveries	<u>(1,000)</u>	<b><u>(5,100)</u></b>	<b><u>(4,100)</u></b>	<u>(5,000)</u>	<u>(5,000)</u>	<u>(5,000)</u>	<u>(5,000)</u>
Net Operating Expense	747,150	<b>708,400</b>	<b>722,650</b>	730,238	738,998	747,933	757,046



# 2017 Capital Budget

## Water Utility Water Distribution

Project description	Budget	Comments
Service Renewals	30,000	Renewal of services.
Fire Hydrant Spacing Improvements	80,000	Ongoing project to correct hydrant spacing deficiencies.
Agricultural Irrigation Upgrades	30,000	Ongoing project to upgrade agricultural irrigations system.
Ellis 2 Dam Consulting & Upgrades	100,000	Geotechnical investigation and design of spillway upgrades to meet current standards.
Campbell Mountain Diversion Spillway Upgrade	275,000	Construction of spillway upgrades to meet current standards.
Misc Dam Projects	75,000	Update Dam Breach Flood Inundation Maps for Penticton Creek.
Domestic Water Meter Upgrades	<u>75,000</u>	Commence the upgrade of 8,500 water meter ERTs from 50w to 100w to enhance reading capabilities and ready for future system.
<b>Total</b>	<b>665,000</b>	



# Summary

- Planned Capital Expense \$665,000
- Increases for meter pit installations, decreases for water valve maintenance



# Questions



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