

Clause 2 in Report No. 21 of Committee of the Whole was adopted, without amendment, by the Council of The Regional Municipality of York at its meeting held on December 17, 2015.

2

2016-2018 Budget – Environmental Services

Committee of the Whole recommends:

1. Receipt of the presentation by Erin Mahoney, Commissioner of Environmental Services.
2. Adoption of the following recommendations contained in the report dated November 19, 2015 from the Commissioner of Finance:

1. Recommendations

It is recommended that:

1. The Committee of the Whole recommends the budget as submitted for Environmental Services as follows:
 - a) The 2016 operating budget and the outlook for 2016 to 2018, as summarized in Attachment 1.
 - b) Capital Spending Authority, as summarized in Attachment 2.
2. That the recommended budget be consolidated by the Treasurer for consideration by Council on December 17, 2015.

2. Purpose

This report provides a summary of the 2016-2018 Operating and Capital Budget for Environmental Services for consideration by Committee.

3. Background

In February 2015 Council approved an outlook for 2016, 2017 and 2018

As part of the 2015-2018 Budget, Council approved an outlook for the operating budget for 2016, 2017 and 2018. This approved outlook formed the starting point for this year's budget. While adjustments to the outlook are a natural part of a multi-year budget process, departments were expected to live within their outlook. The 2016-2018 operating budget reflects any revisions that have been made to the previously approved outlook.

The 2016 Budget was tabled on November 19, 2015

The consolidated 2016-2018 Operating and Capital Budget was tabled with Council on November 19, 2015. It was received and referred to the December meetings of Committee of the Whole for consideration and recommendation.

The 2016 Budget Directions report, approved by Council on May 21, 2015, outlined the proposed timelines and indicated that the 2016 to 2018 budget would be approved in December 2015, as long as Council is satisfied with it through the review process.

A three-year operating budget was tabled for Council's consideration

The operating budget presented is a three-year budget that spans the remaining years of Council's term. Council is asked to approve the budget for 2016 and the outlook for 2017 to 2018. The approved outlook will then form the basis for the budget process in subsequent years. Council can still change the budget each year in response to changing circumstances and new information.

Multi-year commitments for capital projects are proposed as part of the budget process

Many complex capital projects span several years of planning, design and construction, requiring multi-year spending authority.

Capital Spending Authority is requested for projects with contractual and other clear or certain multi-year commitments. As in previous years, Council is asked to approve multi-year Capital Spending Authority for capital projects.

4. Analysis and Options

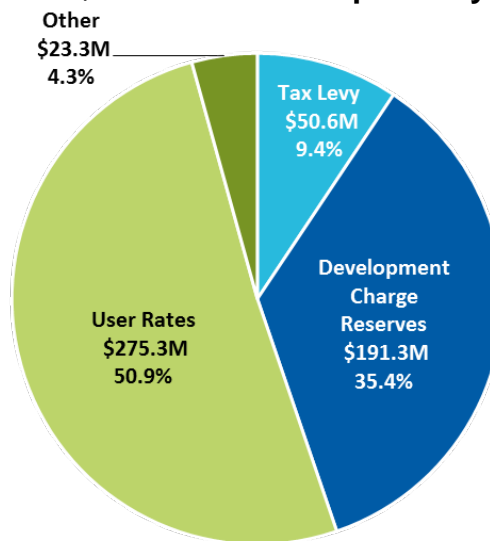
Operating Budget (page 103)

Environmental Services is largely funded through water and wastewater user rates

The budget shows both the gross expenditures (total spending) and the net tax levy (the portion of the budget paid for by the tax levy).

Environmental Services' total gross spending for 2016 is \$540.5 million. As shown in Graph 1 below, tax levy pays for 9.4% of the cost of services provided by the department. The rest of the funding comes from water and wastewater user rates and draws from the development charge reserve.

Graph 1
Gross expenditures of \$540.5 million are primarily funded by tax levy



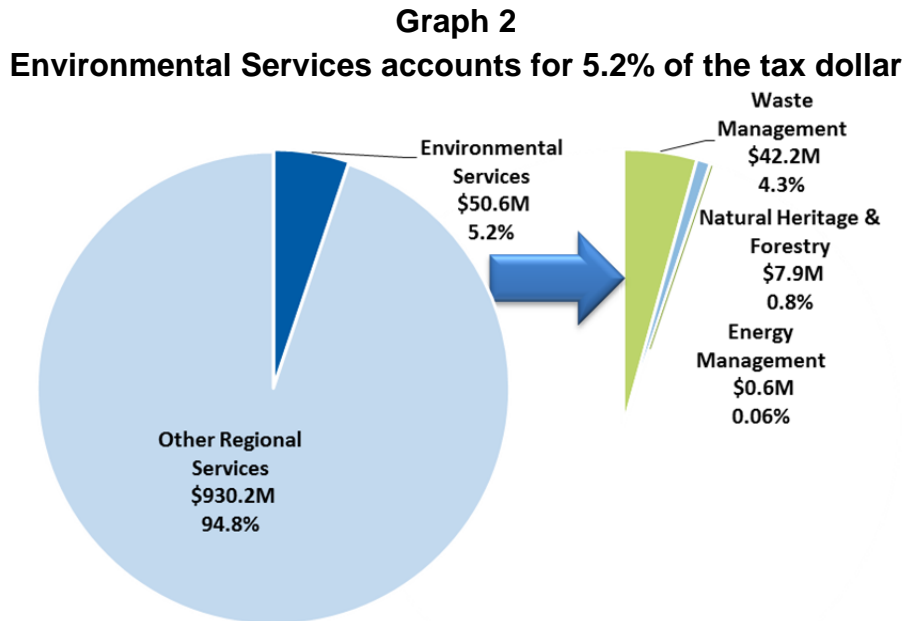
The proposed budget for Environmental Services reflects net operating expenditures of \$50.6 million in 2016

The 2016-2018 Operating Budget includes the cost of providing:

- Base services
- Legislated and contractual requirements
- Impact of capital
- Growth

- Service enhancements.

The proposed budget for Environmental Services is \$50.6 million, or 5.2% of the total 2016 proposed Regional net operating expenditures, as shown in Graph 2 below.



The proposed budget also includes a proposed outlook for 2017 and 2018.

Table 1 in Attachment 1 summarizes the proposed gross and net operating budgets for 2016 and the outlook for 2017 to 2018.

Water and Wastewater User Rate approved to achieve full cost recovery in 2021

In October 2015, Council approved multi-year user rates that will achieve full cost recovery in 2021. The new user rates provide funds for increased asset replacement and rehabilitation expenditures, and eliminate the need to issue rate-supported debt in the future. The capital budget includes about \$1 billion in spending on asset replacement and rehabilitation over the next ten years. The new rate structure also fairly distributes capital replacement costs over time, through equal per capita contributions once full cost recovery is achieved in 2021.

Environmental Services is within the approved outlook for all years

Environmental Services' proposed 2016 budget and outlook for 2017 and 2018 is within the outlook approved as part of the 2015 to 2018 Budget.

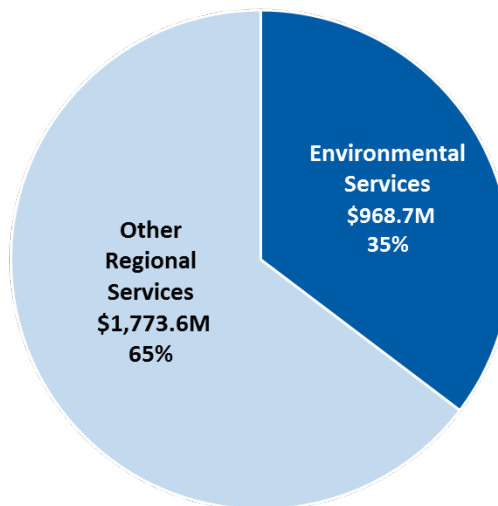
Capital Budget (page 109)

Approval of Capital Spending Authority of \$968.7 million in 2016 is requested for Environmental Services

The capital budget includes new infrastructure projects in support of growth, rehabilitation and replacement of existing infrastructure and service enhancement.

The proposed Capital Spending Authority for Environmental Services is \$968.7 million, or 35.3% of the total Regional 2016 Capital Spending Authority, as shown below in Graph 3.

Graph 3
Environmental Services accounts for 35% of 2016 Capital Spending Authority for the Region



In recent years, major capital investments have focused on securing long-term water supply from the City of Toronto and the Region of Peel and removing major wastewater system conveyance and treatment constraints by building the new Southeast Collector and expanding the Duffin Creek Plant. As a result of these investments, the Region will be well-positioned to provide the water and wastewater capacity needed to support growth.

The proposed Capital Plan reflects the need to continue to make investments balanced with the Region’s overall financial capacity. It includes growth projects timed to meet fiscal strategy requirements, as well as additional rehabilitation and replacement enabled by the new water and wastewater rates.

Attachment 2 summarizes the 2016 Capital Spending Authority by program and shows the associated financing sources for Environmental Services. Details on the individual projects included in the program groups are available in the 2016 to 2018 Budget book.

[Link to key Council-approved plans](#)

The 2016 to 2018 budget for Environmental Services reflects the directions and strategies set out in Vision 2051, the York Region Official Plan, the SM4RT Living Plan, Waste Management Plan, the Greening Strategy and the Water and Wastewater Master Plan. The budget is also supportive of the objectives outlined in the 2015 to 2019 Strategic Plan.

5. Financial Implications

The net operating budget for Environmental Services totals \$50.6 million in 2016 and includes an outlook for 2017 to 2018, as summarized in Attachment 1. Council will have an opportunity to make adjustments to the outlook in subsequent years.

The proposed 2016 Capital Spending Authority reflects a multi-year commitment of \$968.7 million, as summarized in Attachment 2. Expenditures not identified as part of Capital Spending Authority but contained within the Ten-Year Capital Plan are provided for planning purposes and will be brought forward for formal approval in subsequent budget years.

6. Local Municipal Impact

The Region provides essential services to the residents and businesses in York Region. The challenge of meeting growing demands for service and improving service delivery is addressed through the Region’s business planning process. The Region’s investments support local municipalities.

7. Conclusion

This report sets out the proposed 2016-2018 budget for Environmental Services. To facilitate the completion of the budget process, it is recommended that the

2016-2018 Budget – Environmental Services

Committee's recommendations be forwarded to Council for consideration on December 17, 2015.

For more information on this report, please contact Kelly Strueby, Director, Office of the Budget, at ext. 71611.

The Senior Management Group has reviewed this report.

November 18, 2015

Attachments (2)

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Accessible formats or communication supports are available upon request.

2016 to 2018 Budget Summary for Environmental Services

Proposed Operating Budget Expenditures

(in \$000s)

Department	Page No.	2016 Proposed		2017 Outlook		2018 Outlook	
		Gross	Net	Gross	Net	Gross	Net
Waste Management ¹	104	62,280	42,187	64,245	43,776	66,054	45,205
Water & Wastewater Services ¹	104	468,767	-	483,811	-	506,635	-
Natural Heritage and Forestry ¹	104	8,887	7,857	9,082	8,052	8,987	7,957
Energy Management	104	585	565	597	577	750	730
Total²		540,519	50,609	557,735	52,405	582,425	53,892

¹ Includes Contributions to Capital

² Numbers may not add due to rounding

Note: Net operating expenditures= tax levy

**2016 Capital Spending Authority (CSA)
Water**

Water	Page No.	2016 CSA \$000s
Program Expenditures:		
Rehabilitation & Replacement	109	101,498
Growth	109	139,766
Total 2016 Capital Spending Authority		241,264
Financing Sources:		
Reserves	109	103,420
Debenture – Development Charges	109	78,897
Development Charge – Reserve Draws	109	57,147
Other Recoveries	109	1,800
Total Financing Sources		241,264

Wastewater	Page No.	2016 CSA \$000s
Program Expenditures:		
Rehabilitation & Replacement	109	412,038
Growth	109	292,595
Total 2016 Capital Spending Authority		704,633
Financing Sources:		
Reserves	109	404,803
Debenture – Development Charges	109	116,959
Development Charge Reserve Draws	109	103,149
Other Recoveries	109	79,722
Total Financing Sources		704,633

Waste Management	Page No.	2016 CSA \$000s
Program Expenditures:		
Waste Management:		
Rehabilitation & Replacement	109	5,206
Growth	109	10,958
Total 2016 Capital Spending Authority		16,164
Financing Sources:		
Reserves	109	16,164
Total Financing Sources		16,164

Natural Heritage & Forestry	Page No.	2016 CSA \$000s
Program Expenditures:		
Natural Heritage & Forestry	109	1,860
Total 2016 Capital Spending Authority		1,860
Financing Sources:		
Current Tax Levy – Reserves	109	1,140
Development Charge Reserve Draws	109	720
Total Financing Sources		1,860

Energy Management	Page No.	2016 CSA \$000s
Program Expenditures:		
Energy Management	109	4,741
Total 2016 Capital Spending Authority		4,741
Financing Sources:		
Reserves	109	4,741
Total Financing Sources		4,741

Environmental Services 2016 Business Plan and Budget

Presentation to Committee of the Whole

Erin Mahoney
December 10, 2015

1 OVERVIEW



Environmental Services Department



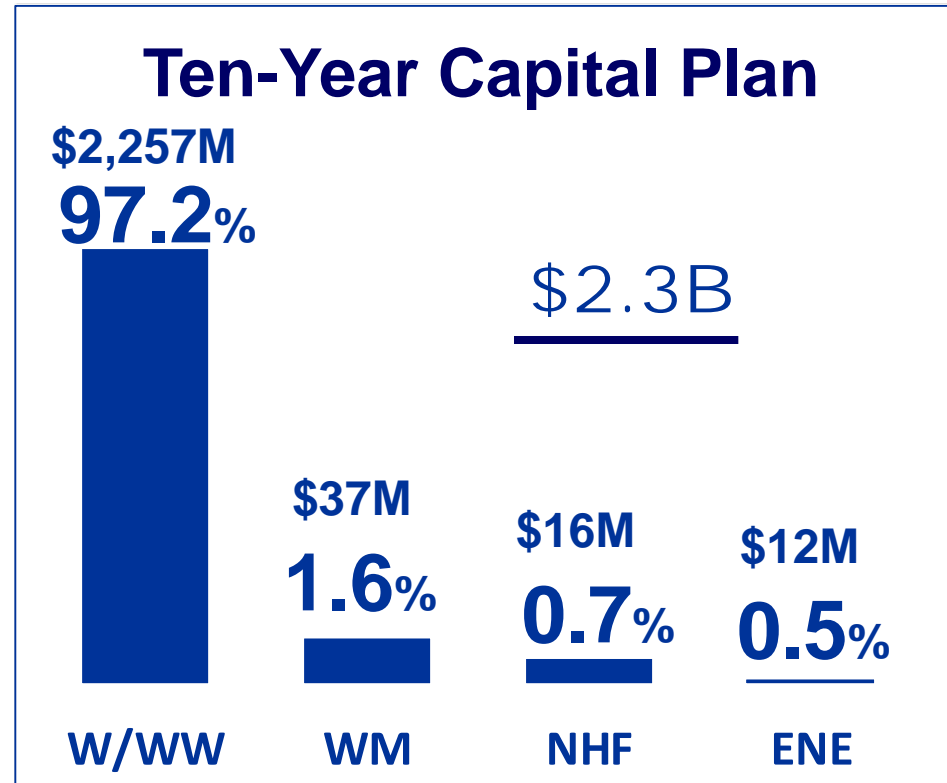
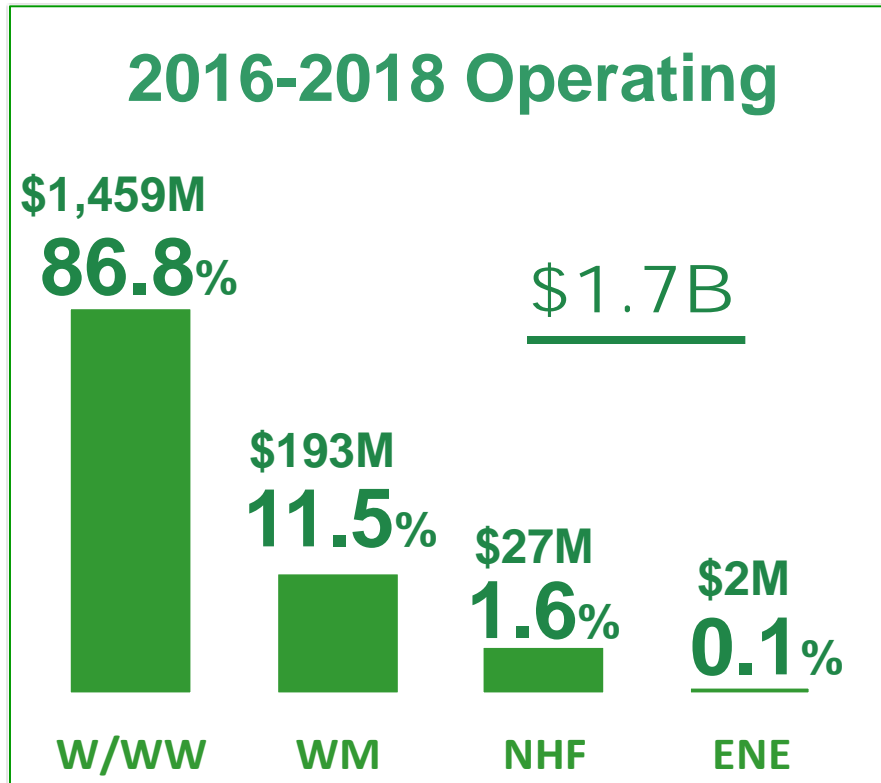
Team delivers water, wastewater, waste, forestry and corporate energy services

Proposed Budget at a Glance

	2016 (per 2015 budget)	2016 (proposed)
Ten-Year Capital Plan	\$2.2B	\$2.3B
New User Rate Debt	\$243M	\$0
Net Operating Budget	\$50.6M	\$50.6M

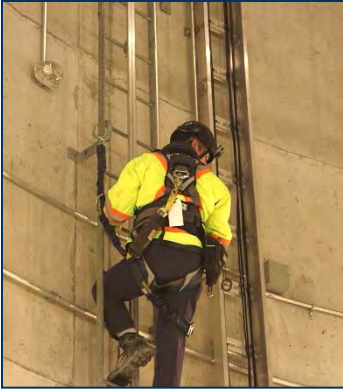
No tax levy variance proposed compared to 2016 outlook presented in 2015

Overview of 2016-2018 Operating Budget & Ten-Year Capital Plan



Water and wastewater accounts for 93% of total spending in Environmental Services

Core Service Delivery Responsibilities



Efficient Operations

- Providing services to 1.2M residents
- Managing \$5.4B in capital infrastructure
- Managing 365,000 tonnes of solid waste per year
- Operating in compliance with complex regulations
- Delivering Corporate Energy Management

Capital Optimization

- Driving \$2.3B ten-year capital plan
- Expanding Urban Forest

Asset Management

- Implementing asset management for infrastructure renewal
- Preserving Regional green space



Ensuring services align with Corporate Strategic Plan

2015 Key Accomplishments

WATER

Delivering over \$100M in capital
 Top marks in MOECC inspections
 Residential Green Development Incentive Programs
 Revaluation of water assets
 Over 20 Risk Management Plans executed

WASTEWATER

Delivering over \$200M in capital
 Reduced 1.1 MLD of inflow and infiltration
 Revaluation of wastewater assets
 “I don’t flush” campaign award
 Completed over 200 industry sewer use inspections

WASTE MANAGEMENT

Achieved 85% diversion from landfill
 Commissioning Durham York Energy Centre
 Continuing to act on SM4RT Living Plan with Local Municipalities

FORESTRY

Opened Forest Stewardship Centre
 Recertification of York Regional Forest
 Maintained 6 km of VivaNext Rapidway
 Secured more than 70 hectares of environmental lands

ENERGY

Completed annual Corporate Energy Report
 Installed solar panels at Forestry Centre
 Amended agreement for natural gas procurement



2015-2019 Strategic Plan Activities

Environmental Services



**ECONOMIC
VITALITY**



**HEALTHY
COMMUNITIES**



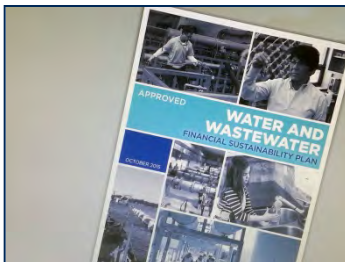
**SUSTAINABLE
ENVIRONMENT**



**GOOD
GOVERNMENT**

Key Planned Regional Activities

- ❑ Complete and implement Water and Wastewater Master Plan Update
- ❑ Implement Environmental Services Infrastructure Improvement Program
- ❑ Implement SM4RT Living Integrated Waste Management Master Plan
- ❑ Implement Long Term Water Conservation Strategy
- ❑ Implement Greening Strategy programs; increasing forest cover and urban canopy
- ❑ Implement infrastructure Asset Management Framework across Corporation
- ❑ Complete Bi-annual Corporate State of Infrastructure Reports



Meeting our Challenges Head-On



Reviews at program and department levels drive efficiencies and reductions

Water and Wastewater User Rates

Council approved increases achieve:

- ❑ Full cost recovery in six years
- ❑ No new debt on rehabilitation and replacement projects
- ❑ Increased asset management
- ❑ Intergenerational equity
- ❑ Support of 2015 to 2019 Strategic Plan



Full cost recovery pricing aligns with objectives of Strategic Plan

Driving Budget Efficiencies in Water and Wastewater

Cutting Costs	Increasing Revenues	Optimizing Business Processes
<ul style="list-style-type: none">• Move to 24/7 operations increasing coverage and reducing overtime and standby costs by \$500K• Elimination of all new user-rate debt funding for rehabilitation and replacement projects	<ul style="list-style-type: none">• Water and wastewater rate increase addresses asset management and move to full-cost recovery pricing• Increased fees for Sewer Use Bylaw Program results in additional \$100K revenue	<ul style="list-style-type: none">• Water sample program review to reduce annual costs by \$200K• Treatment chemical and process optimization to reduce annual costs by \$400K• Continued review of capital expenditures to pace infrastructure delivery to growth• Duffin Creek metering strategy reduces capital investment requirements

Increasing rates and fees to move towards full cost recovery pricing

Driving Budget Efficiencies in Waste Management, Forestry and Energy

	Cutting Costs	Increasing Revenues	Optimizing Business Processes
Waste Management	<ul style="list-style-type: none"> • Negotiated contracts and reduced tonnages for Source Separated Organics results in \$331K annual savings • Implemented SM4RT Living initiatives reducing food waste in Green Bin 	<ul style="list-style-type: none"> • Secured voluntary funding agreement for recycling fluorescent tubes and bulbs for estimated \$56K • \$2M+ annual share of electricity generation and metal recovery revenue from Durham York Energy Centre 	<ul style="list-style-type: none"> • Enhanced Glass Clean Up System improves recyclable recovery and increases diversion from landfill • Alternate processing for energy from waste contracts
Forestry	<ul style="list-style-type: none"> • Conservation land securement partnerships reduces costs and leverages funds 	<ul style="list-style-type: none"> • Optimizing revenue through sustainable harvest of Forest Stewardship Council Certified York Regional Forest 	<ul style="list-style-type: none"> • Increasing street tree survivability from 27% in 2003 to estimated 84% in 2015
Energy Management	<ul style="list-style-type: none"> • Energy efficient retrofits • Completed 8 facility energy audits 	<ul style="list-style-type: none"> • Solar array installation at two facilities with a 20 year contract through Feed-in Tariff program 	<ul style="list-style-type: none"> • Developing building performance analytics to identify areas for energy efficiency and conservation

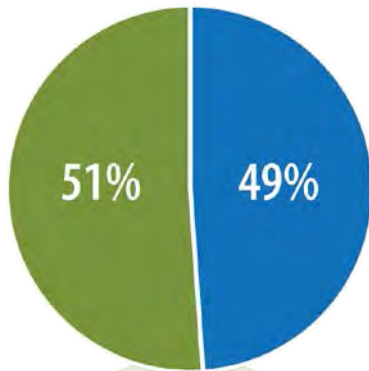
Strategic Partnerships to Achieve Smart Growth and Economies of Scale



Partnerships provide critical services and achieve economies of scale to deliver high quality services

Leveraging Partnerships to Drive Efficiencies

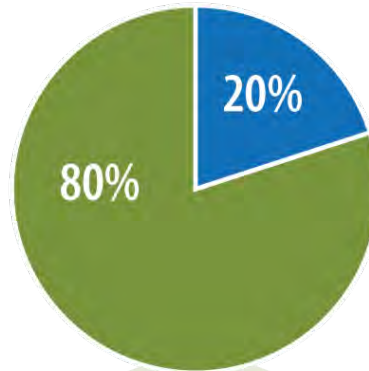
WATER / WASTEWATER



Contracted Services
Other

51% of direct costs are related to purchased water and wastewater treatment costs

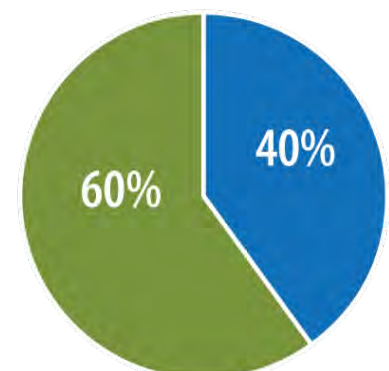
WASTE MANAGEMENT



Contracted Services
Other

80% of Waste Management costs are 3rd party contracts

FORESTRY



Contracted Services
Other

60% of direct costs are contracted services for tree planting, maintenance and Greening Strategy partnership

Contracts provide critical services and achieve economies of scale

Financial Sustainability of Services

WATER/WASTEWATER

- High fixed cost business
- Building water and wastewater reserves
- Managing demand through system optimization
- Leveraging infirstretching, integration, and innovation

WASTE MANAGEMENT

- Advocating for sustainable funding
- Leveraging innovation to provide cost effective services
- Increasing reliance on modeling and technical resources to better forecast demand management

FORESTRY

- Managing operating impact of rapid-way urban streetscapes
- Addressing invasive species and climate change
- Managing street trees as assets

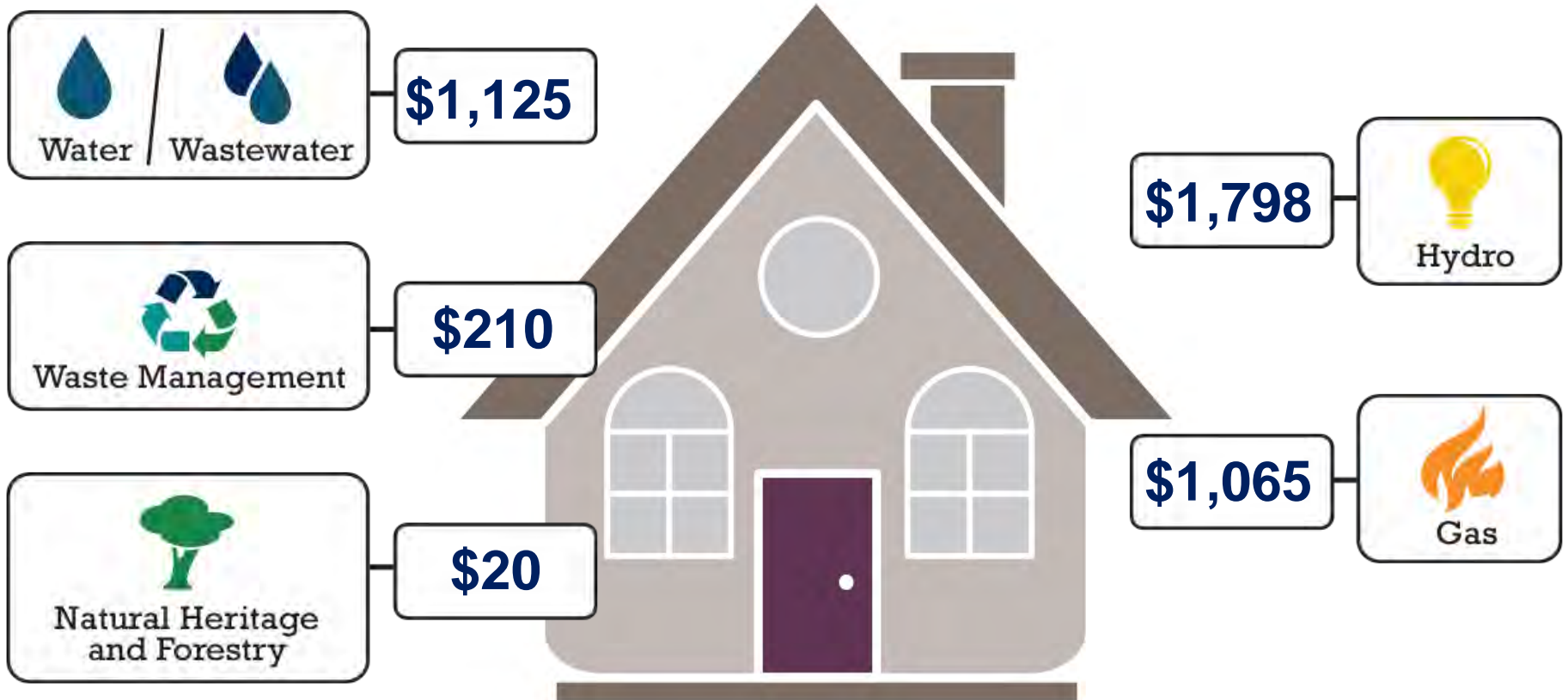
ENERGY

- Energy retrofits reduce increasing energy costs
- Identifying funding opportunities for studies and projects
- Participating in Feed-in Tariff revenue generating programs



New complex infrastructure impacts cost and resources for existing operating programs

Annual Environmental Services vs. Other Household Costs



Providing quality environmental services for approximately \$26/week per household

Achieving Leading Results

100% of Residents Rely on Our Services

**Delivering
Over 75 Capital
Projects**



**Zero Water
Restrictions
Since 2008**



**Waste Diversion
Ontario
Diversion Rate
(2015 Budget)
62%**



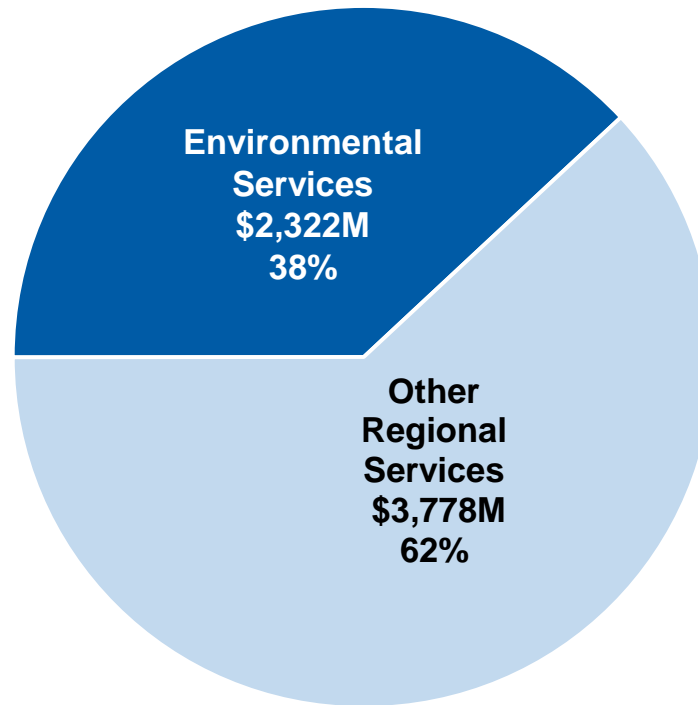
**Maintaining
43,000 Street
Trees in 2015**

2

CAPITAL



York Region Ten-Year Capital Plan



**York Region 2016
Ten-Year Capital Plan:
\$6,100M**

Environmental Services represents 38% of the Region's ten-year capital plan

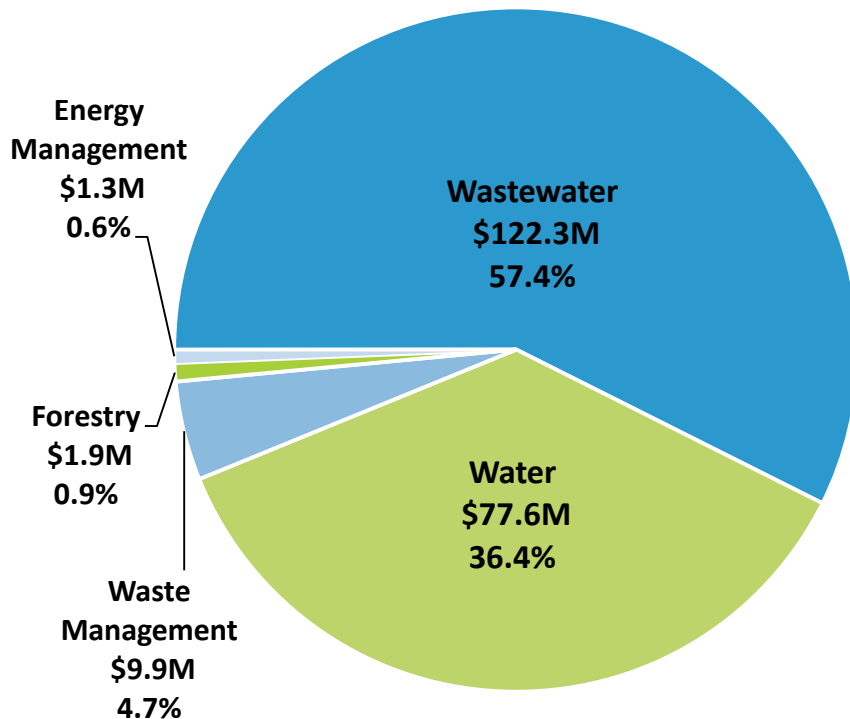
Proposed Capital Budget

Capital Budget	\$ Millions
2016 Capital	213
Ten-Year Capital Plan	2,322
2016 Capital Spending Authority	969

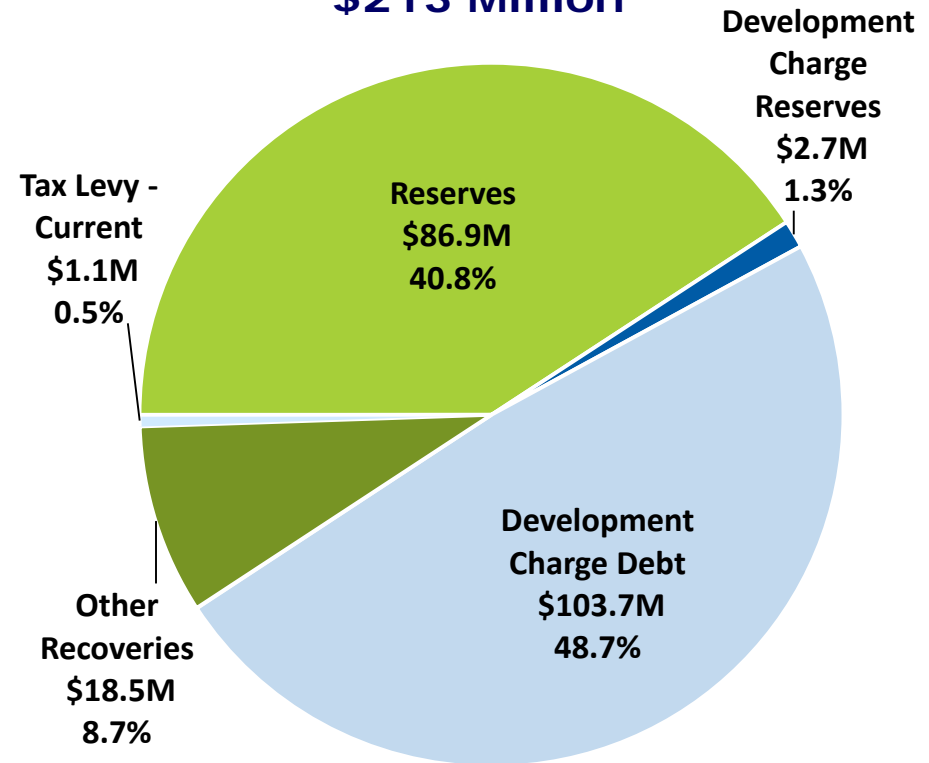
Capital budget focused on delivering required capacity to service growth and sustain critical infrastructure

2016 Capital Plan Overview

2016 Capital Expenditures \$213 Million



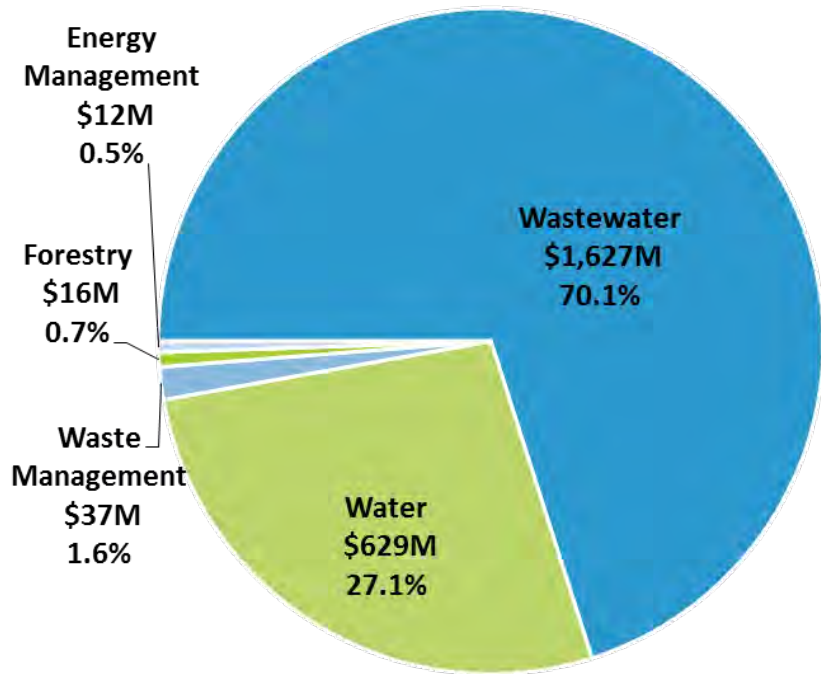
2016 Funding Sources \$213 Million



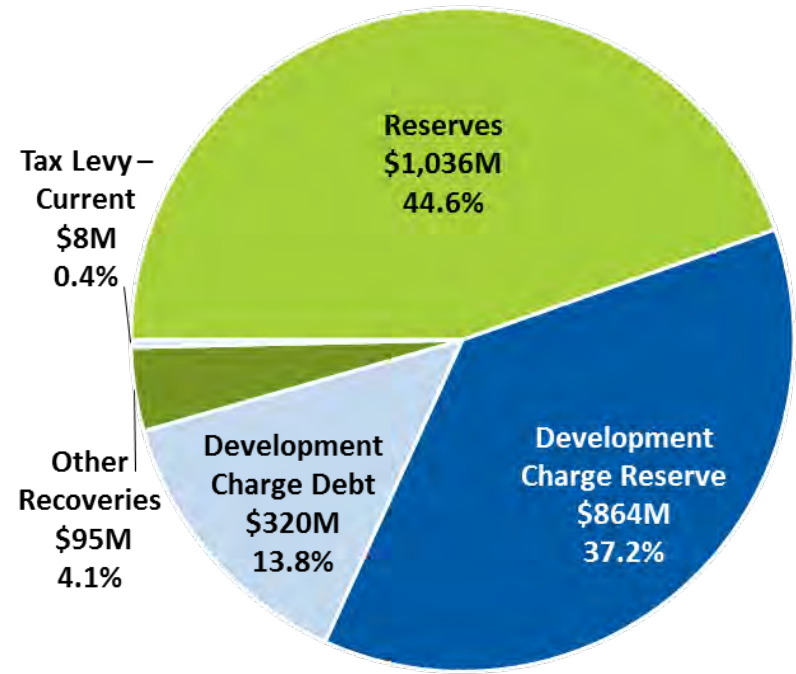
\$213M 2016 Capital Budget with approximately 75 active projects

Ten-Year Capital Plan Overview

Ten-Year Capital Expenditures \$2.3 Billion



Ten-Year Funding Sources \$2.3 Billion



Water and Wastewater budget represents over 97% of ten-year capital plan with nearly 45% funded through reserves

2016 to 2025 Capital Plan

WATER

\$629M

Rehabilitation & Replacement
\$327M

Toronto Cost Share
\$100M

Peel Cost Share
\$67M

West Vaughan
\$24M



WASTEWATER

\$1,627M

Rehabilitation & Replacement
\$703M

Upper York
\$531M

Duffin Creek Stages 1 & 2 Upgrades
\$114M

West Vaughan
\$84M



WASTE MANAGEMENT

\$37M

Rehabilitation & Replacement
\$18M

Georgina Transfer Station Upgrades
\$5M

Durham York Energy Centre
\$4M



FORESTRY

\$16M

Street Tree Planting
\$10M

Regional Forest Property Upgrade
\$3M

Emerald Ash Borer Street Tree Replacement
\$2M



ENERGY

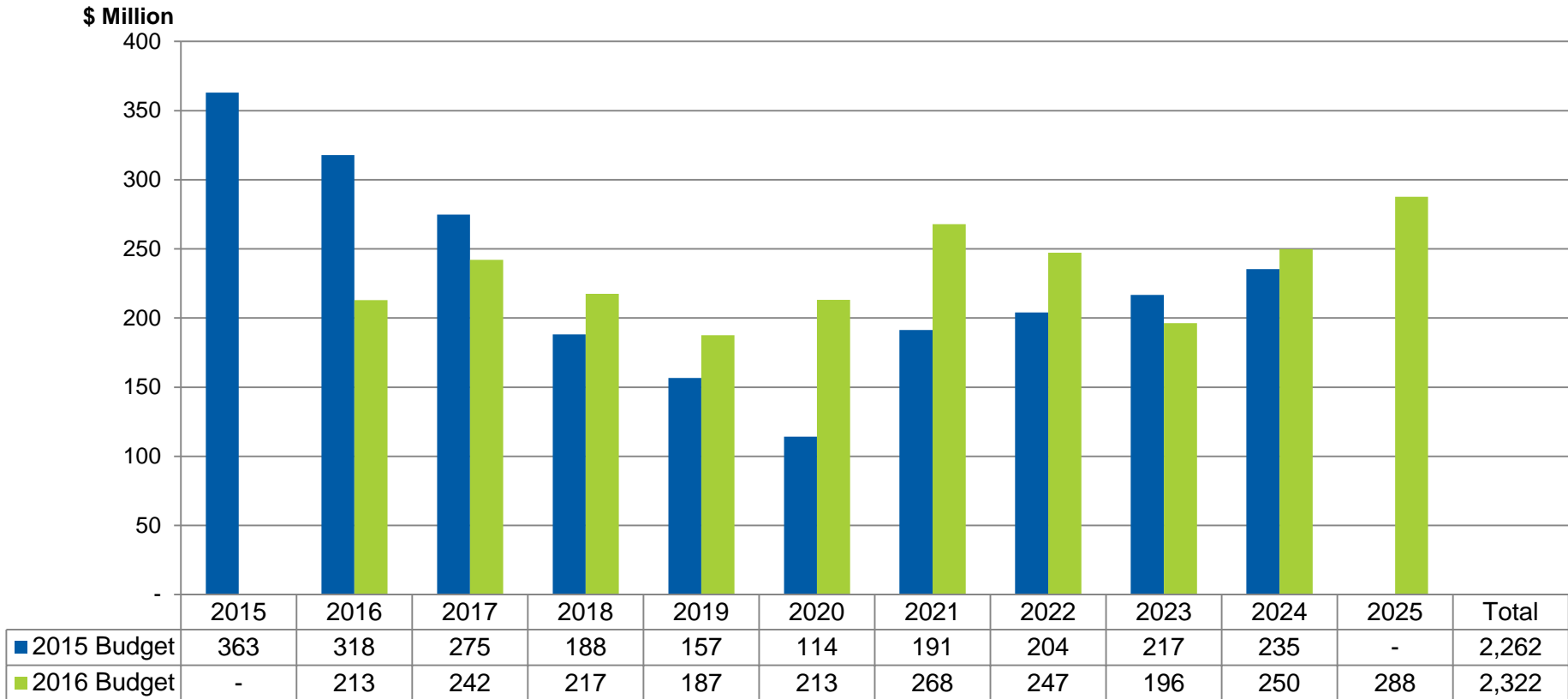
\$12M

Energy Retrofit – Various Existing Buildings
\$12M



\$2.3B 10-year capital plan with 55% related to growth

Comparison of Ten-Year Capital Plan 2015 vs. 2016



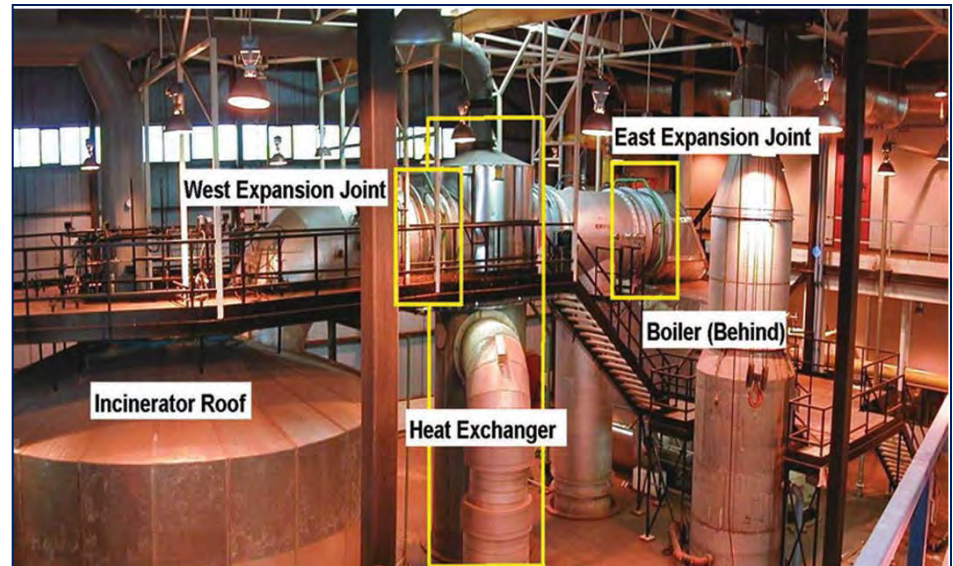
\$2.3B ten-year capital plan with over 150 projects in flight

Strengthening Commitment to Infrastructure

\$100M average annual investment over the next 10 years required to rehabilitate and replace infrastructure

Key Rehabilitation and replacement asset projects include:

- Trunk Sewers \$230M
- Duffin Creek Incinerators \$166M
- Southeast Collector Rehab \$122M
- Transmission Mains \$87M



Over \$1 billion investment in rehabilitation and replacement to support aging assets over next 10 years

Aligning Capital Plan with Corporate Fiscal Strategy

- ❑ Plan remains focused on delivering capacity needed to service future growth within current financial limits
- ❑ Continue to build system resiliency and manage system risk through comprehensive asset management

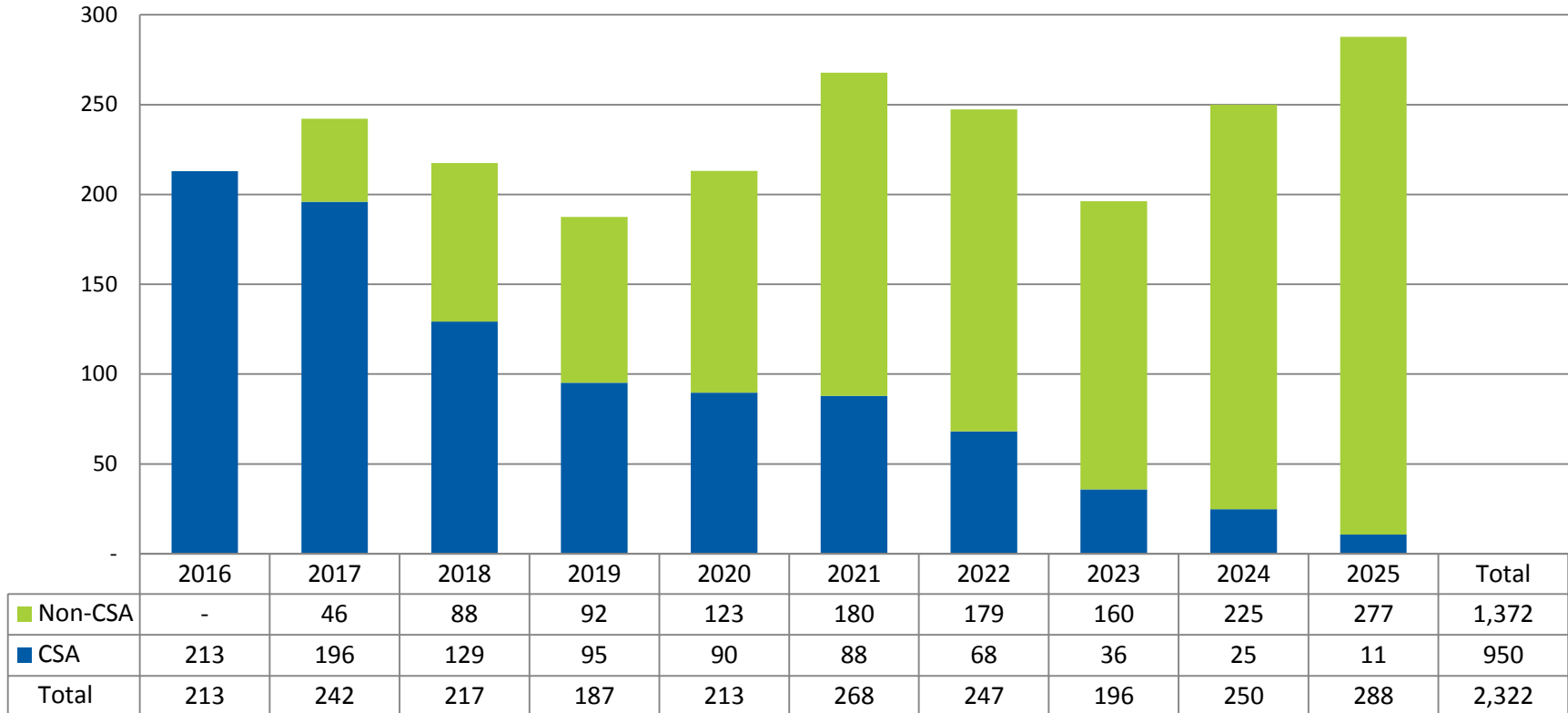


Capital budget updated annually to reflect new information and changing priorities

Ten-Year Capital Plan and Capital Spending Authority (CSA)

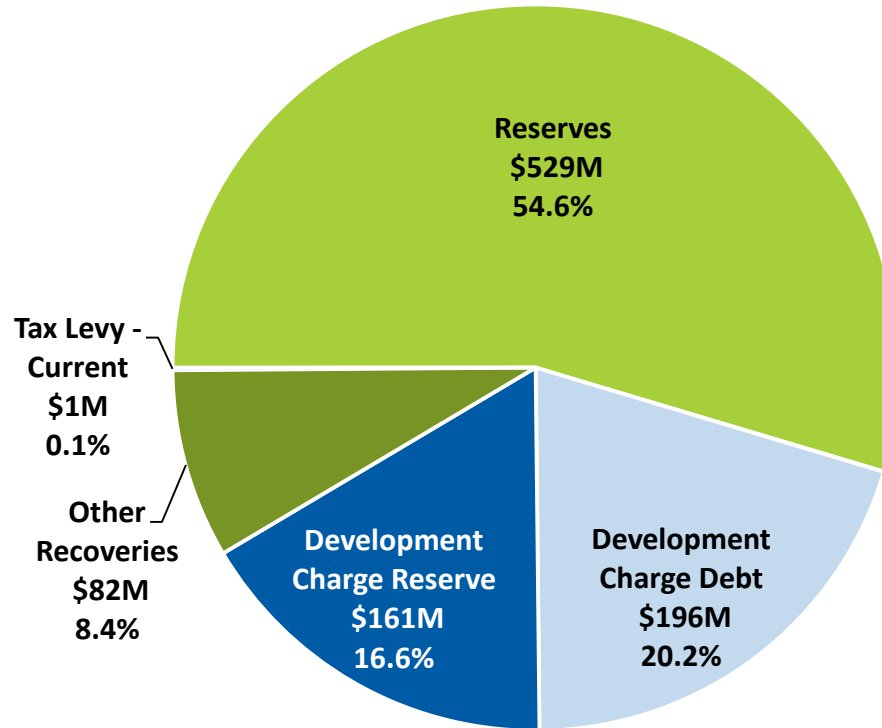
\$ Million

*Environmental Services also has an additional \$18M in CSA in years beyond 2025



Approximately 41% of our ten-year capital plan covered by multi-year CSA

2016 CSA Funding Sources



**Total 2016 CSA:
\$969M**

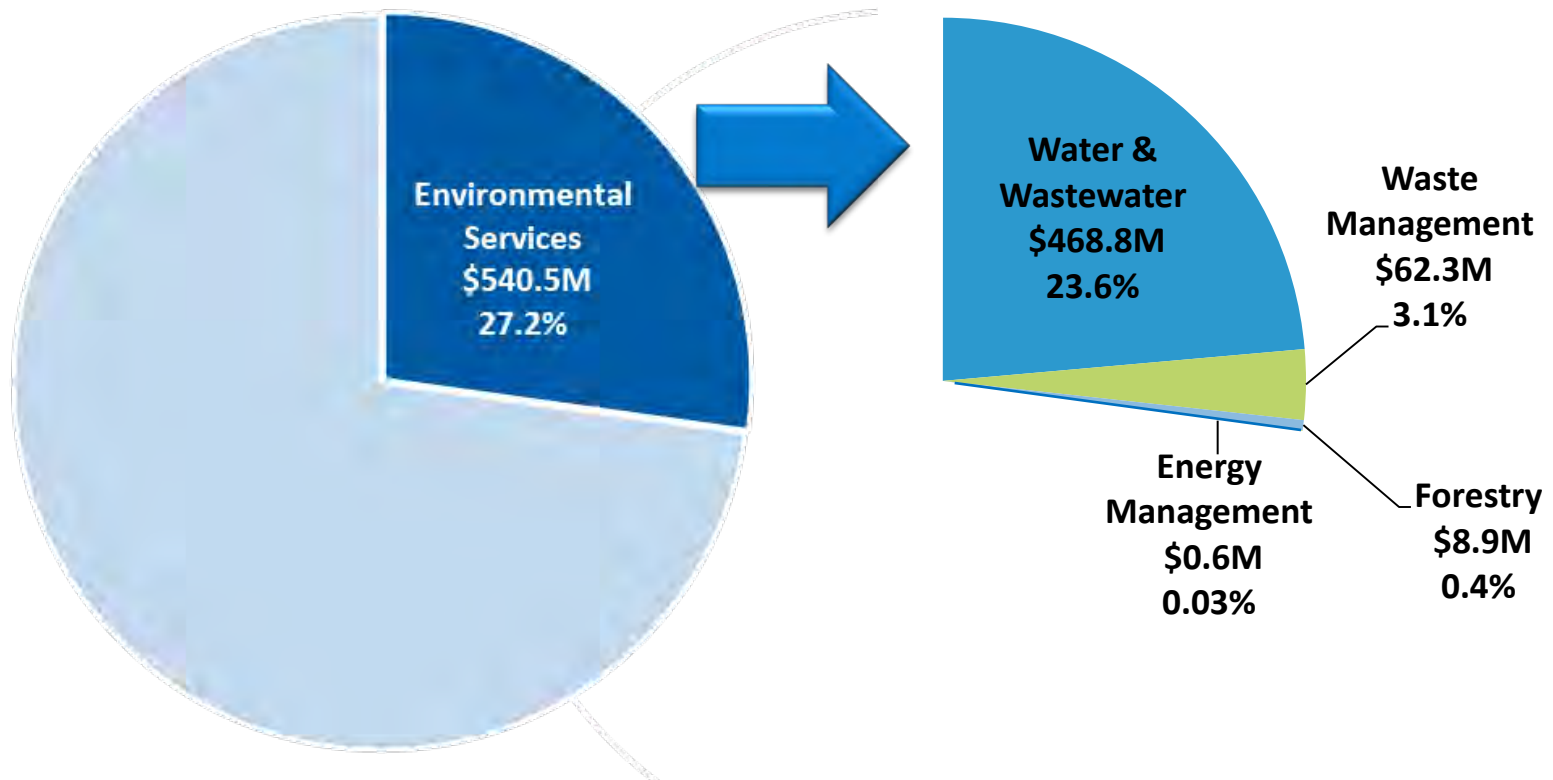
**20% of requested CSA financed through debentures
and over 70% through reserves**

3

OPERATING



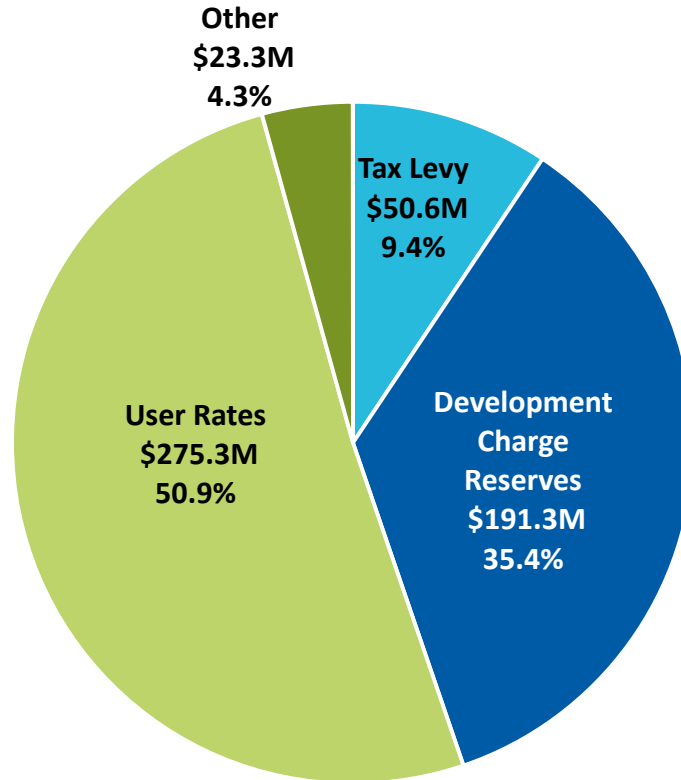
2016 Operating Share of Total Gross Spending



Water and Wastewater accounts for approximately 87% of total gross spending in Environmental Services in 2016

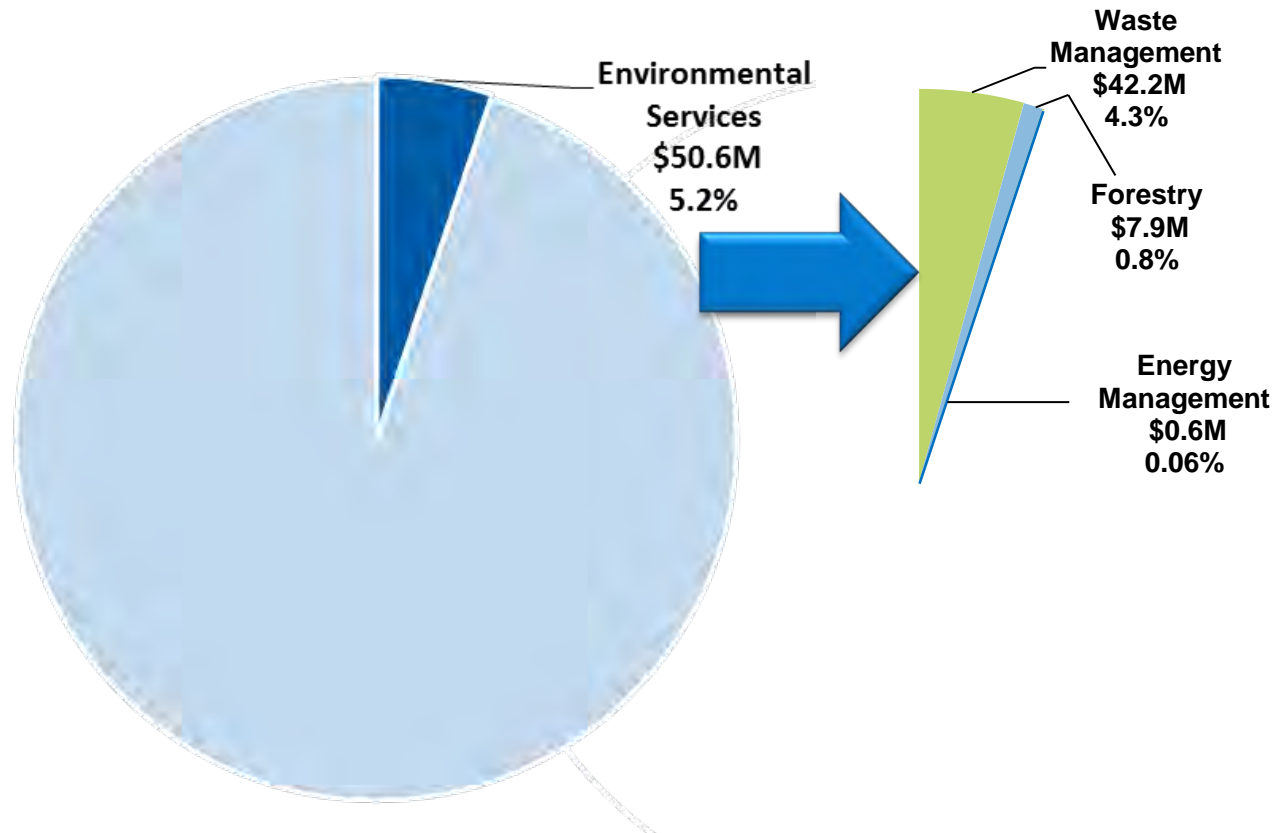
How the 2016 Operating Budget is Funded

Environmental Services 2016 Funding Requirements: \$540.5M



User rates account for approximately 51% of required funding

2016 Operating Share of Total Net Spending



Environmental Services represents only 5.2% of total Regional Net Spending

2016 - 2018 Operating Budget Summary

(\$Million)	2015 Approved	2016 Proposed	2017 Outlook	2018 Outlook
Gross Expenditures	519.8	540.5	557.7	582.4
Non-Tax Revenues	471.0	489.9	505.3	528.5
Net Expenditures	48.8	50.6	52.4	53.9
Increase/(Decrease) (year over year)	(0.7%)	3.7%	3.5%	2.8%
2015 Approved Outlook (restated)	-	3.7%	3.5%	2.8%
Proposed Staffing Changes (Compared to Outlook)	-	-	-	-

No changes from outlook presented in the 2015 budget

4

BUDGET HIGHLIGHTS



2016 - 2018 Budget Summary

	2016	2017	2018
Net Operating Budget	\$50.6M	\$52.4M	\$53.9M
Capital Budget for 2016		\$213M	
Ten-Year Capital Plan		\$2.3B	
2016 CSA		\$969M	

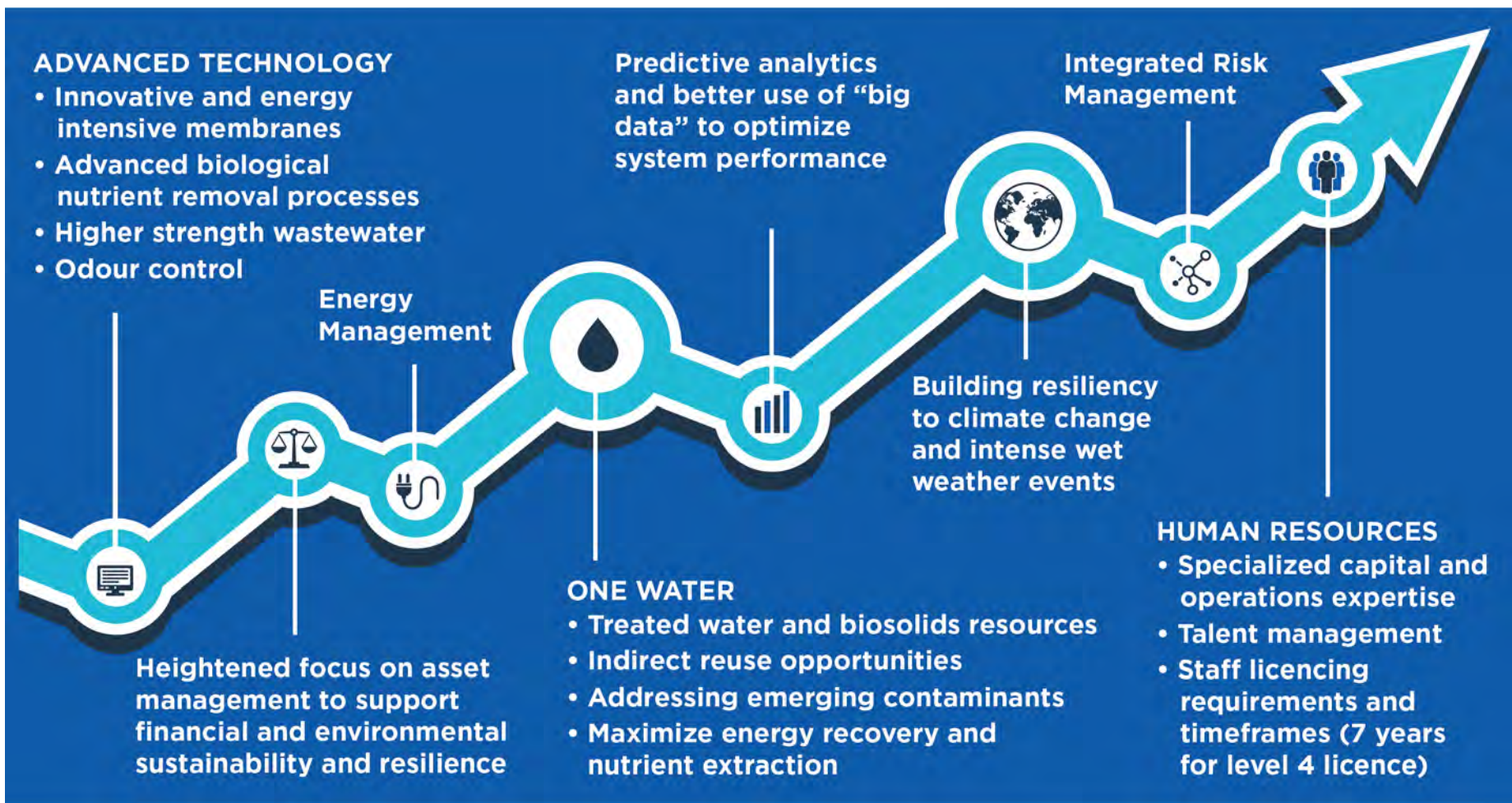
No change in requested net operating budget compared to approved outlook

Mitigating Budget Impacts

- Over \$2M of efficiencies in 2016 budget with continued focus on improvements
- Delivering services through strong partnerships with our local municipalities
- Council approved rates result in increased asset management spending and no new user rate debt

Innovative ideas and analytics to better leverage resources

Future Trends Impacting Environmental Services



5

CONCLUSION



Budget Recommendation

1. The Committee of the Whole recommends the budget as submitted for Environmental Services as follows:
 - a) The 2016 operating budget and the outlook for 2017 and 2018, as summarized in Attachment 1
 - b) Capital Spending Authority, as summarized in Attachment 2
2. That the recommended budget be consolidated by the Treasurer for consideration by Council on December 17, 2015