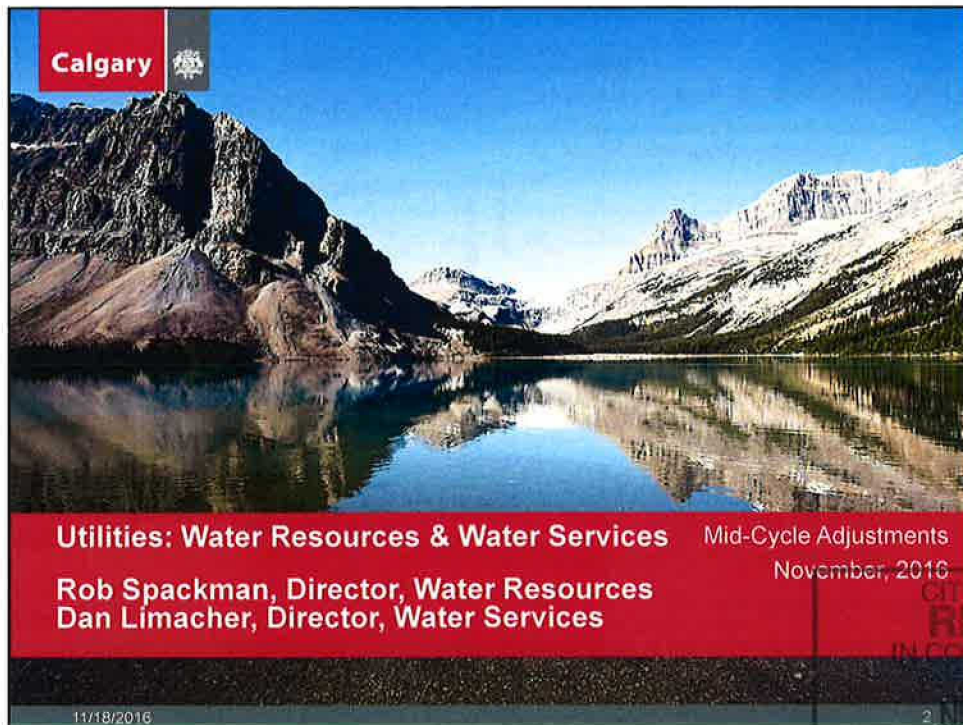




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**Utilities & Environmental Protection**

- Utilities: Water Resources and Water Services
- Waste & Recycling Services
- Environmental & Safety Management



**Calgary**

**Utilities: Water Resources & Water Services**

Mid-Cycle Adjustments  
November, 2016

**Rob Spackman, Director, Water Resources**  
**Dan Limacher, Director, Water Services**

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CITY OF CALGARY  
**RECEIVED**  
IN COUNCIL CHAMBER

2 NOV 21 2016

ITEM: *Distribution 4.1.1*  
*2016-0863*

CITY CLERK'S DEPARTMENT




## Overview of Utilities Water Resources & Water Services

We serve 1.3 million customers in Calgary and region

We provide three lines of service to customers:



Water  
Treatment &  
Supply



Wastewater  
Collection &  
Treatment





Stormwater  
Management

We operate and maintain >\$38 B worth of infrastructure

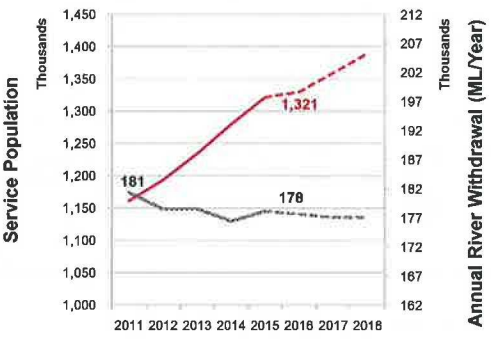
A healthy and green city
A well-run city
A city of inspiring neighbourhoods

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## Water Supply & Treatment

**Calgary Service Population and Annual Combined River Withdrawal**



— Calgary Service Population  
- - - Combined Annual River Withdrawal (ML/Year)

**Outlook**

**Key Actions:**

- Integrated Water Supply Management Planning:
  - Source water protection
  - Drought management
  - Water efficiency program

**Key Investments:**

- Glenmore Dam upgrades
- Shaganappi pump station
- Water feeder mains

**Story Behind Performance**

- The City's investment in asset management and Calgarians' response to programs have been successful at reducing water use.

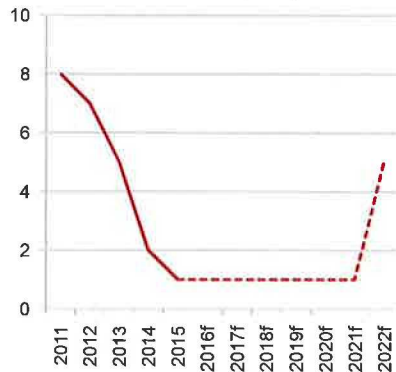
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## Wastewater Collection & Treatment

Remaining Years of Wastewater Treatment Capacity



### Outlook

#### Key Actions:

- Planning for wastewater treatment capacity in the south catchment
- Working towards renewal of our Approval to Operate in 2018
- Working with high strength wastewater customers

#### Key Investments:

- Bonnybrook upgrades and expansion (north catchment)
- Dewatering facility
- Major sewer trunks

### Story Behind Performance

- Consistent high growth in recent years decreased the remaining years of wastewater treatment capacity. Although investment was expedited prior to the decrease, there is a time lag to realize the benefit.

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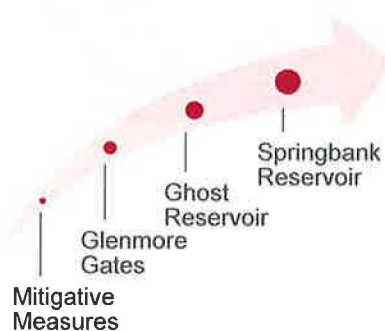
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## Stormwater Management

### Flood Protection Increasing



### Outlook

#### Key Actions:

- Finalize flood mitigation measures assessment
- Identify opportunities to further accelerate Community Drainage Improvement program
- Update our Stormwater Management Strategy

#### Key Investments:

- Flood mitigation
- Stormwater pond assessment & maintenance
- Community drainage improvements

### Story Behind Performance Measure

- Springbank Reservoir and committed projects will provide flood protection for the Elbow River. Additional work is underway to increase flood protection for the Bow River.

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A Water Utility focused on best value for money, cost effectiveness and efficiencies

- Stage gating
- Capital delivery models
- Energy management
- Vehicle Management

A customer focused Water Utility that engages citizens, encouraging participation in City decision-making

- Customer experience
- Customer engagement
- Levels of Service



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**Thank You**



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**Waste & Recycling Services**

Mid-Cycle Adjustments  
November, 2016

**Rick Valdarchi, Director**



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## Overview of Waste & Recycling Services

### Waste Collection



### Waste Diversion



### Waste Disposal



- Green Cart Program
- Organics & Biosolids Composting Facility
- Financial Model Review



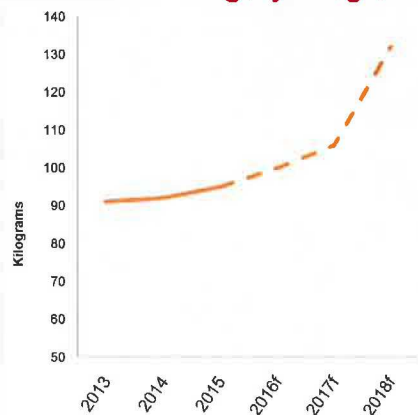
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## Waste Diversion From Landfill Through City of Calgary Programs Per Capita (kilograms)



### Outlook

#### •Key Actions

- Implement the city-wide Green Cart Program mid-2017

#### •Key Investments:

- Complete construction of the organics and biosolids composting facility

#### •Anticipated Challenges

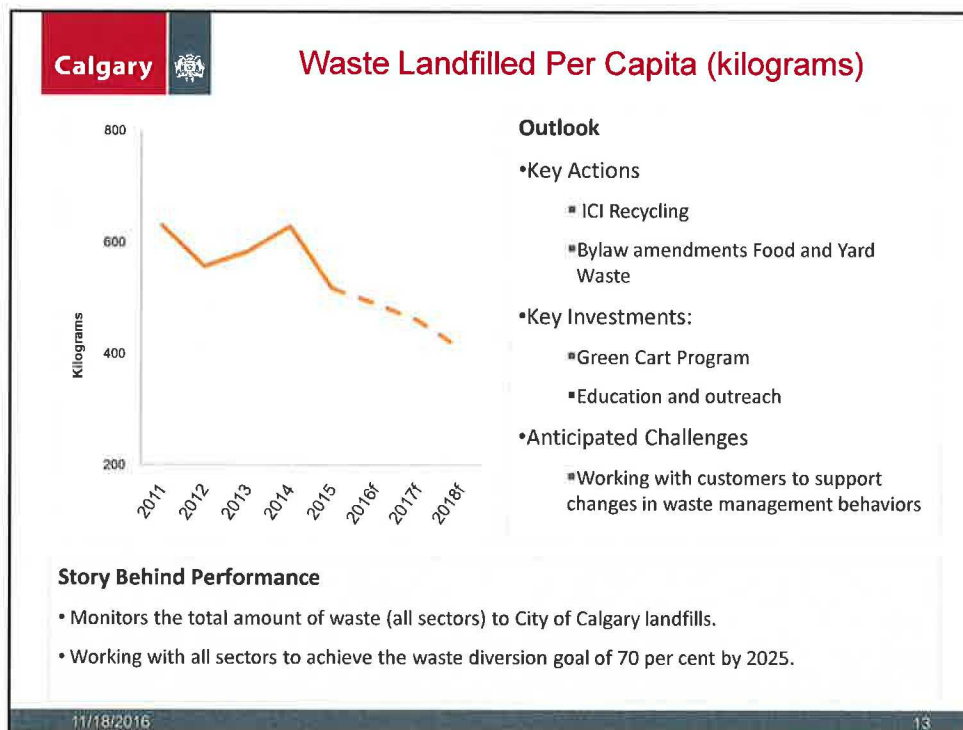
- Introduction of Green Cart and the change to Black Cart collection frequency presents considerable changes for customers


### Story Behind Performance

- Calgary has implemented many best practices including Blue Cart recycling, education and outreach, Green Cart Pilot, C&D and material sorting areas at waste management facilities.
- The Green Cart Program will increase diversion toward the goal of 70 per cent diversion by 2025.

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**Environmental & Safety Management**

Mid-Cycle Adjustments  
November, 2016

**Christopher Collier, Director**

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**Overview of Environmental & Safety Management**

- ESM contributes to three Council Priorities: a healthy and green city, a city of inspiring neighbourhoods, and a well-run city.
- As an enabling service provider, ESM supports City business units in delivering City services through corporate governance, and programs and services.
- ESM champions excellence in safety and environmental performance throughout The Corporation.



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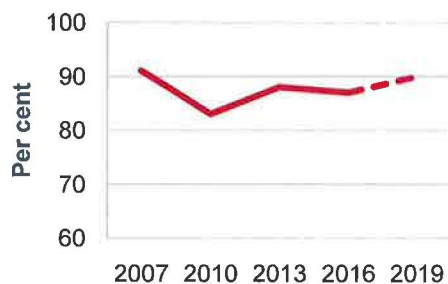
graph TD
    A[Management Systems for Environment & Safety] --> B[Environment]
    A --> C[Safety]
    B --- D[Programs & Services]
    C --- D
    D --- E[Corporate Governance]
  
```

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### Certificate of Recognition Audit Scores



### Outlook

- Creating a safer workplace:
  - Ensuring business units have access to safety resources
  - Continuing to deliver corporate-wide programs to prevent injuries, manage them well, and embed safety into decision making
  - Collaborating with employee health and wellness
  - Using an online platform for easier reporting, tracking and managing of incidents



### BREAKOUT STORY: Certificate of Recognition

Evidence that our system for managing workplace health and safety risks and for protecting our employees :

- Complies with legislation and meets industry standards
- Facilitates communication of requirements and expectations
- Ensures a consistent standard across a complex organization

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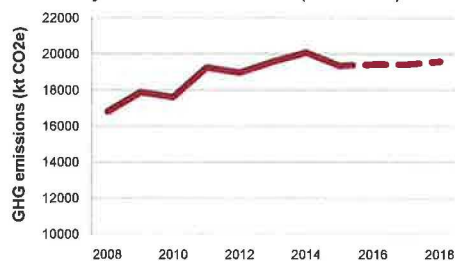


### Outlook

- Championing excellence for corporate environmental risk management:
  - Maintaining environmental management systems to international standards
  - Managing corporately owned contaminated sites
  - Driving corporate environmental stewardship initiatives
  - Developing coordinated climate change response



### City-wide GHG emissions (2008-2018)



### BREAKOUT STORY: Climate Change

- Building climate resilience:
  - Carbon reduction strategies
  - Adaptation plans (risk assessments)
  - Corporate capacity
  - Align with provincial and federal government efforts

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Thank You

