## Agenda

**October 24, 2015 Council of Councils**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 am</td>
<td>Welcome and Introductions</td>
</tr>
<tr>
<td>9:10 am</td>
<td>Utility Infrastructure Investment Planning</td>
</tr>
<tr>
<td>9:40 am</td>
<td>Metro Vancouver 2016 Budget Overview</td>
</tr>
<tr>
<td>10:45 am</td>
<td>Regional Affordable Housing Strategy</td>
</tr>
<tr>
<td>11:05 am</td>
<td>Lions Gate Secondary Wastewater Treatment Plant Project</td>
</tr>
<tr>
<td>11:25 am</td>
<td>Water Management in Summer 2015</td>
</tr>
<tr>
<td>11:45 am</td>
<td>2015 Zero Waste Conference</td>
</tr>
<tr>
<td>11:50 am</td>
<td>Roundtable and Closing Remarks</td>
</tr>
<tr>
<td>Noon</td>
<td>Adjournment</td>
</tr>
</tbody>
</table>
Metro Vancouver Council of Councils

Surrey City Hall  October 24, 2015

Moderator: Greg Moore

Chair, Metro Vancouver Board
Year In Review

Year in Review Video

http://bcove.me/d4fwcykp
Utility Infrastructure Investment Planning

Council of Councils  October 24, 2015

Frank Huber, Rick Gallilee, Dean Rear
Assets Metro Vancouver Owns and Operates

*Water*

- 2.4M population served
- Avg demand = 1 billion litres/day

<table>
<thead>
<tr>
<th>Water Assets</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dams</td>
<td>5</td>
</tr>
<tr>
<td>Water Treatment Plants</td>
<td>2</td>
</tr>
<tr>
<td>Transmission Mains</td>
<td>&gt;500 km</td>
</tr>
<tr>
<td>Pump Stations</td>
<td>19</td>
</tr>
<tr>
<td>Storage Reservoirs</td>
<td>25</td>
</tr>
<tr>
<td>Rechlorination Stations</td>
<td>8</td>
</tr>
</tbody>
</table>
Assets Metro Vancouver Owns and Operates...

Liquid Waste

- 2.4M population served
- Avg flow = 1.2 billion litres/day

### Wastewater Assets

<table>
<thead>
<tr>
<th>Wastewater Assets</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wastewater Treatment Plants</td>
<td>5</td>
</tr>
<tr>
<td>Trunk Sewers</td>
<td>&gt;500 km</td>
</tr>
<tr>
<td>Pump Stations</td>
<td>33</td>
</tr>
<tr>
<td>Storage Facilities</td>
<td>2</td>
</tr>
</tbody>
</table>
Utility Infrastructure Investment Planning Process
Planning Framework

• Board Strategic Plan
• MV 2040 Regional Growth Strategy
• Integrated Liquid Waste and Resource Management Plan
• Drinking Water Management Plan
Infrastructure Investment Drivers

- Growth
- Upgrade
- Risk (Resilience)
- Maintenance
- Opportunity
Growth

Metro Vancouver Growth Projections:

- Population
- Employment
- Dwelling Units

Notes:
1) This map is a small-scale depiction of the Regional Land Use Designation Map that Metro Vancouver maintains as the basis for defining land use designation boundaries. The Regional Land Use Designation Map is posted on the Metro Vancouver website.
2) Urban Centres are shown as symbols in approximate locations.

By 2041, Metro Vancouver is projected to have 3.4 million residents, 1.7 million dwelling units and 1.7 million jobs.
Growth

• Growth translates into significant infrastructure needs
• Manage growth through regional and municipal plans
• Educate public to reduce per capita demand
• Use regulations and conservation measures
Upgrade

Seymour-Capilano Filtration Plant

Lions Gate WWTP
Upgrade

• Regulated service expectations driven by guidelines and legislation
  • Water projects include SCFP and Coquitlam Water Treatment Plant
  • Liquid Waste projects include Lions Gate and Iona WWTP
• Non-regulated service expectations
  • Includes increased resource recovery, greenhouse gas reductions, odour control and system automation
Risk (Resilience)
Risk (Resilience)

• Resiliency to climate change & natural hazards
• Includes flooding & earthquakes
• 25% of capital expenditures over next decade
• GVWD lifeline study completed in mid-1990’s
• Seismic Upgrade program continues
• New infrastructure built to latest codes
• Key marine crossings to be hardened
• Liquid Waste has begun a similar program
Maintenance
Maintenance

• Deterioration of infrastructure over time
• Coordinated with annual maintenance actions
• Major projects that exceed operating budgets
• Long range forecasts reflect replacement costs
• Major infrastructure continuously refurbished
• Other programs include maintenance benefits
Opportunity
Opportunity

• Recover energy from water and wastewater
• Nutrient recovery from wastewater
• Utilization of digester gas
• Riparian habitat improvements
• Non-regulated projects that yield benefits
Infrastructure Investment Decision Process

Needs → Options → Priority → Fund & Execute
Infrastructure Investment Decision Process

- Infrastructure issues, risks, and opportunities are identified
- Organized by the infrastructure investment drivers
  - Growth
  - Upgrade
  - Risk (Resilience)
  - Maintenance
  - Opportunity
Infrastructure Investment Decision Process

- Options to address needs are prepared and analysed.
- Investment alternatives identified
  - O&M Strategy changes
  - Emergency Preparedness and Response Plans
- Liaison with municipal partners
Proposed infrastructure investments are consolidated into a portfolio that is run through multiple scenarios to balance cost, risks and benefits to services.

Prioritization criteria include:

- Comply with existing regulations
- Meet non-regulated service levels
- Comply with new/modified regulations
- Meet growth projections
- Improve resiliency to major adverse events
- Cost savings
- Improve environmental stewardship
Infrastructure investment requests are approved for funding

- Projects are implemented and new/modified infrastructure is integrated into the utilities
Annual Capital Planning Cycle

- **Jan**: Cashflow/schedule changes identified
- **Feb**: New projects submitted and changes reviewed
- **Mar**: Project resources and risks/benefits reviewed
- **May**: GMs present Capital Plan to CAO/CFO
- **Jun**: Municipal meetings
- **Jul**: Project budget change requests reviewed
- **Aug**: Finance debt calculations
- **Sep**: Finalize budget
- **Oct**: Board budget review/approval
- **Nov**:
Projected Capital Spending for Next 10 Years

- **WATER**
  - Maintenance
  - Risk (Resilience)
  - Upgrade
  - Opportunity
  - Growth

- **LIQUID WASTE**
  - Opportunity
  - Upgrade
  - Maintenance
  - Risk (Resilience)
  - Growth

\[ \text{WATER: } $3.1B \quad \text{LIQUID WASTE: } $4.1B \]
Large Liquid Waste Projects

- South Surrey Interceptor Dredging Impacts
- North Surrey Interceptor
- Annacis Island WWTP Stage 5
- Lions Gate Secondary WWTP
- Northwest Langley WWTP
- Gilbert Trunk Sewer
- Sapperton Pump Station
- Lulu Digester No. 3
- South Surrey Interceptor
- AIWWTP Ammonia Removal

Non-Large Projects (~150)

Opportunity
Growth
Risk Management
Maintenance
Upgrade

Northwest Langley WWTP
Iona Secondary WWTP

2010 2020 2030
Infrastructure Investment Funding

- Funding Philosophy
  - Pay as You Go
  - Conservative Use of Borrowing

- Source of Funding
  - Water Rate
  - Liquid Waste Levy
  - Development Cost Charges

- Long Term Thinking
  - Strengthen policy to ensure fiscal sustainability
# Infrastructure Investment Funding

## Water Services

### 2016 Proposed Budget

<table>
<thead>
<tr>
<th></th>
<th>($ Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating</strong></td>
<td></td>
</tr>
<tr>
<td>Revenues:</td>
<td></td>
</tr>
<tr>
<td>Water Sales</td>
<td>$ 251.8</td>
</tr>
<tr>
<td>Other Revenues</td>
<td>0.9</td>
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<tr>
<td>Reserve Funding</td>
<td>0.7</td>
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<tr>
<td>Total Revenues</td>
<td>$ 253.4</td>
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<tr>
<td>Expenditures:</td>
<td></td>
</tr>
<tr>
<td>Operating Costs</td>
<td>$ 81.7</td>
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<tr>
<td>Allocated Centralized Support Costs</td>
<td>18.4</td>
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<tr>
<td>Debt Service Costs (Principal &amp; Interest)</td>
<td>$ 98.2</td>
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<tr>
<td>Contribution to Capital Program</td>
<td>55.1</td>
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<tr>
<td>Total Expenditures</td>
<td>$ 253.4</td>
</tr>
<tr>
<td>Average Household Impact</td>
<td>$ 158</td>
</tr>
<tr>
<td><strong>Capital</strong></td>
<td></td>
</tr>
<tr>
<td>Capital Expenditures:</td>
<td></td>
</tr>
<tr>
<td>Infrastructure Growth</td>
<td>$ 39.4</td>
</tr>
<tr>
<td>Infrastructure Maintenance</td>
<td>26.0</td>
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<tr>
<td>Infrastructure Risk Management</td>
<td>92.6</td>
</tr>
<tr>
<td>Infrastructure Upgrade</td>
<td>18.3</td>
</tr>
<tr>
<td>Opportunity Projects</td>
<td>3.2</td>
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<tr>
<td>Total Capital Expenditures</td>
<td>$ 179.5</td>
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<tr>
<td>Capital Funding:</td>
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</tr>
<tr>
<td>Reserves - Surplus</td>
<td>$ 18.8</td>
</tr>
<tr>
<td>Long Term Borrowing</td>
<td>$ 105.6</td>
</tr>
<tr>
<td>Contribution to Capital</td>
<td>55.1</td>
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<tr>
<td>Total Capital Funding</td>
<td>$ 179.5</td>
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</table>
## Liquid Waste Services
### 2016 Proposed Budget
($ Millions)

<table>
<thead>
<tr>
<th>Operating</th>
<th>Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenues:</strong></td>
<td><strong>Capital Expenditures:</strong></td>
</tr>
<tr>
<td>GVSDD Levies</td>
<td>Infrastructure Growth $49.1</td>
</tr>
<tr>
<td>Other Revenues</td>
<td>Infrastructure Maintenance 34.4</td>
</tr>
<tr>
<td>Reserve Funding</td>
<td>Infrastructure Risk Management 21.3</td>
</tr>
<tr>
<td><strong>Total Revenues</strong></td>
<td>Infrastructure Upgrade 18.1</td>
</tr>
<tr>
<td>$215.5</td>
<td>Opportunity Projects 3.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expenditures:</th>
<th><strong>Capital Funding:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Costs</td>
<td>Reserves - Surplus $8.4</td>
</tr>
<tr>
<td>Allocated Centralized Support Costs</td>
<td>Long Term Borrowing $57.4</td>
</tr>
<tr>
<td>Debt Service Costs (Principal &amp; Interest)</td>
<td>Contribution to Capital 60.2</td>
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<tr>
<td>Contribution to Capital Program</td>
<td><strong>Total</strong></td>
</tr>
<tr>
<td><strong>Total Expenditures</strong></td>
<td>$215.5</td>
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Average Household Impact $180
Questions & Answers
Metro Vancouver 2016 Budget Overview

Council of Councils          October 24, 2015

Carol Mason                  Phil Trotzuk
CAO and Commissioner         Chief Financial Officer
2016 Budget Process

Evolving budget process
  • Enhanced sense of budget accountability/ownership
  • New budget software – enhanced development and review

Commenced preparation of 5 year financial plans
  • Constructing 5 year plans – focus on 2016
  • 5 year financial plans to be rolled out in late spring
  • Longer term view – including assessment of financial policies
### 2016 BUDGET OVERVIEW

#### Expenditures

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Water District</td>
<td>$245.6</td>
<td>$253.4</td>
<td>3.2%</td>
</tr>
<tr>
<td>Liquid Waste</td>
<td>$210.4</td>
<td>$215.5</td>
<td>2.4%</td>
</tr>
<tr>
<td>Solid Waste</td>
<td>$93.2</td>
<td>$90.8</td>
<td>(2.5%)</td>
</tr>
<tr>
<td>Regional District</td>
<td>$65.5</td>
<td>$69.1</td>
<td>5.4%</td>
</tr>
<tr>
<td>Housing Corporation</td>
<td>$39.7</td>
<td>$40.6</td>
<td>2.2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$654.4</strong></td>
<td><strong>$669.4</strong></td>
<td><strong>2.3%</strong></td>
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</tbody>
</table>
2016 BUDGET OVERVIEW

Revenue Sources

<table>
<thead>
<tr>
<th>Revenue Source</th>
<th>2015</th>
<th>2016</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water sales</td>
<td>$243.8</td>
<td>$251.8</td>
<td>3.3%</td>
</tr>
<tr>
<td>Sewer levy</td>
<td>192.3</td>
<td>200.3</td>
<td>4.1%</td>
</tr>
<tr>
<td>Solid waste tipping fee</td>
<td>75.8</td>
<td>80.0</td>
<td>5.5%</td>
</tr>
<tr>
<td>Housing rents</td>
<td>34.7</td>
<td>35.8</td>
<td>3.0%</td>
</tr>
<tr>
<td>Tax requisitions</td>
<td>47.2</td>
<td>49.8</td>
<td>5.7%</td>
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<tr>
<td>External revenues</td>
<td>35.5</td>
<td>34.1</td>
<td>(4.2%)</td>
</tr>
<tr>
<td>Other*</td>
<td>25.0</td>
<td>17.6</td>
<td>(29.6%)</td>
</tr>
</tbody>
</table>

Total: $654.4 $669.4 2.3%

* Other revenue sources include reserves, BOD/TSS, DCC.
# 2016 Budget Overview

## Capital Expenditures

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>153.2</td>
<td>189.3</td>
<td>190.0</td>
<td>179.5</td>
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<tr>
<td>Liquid Waste</td>
<td>78.6</td>
<td>84.9</td>
<td>92.1</td>
<td>126.0</td>
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<tr>
<td>Solid Waste</td>
<td>15.7</td>
<td>17.7</td>
<td>37.1</td>
<td>17.2</td>
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<tr>
<td>Housing</td>
<td>5.4</td>
<td>8.0</td>
<td>9.5</td>
<td>11.7</td>
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<tr>
<td>Regional Parks</td>
<td>12.7</td>
<td>13.5</td>
<td>13.1</td>
<td>12.0</td>
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**Total Capital Expenditures**

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
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</thead>
<tbody>
<tr>
<td>$256.6</td>
<td>$313.4</td>
<td>$341.8</td>
<td>$346.4</td>
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</table>
## 2016 Budget Overview

### Debt Management 2016

($ millions)

**Funding provided by:**

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 Year Debt Financing</td>
<td>$180.1</td>
<td>52%</td>
</tr>
<tr>
<td>Pay As You Go Financing</td>
<td>$115.4</td>
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<tr>
<td>Contributions from operations</td>
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<td></td>
</tr>
<tr>
<td>Reserves (Housing &amp; Regional Parks)</td>
<td>23.7</td>
<td></td>
</tr>
<tr>
<td>Applied surplus</td>
<td>27.2</td>
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</table>

**Total 2016 Capital Expenditures** $346.4
## Debt Management 2008-2014

<table>
<thead>
<tr>
<th>Funding provided by</th>
<th>($ millions)</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>15 Year Debt Financing</td>
<td>$707.3</td>
<td>49%</td>
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<tr>
<td>Pay As You Go Financing</td>
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<tr>
<td>Contributions from operations</td>
<td>$444.8</td>
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</tr>
<tr>
<td>Reserves (Housing &amp; Regional Parks)</td>
<td>92.6</td>
<td></td>
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<tr>
<td>Applied surplus</td>
<td>190.9</td>
<td></td>
</tr>
<tr>
<td><strong>Total 2008-2014 Capital Expenditures</strong></td>
<td><strong>$1,435.6</strong></td>
<td><strong>51%</strong></td>
</tr>
</tbody>
</table>
Net Debt

($ millions)

Net Debt - 2008 $711.6
Net Debt - 2014 800.5

Change in net debt (2008 - 2014) $88.9

New capital assets (2008 – 2014) $1,435.6
## 2016 Household Impact

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water District</td>
<td>$151</td>
<td>$154</td>
<td>$158</td>
</tr>
<tr>
<td>Liquid Waste</td>
<td>173</td>
<td>176</td>
<td>180</td>
</tr>
<tr>
<td>Solid Waste</td>
<td>58</td>
<td>57</td>
<td>56</td>
</tr>
<tr>
<td>Regional District</td>
<td>40</td>
<td>40</td>
<td>42</td>
</tr>
<tr>
<td><strong>Total household impact</strong></td>
<td><strong>$422</strong></td>
<td><strong>$427</strong></td>
<td><strong>$436</strong></td>
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</tbody>
</table>

1 Average based on $760,000 assessed home value.
## 2016 BUDGET OVERVIEW

### 2016 Household Impact

**Water District**

- 2016 Water Rate $ \times$ Projected Average Consumption per Single/Multi-Family Dwelling m³
- $0.65 \text{ per m}^3 \times 243 \text{m}^3 \text{ per household}$

**Liquid Waste**

- Total 2016 Sewer Levy $ \times$ Projected Average % Charged to Residential Sector of all Municipalities
- Total Number of Single and Multi-Family Dwellings
- $(200,250,619 \times 67\%) / 748,342 \text{ residential dwellings}$

**Solid Waste**

- Municipal Tipping Fee $ \times$ Average Tonnage per Single/Multi Family Dwelling
- $(100 \text{ per tonne} \times 0.56 \text{ tonne})$

**Regional District**

- Total MV GVRD Tax Requisition $ \times$ Average % Charged to Residential Sector of all Municipalities
- Total Number of Single and Multi-Family Dwellings
- $(49,844,842 \times 63\%) / 748,342 \text{ residential dwellings}$

---

1. Average based on $760,000 assessed home value.
2. 2015 BC Assessment
## 2016 WATER BUDGET

### Expenditures

<table>
<thead>
<tr>
<th></th>
<th>2015 ($ millions)</th>
<th>2016 ($ millions)</th>
<th>$ Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operations</td>
<td>$99.6</td>
<td>$100.1</td>
<td>$0.5</td>
<td>0.5%</td>
</tr>
<tr>
<td>Debt service</td>
<td>93.7</td>
<td>98.2</td>
<td>4.5</td>
<td>4.9%</td>
</tr>
<tr>
<td>Contribution to Capital</td>
<td>52.3</td>
<td>55.1</td>
<td>2.8</td>
<td>5.4%</td>
</tr>
<tr>
<td><strong>Total expenditures</strong></td>
<td><strong>$245.6</strong></td>
<td><strong>$253.4</strong></td>
<td><strong>$7.8</strong></td>
<td><strong>3.2%</strong></td>
</tr>
</tbody>
</table>
2016 WATER BUDGET

Overview

2016 Key Actions Include
• Developing a Comprehensive Regional Water System Plan
• Identifying climate change impacts on infrastructure and develop adaptation strategy
• Securing additional water allocation from Coquitlam Source
• Commencing project definition for Coquitlam Intake No. 2 project
• Completing and commissioning of Port Mann Water Supply Tunnel
• Continuing the development of an Asset Management Plan
• Completing Alpine Lake Dam seismic assessments

2016 Major Capital Projects
• Port Mann Water Supply Tunnel ($32 M)
• Capilano Main No. 9 ($15 M)
• South Delta Main No. 1 Replacement ($14 M)
• Port Mann Main No. 2 – North (12 M)
• Clayton Reservoir ($10 M)
# 2016 Water Budget

## Household Impact

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total water sales</td>
<td>$243.8 M</td>
<td>$251.8 M</td>
</tr>
<tr>
<td>Other revenues</td>
<td>$1.8 M</td>
<td>$1.6 M</td>
</tr>
<tr>
<td><strong>Total revenues</strong></td>
<td><strong>$245.6 M</strong></td>
<td><strong>$253.4M</strong> 3.2%</td>
</tr>
</tbody>
</table>

**Water rate average** ($/m³) (Blended Rate)

- June – September: $0.7270
- October – May: $0.5816

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>Proposed 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household cost</td>
<td>$154</td>
<td>$158</td>
</tr>
<tr>
<td>Impact on average household *</td>
<td>$3</td>
<td>$4</td>
</tr>
</tbody>
</table>

* Average household assumed to use 243 cubic metres of water annually.
### 2016 LIQUID WASTE BUDGET

#### Expenditures

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
<th>$ Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operations</td>
<td>$138.5</td>
<td>$140.6</td>
<td>$2.1</td>
<td>1.5%</td>
</tr>
<tr>
<td>Debt service</td>
<td>16.1</td>
<td>14.7</td>
<td>(1.4)</td>
<td>(8.8%)</td>
</tr>
<tr>
<td>Contribution to Capital</td>
<td>55.8</td>
<td>60.2</td>
<td>4.4</td>
<td>7.9%</td>
</tr>
<tr>
<td><strong>Total expenditures</strong></td>
<td><strong>$210.4</strong></td>
<td><strong>$215.5</strong></td>
<td><strong>$5.1</strong></td>
<td><strong>2.4%</strong></td>
</tr>
</tbody>
</table>
2016 LIQUID WASTE BUDGET

Overview

2016 Key Actions Include

• Identifying climate change impacts on infrastructure
• Completing procurement for the Lions Gate WWTP Secondary Upgrade project
• Completing construction of Northwest Langley WWTP Upgrade
• Completing sustainability innovation projects at Annacis Research Centre
• Commencing construction of Annacis Island WWTP Stage 5 expansion
• Commencing removal of Iona Island WWTP biosolids stockpile
• Continuing development of an Asset Management Plan

2016 Major Capital Projects

• Annacis Island WWTP Stage 5 Expansion ($23.0 M)
• Northwest Langley WWTP Upgrade ($4.0 M)
• Gilbert Trunk Sewer Twinning ($9.4 M)
• Iona Island WWTP Solids Handling Facility ($5.0 M)
• Annacis Island WWTP Cogeneration Facility ($5.0 M)
## 2016 LIQUID WASTE BUDGET

### Household Impact

<table>
<thead>
<tr>
<th>($ millions)</th>
<th>2015</th>
<th>2016</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sewer levy(^1)</td>
<td>$192.3</td>
<td>$200.3</td>
<td>2.4%</td>
</tr>
<tr>
<td>User fees</td>
<td>2.5</td>
<td>2.5</td>
<td>0%</td>
</tr>
<tr>
<td>BOD/TSS industrial charges</td>
<td>7.6</td>
<td>8.5</td>
<td>2.4%</td>
</tr>
<tr>
<td>Other revenues</td>
<td>8.0</td>
<td>4.2</td>
<td>-48%</td>
</tr>
<tr>
<td><strong>Total revenues</strong></td>
<td><strong>$210.4</strong></td>
<td><strong>$215.5</strong></td>
<td><strong>2.4%</strong></td>
</tr>
</tbody>
</table>

### 2015 vs. Proposed 2016

<table>
<thead>
<tr>
<th>($ millions)</th>
<th>2015</th>
<th>Proposed 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household cost</td>
<td>$176</td>
<td>$180</td>
</tr>
<tr>
<td>Impact on average household(^2)</td>
<td>$3</td>
<td>$4</td>
</tr>
</tbody>
</table>

---

\(^1\) Sewer levy increase includes the impact of population growth.

\(^2\) Average based on $760,000 assessed home value.
## 2016 SOLID WASTE BUDGET

### Expenditures

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
<th>$ Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operations</strong></td>
<td>$91.8</td>
<td>$89.5</td>
<td>$(2.3)</td>
<td>(2.5%)</td>
</tr>
<tr>
<td><strong>Debt service</strong></td>
<td>1.4</td>
<td>1.3</td>
<td>(0.1)</td>
<td>(6.2%)</td>
</tr>
<tr>
<td><strong>Contribution to Capital</strong></td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Total expenditures</strong></td>
<td>$93.2</td>
<td>$90.8</td>
<td>$(2.4)</td>
<td>(2.5%)</td>
</tr>
</tbody>
</table>
Overview

2016 Key Actions Include
- Various waste reduction and recycling initiatives (bans program, waste composition work, recycling depot standards etc.)
- Procurement for transfer station third party operator
- North Shore Transfer Station reconfiguration
- Waste-to-Energy Facility initiatives
- Surrey Residential Drop-Off and Coquitlam Transfer Station replacement process

2016 Major Capital Projects
- Surrey Residential Drop-Off, Coquitlam Transfer Station replacement, and North Shore Transfer Station reconfiguration work
- Various existing WTE facility projects
- Coquitlam Landfill projects
## Household Impact

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>User fees (tipping fee)</td>
<td>$75.8</td>
<td>$80.0</td>
</tr>
<tr>
<td>Energy sales</td>
<td>6.1</td>
<td>5.7</td>
</tr>
<tr>
<td>Other revenues</td>
<td>11.3</td>
<td>5.1</td>
</tr>
<tr>
<td><strong>Total revenues</strong></td>
<td><strong>$93.2</strong></td>
<td><strong>$90.8</strong></td>
</tr>
</tbody>
</table>

### Tipping Fees /cubic metre
- **Up to 1 tonne**: $130 → $133
- **1 to 9 tonnes**: $109 → $112
- **Over 9 tonnes**: $80
- **Municipal**: N/A → $100

### Proposed 2016
- **Household cost**: $57 → $56
- **Impact on average household**: ($1) → ($1)

*Average household assumed to produce 0.56 metric tonne annually.*
## 2016 MVHC BUDGET

### Expenditures

<table>
<thead>
<tr>
<th></th>
<th>2015 ($ millions)</th>
<th>2016 ($ millions)</th>
<th>$ Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operations</td>
<td>$23.2</td>
<td>$24.5</td>
<td>$1.3</td>
<td>5.6%</td>
</tr>
<tr>
<td>Debt service</td>
<td>15.5</td>
<td>15.2</td>
<td>(0.3)</td>
<td>(2.2%)</td>
</tr>
<tr>
<td>Contribution to Capital</td>
<td>1.0</td>
<td>0.9</td>
<td>(0.1)</td>
<td>(9.1%)</td>
</tr>
<tr>
<td><strong>Total expenditures</strong></td>
<td><strong>$39.7</strong></td>
<td><strong>$40.6</strong></td>
<td><strong>$0.9</strong></td>
<td><strong>2.2%</strong></td>
</tr>
</tbody>
</table>
2016 MVHC BUDGET

Overview

2016 Key Actions Include
• Executing 2016 capital replacement and upgrading plan projects
• Heather Place Re-development Phase 1 Construction starts / Redevelopment Priority Plan
• Energy Upgrades including boiler replacements and common area LED lighting conversions
• Increasing market rents by 2.9% - Residential Tenancy Act maximum

2016 Major Capital Projects
• Next phase of Heather Place Redevelopment ($5.7 M)
• Capital Replacement - Routine upgrades to flooring, kitchens/bathrooms ($2.0 M)
• Capital Replacement - Major works include Regal Place and Tivoli Garden envelope repairs, roofing at Kingston Gardens, Tivoli Place and Alderwood ($4.0 M)
# 2016 REGIONAL SERVICES BUDGETS

## Expenditures

<table>
<thead>
<tr>
<th>($ millions)</th>
<th>2015</th>
<th>2016</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Policy, Planning and Environment:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air Quality</td>
<td>$8.5</td>
<td>$9.0</td>
<td>5.5%</td>
</tr>
<tr>
<td>Regional Parks</td>
<td>33.0</td>
<td>34.4</td>
<td>4.3%</td>
</tr>
<tr>
<td>Regional Planning</td>
<td>2.9</td>
<td>3.2</td>
<td>9.7%</td>
</tr>
<tr>
<td>Electoral Area Service</td>
<td>0.5</td>
<td>0.6</td>
<td>13.5%</td>
</tr>
<tr>
<td><em><em>Other Regional Services</em>:</em>*</td>
<td>20.6</td>
<td>21.9</td>
<td>6.4%</td>
</tr>
<tr>
<td><strong>Total expenditures</strong></td>
<td>$65.5</td>
<td>$69.1</td>
<td>5.4%</td>
</tr>
</tbody>
</table>

* Includes E911, General Government, Labour Relations, Regional GPS, Sasamat VFD
Overview

**2016 Air Quality Key Actions Include**
- Developing and implementing integrated regional climate action strategy
- Implementing a regional approach to climate change adaptation
- Implementing additional energy and greenhouse gas reduction projects
- Developing new air quality bylaws and regulations for the protection of human health

**2016 Regional Planning Key Actions Include**
- Preparing and implementing a strategic communication strategy and municipal and public outreach strategy
- Conducting livability survey
- Developing tools and processes that contribute to agricultural land protection and viability
- Preparing data and analytics strategy
Overview

2016 Regional Parks Key Actions Include
- Completing Regional Parks Plan update
- Completing construction of Kanaka Creek Watershed Stewardship Centre
- Completing construction of Surrey Bend Regional Park facilities and hold official opening
- Construction of Colony Farm Regional Park Sheep Paddocks trail

2016 Regional Parks Major Capital Projects
- Heritage Parkland Acquisition Fund ($4.0 M)
- Colony Farm Sheep Paddocks Trail ($2.0 M)
- Kanaka Creek Watershed Stewardship Centre ($1.9 M)
Overview

2016 Electoral Area Service Key Actions Include
• Prepare a compendium of policies and procedures
• Initiate development of a Official Community Plan

2016 Other Regional Services Key Actions Include
• Complete a Client Satisfaction Survey and develop a Members Only Website in Labour Relations
• 2nd year of survey updating of the high precision monuments in Regional GPS
• Continue with enhancements to corporate budgeting system/process
• Commencing long-term financial planning process including a financial policy review
### Household Impact

($ millions) | 2015 | 2016 | % Increase
---|---|---|---
GVRD municipal tax requisition* | $47.2 | $49.8 | 5.7%
Other revenues | 18.3 | 19.3 |
**Total revenues** | **$65.5** | **$69.1** | **5.4%**

<table>
<thead>
<tr>
<th>2015</th>
<th>Proposed 2016</th>
</tr>
</thead>
</table>
Household cost | $40 | $42 |
Impact on average household** | $0 | $2 |

* Overall GVRD tax requisition 4.2% higher than 2015 after accounting for 1.5% regional population growth; impact rounded to $2

** Average based on $760,000 assessed home value
Overview

2.3%  Total expenditure increase

$669.4M  Proposed 2016 budget
Household Impact*

$9
Increase for the average household in 2016

$436
Average annual costs for all Metro Vancouver services

* Average based on $760,000 assessed home value.
Questions & Answers
<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:45 am</td>
<td>Regional Affordable Housing Strategy</td>
</tr>
<tr>
<td>11:05 am</td>
<td>Lions Gate Secondary Wastewater Treatment Plant Project</td>
</tr>
<tr>
<td>11:25 am</td>
<td>Water Management in Summer 2015</td>
</tr>
<tr>
<td>11:45 am</td>
<td>2015 Zero Waste Conference</td>
</tr>
<tr>
<td>11:50 am</td>
<td>Roundtable and Closing Remarks</td>
</tr>
<tr>
<td>Noon</td>
<td>Adjournment</td>
</tr>
</tbody>
</table>
# Metro Vancouver Housing Roles

| Policy and planning | • Metro 2040  
| • Regional Affordable Housing Strategy |
|---------------------|------------------------------------------------|
| Provide housing     | • Metro Vancouver Housing Corporation |
| Administer funding  | • Homelessness Partnering Strategy |
Regional Affordable Housing Strategy 2007

3 Goals

• Increase the supply + diversity of modest cost housing
• Eliminate homelessness across the region
• Meet the needs of low-income renters
Accomplishments

• Municipal Housing Action Plans
• Parking reductions
• Appropriate density
• Infill – secondary suites, laneway housing
• Importance of rental supply
• New purpose built rental supply
• Connection between affordable housing and transit
Regional Affordable Housing Strategy Update Process

Phase 1 - Issues and Options
- Develop Goals: Fall 2013
- Stakeholder Engagement: Fall 2014

Phase 2 - Develop the Strategy
- Draft Strategy: Spring 2015
- Stakeholder Engagement: Fall 2015
- Final Strategy: Winter 2016

Roundtable
## Housing Continuum

<table>
<thead>
<tr>
<th>Rental</th>
<th>Ownership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affordable rental with support</td>
<td>Affordable rental</td>
</tr>
<tr>
<td>Emergency shelter</td>
<td>Low income rental</td>
</tr>
<tr>
<td>Transitional and supportive housing</td>
<td>Moderate income rental</td>
</tr>
<tr>
<td></td>
<td>Market rental</td>
</tr>
<tr>
<td></td>
<td>Entry level homeownership</td>
</tr>
<tr>
<td></td>
<td>Market ownership</td>
</tr>
</tbody>
</table>

**Regional Homeless Plan**

**Regional Affordable Housing Strategy**
Draft RAHS Framework

VISION

GOAL 1

Strategy 1.1

Metro Actions
Municipal Actions
Developer actions
Provincial Actions
Federal Actions

Strategy
Strategy
A diverse and affordable housing supply that meets the needs of current and future regional residents
Draft Goals

① Expand the supply and diversity of housing to meet a variety of needs

② Preserve and expand the rental housing supply

③ Meet housing demand estimates for low and moderate income renters

④ Increase the rental housing supply along the Frequent Transit Network

⑤ End homelessness in the region
Questions & Answers
Lions Gate Secondary Wastewater Treatment Plant Project Update

Council of councils

October 24, 2015

Simon So
General Manager, Liquid Waste Services
Regulatory Drivers

• Metro Vancouver Integrated Liquid Waste and Resource Management Plan (ILWRMP) approved in May 2011

• Canadian Wastewater Systems Effluent Regulations – July 2012

Secondary treatment by December 31, 2020
Work Completed and Underway

- 2013 – Indicative Design - *complete*
- 2014 – Procurement Business Case - *complete*
- 2015 – Owner’s Engineer Contract - *complete*
- 2015 (Sept) – Request for Qualifications (Design-Build-Finance) - *underway*
Project Schedule

--- | --- | --- | --- | --- | --- | --- | --- | ---
Funding Application | | | | | | | | 
Design Build Finance Consultant Procurement | | | | | | | | 
Design Build Finance Contract Development | | | | | | | | 
RFQ Design Build Finance Contract | | | | | | | | 
RFP Design Build Finance Contract | | | | | | | | 
Design | | | | | | | | 
Construction | | | | | | | | 
Commissioning and Handover | | | | | | | | 
Conveyance Upgrades | | | | | | | | 
Decommissioning Existing Lions Gate WWTP | | | | | | | | 

Owner’s Engineer Retained
Secondary Treatment Completed
DBF Contract Award
Grant Funding Applications

- 2014 – Submittal to Province for New Building Canada Fund
- 2014 – 2015 – Meetings with Province and Federal Government
2015 (June)

• Application to PPP Canada for funding

• Awaiting Decision on “screened in”

• Meeting with new North Shore MPs
Questions & Answers
Outline

• What occurred in 2015
• How the regional system performed
• Response plan review
• Where we go next
Combination of Events

• Low snowpack
• Low inflows
• High temperatures
• Level 4 Provincial drought rating
• Wildfire management
Source Reservoir Storage

- Storage maximized in early May
- Increased nominations from Coquitlam Lake
- Storage depleted faster and earlier than normal
- Accessed alpine lakes earlier than normal
- Returned to within normal range in September/October
Daily System Consumption

- Higher than normal demand in May/June
- Peak Day Consumption: 1.7 billion litres on July 2
- Water Shortage Response Plan escalated to Stages 2 and 3
- Target consumption set at 1.2 billion litres/day
System Performance

- Morning lawn sprinkling reduced peak hour demand
- Transmission system kept pace with peak demand throughout the region
- Drinking water available for all essential uses
- Met minimum in-stream flow requirements from the source reservoirs
Water Shortage Response Plan Review

- Consultation with member municipalities
- Engagement with stakeholders
- Immediate changes for 2016
- Broader changes for 2017
Demand Reduction Initiatives

- Water Conservation Campaign
- Enhanced Tap Water Campaign
- Re-evaluate business case for regional water metering
Ensuring Sustainable Supply

- Secure additional water allocation for the Coquitlam source as per the Coquitlam Water Use Plan
- Commence project definition for infrastructure improvements to convey additional supply from the Coquitlam source
- Initiate environmental studies associated with future raising of Seymour Falls Dam
REGISTER NOW FOR METRO VANCOUVER’S ZERO WASTE CONFERENCE

ZERO WASTE CONFERENCE 2015

A Future Without Waste
Redefining Value / Building the Circular Economy

A global shift is under way, find out how from international, national and local business experts.

William McDonough, Designer & Sustainability Pioneer – 
Time magazine recognized him as a ‘Hero for the Planet’.
Opening keynote

Stefan Sjöstrand, President IKEA Canada – will explain 
the power behind their ‘People & Planet Positive’ strategy.
Closing keynote

OCTOBER 29, 2015 | VANCOUVER CONVENTION CENTRE

REGISTER AT ZWC.CA
2015 Zero Waste Conference Video

http://bcove.me/xby5g2c0
Thank you
SERVICES AND SOLUTIONS FOR A LIVABLE REGION