



Metro Vancouver

MEASUREMENT & ACCOUNTABILITY IN THE METRO VANCOUVER SOLID WASTE SYSTEM

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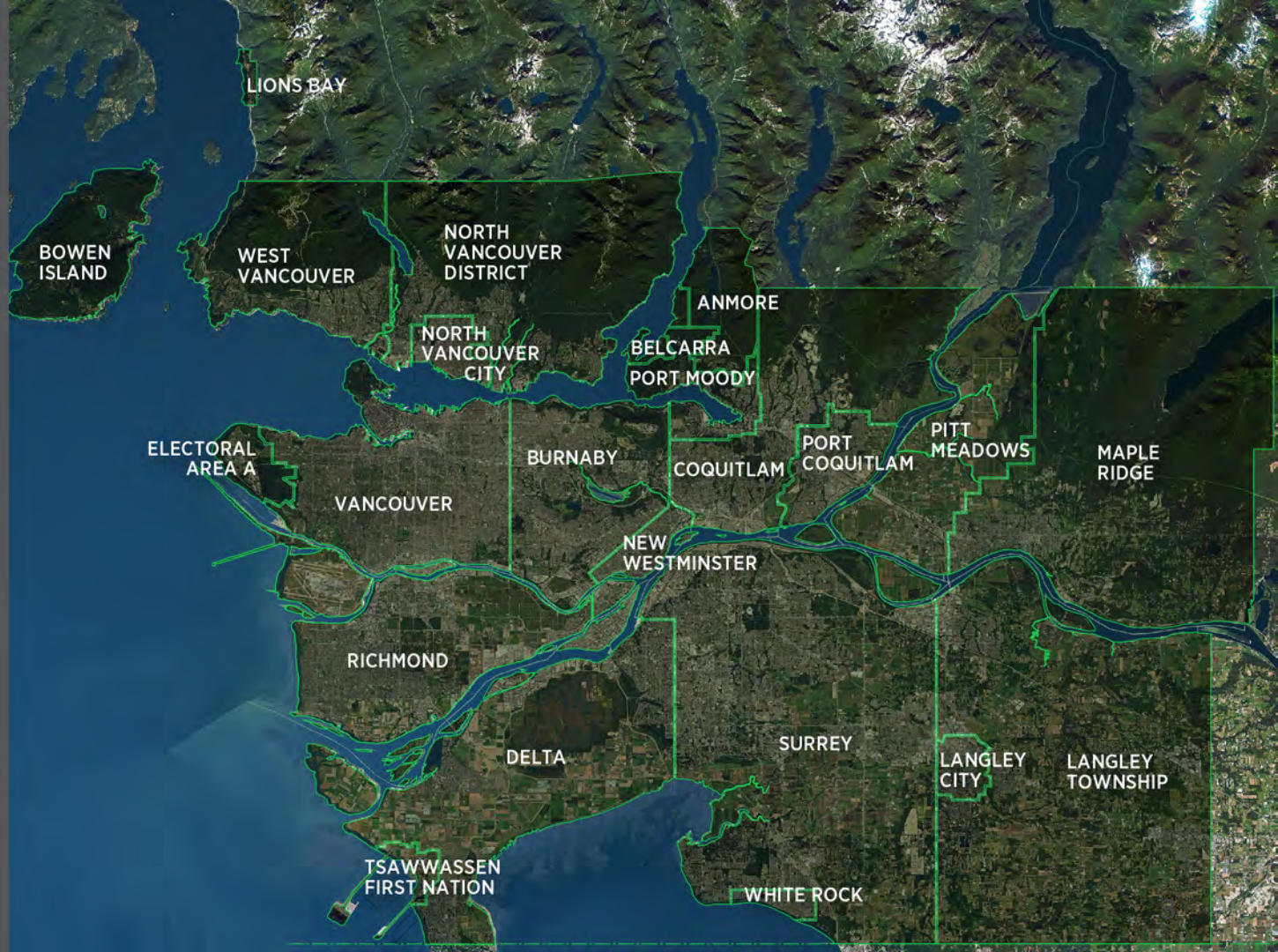


Presentation Outline

- Metro Vancouver and Solid Waste Overview
- Measuring Solid Waste Performance
 - Waste Diversion Rate
 - Waste Composition Study
 - Facility Performance Monitoring
 - Disposal Ban Program
 - Waste-to-Energy Facility Monitoring and Reporting
- Current Challenges

Metro Vancouver

21 municipalities
one Electoral Area
and one Treaty First
Nation working
together for
a livable region



Metro Vancouver Solid Waste System



Diversion Targets

- 70% diversion by 2015
- 80% diversion by 2020 aspirational goal
- 10% per capita waste reduction

Achieved 63% diversion in
2017
(Canadian average 26.5%)

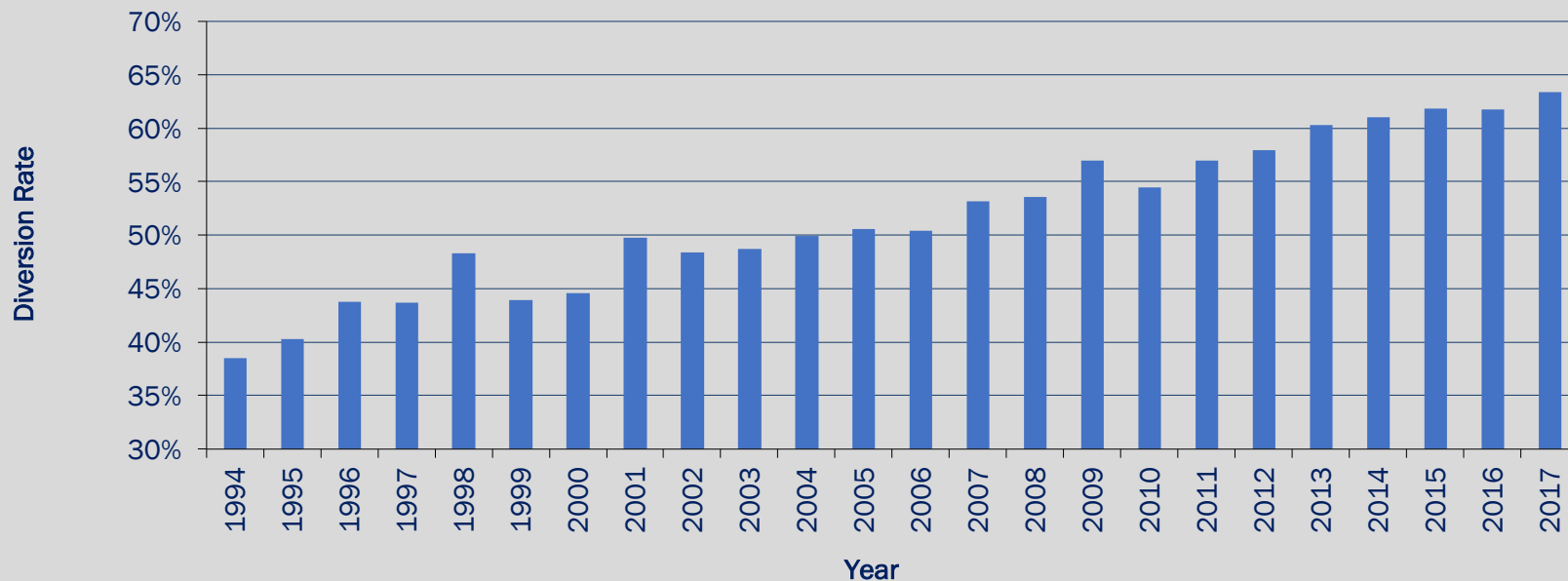


Historical Diversion Rates

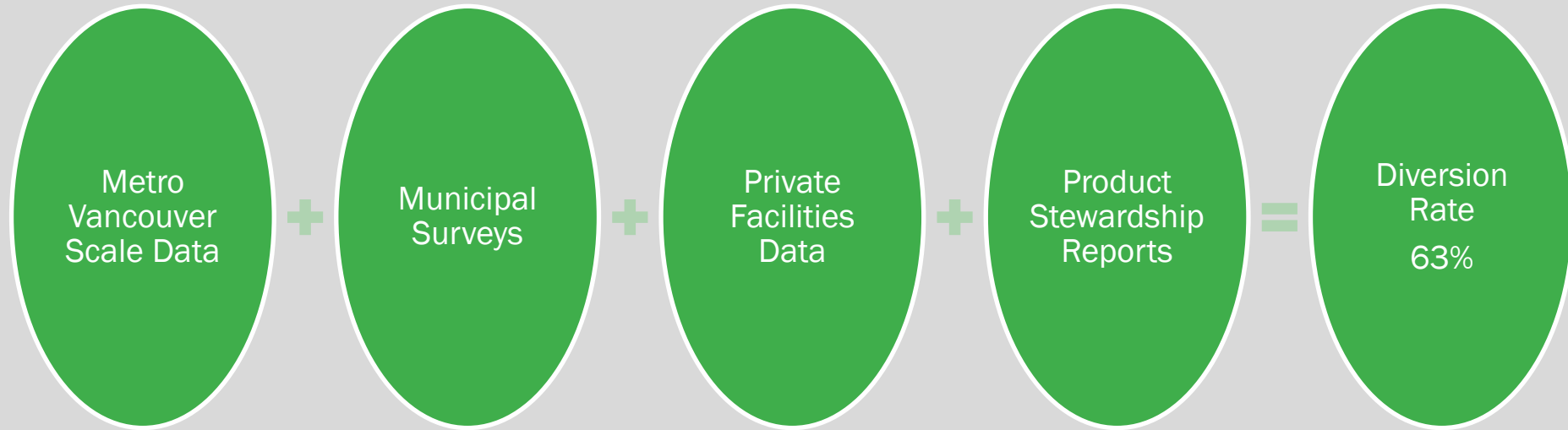
REGIONAL DIVERSION RATE


All Sectors

1994 to 2017



Diversion Rate Calculation Inputs





Measurement and Accountability Initiatives

Waste Composition Study

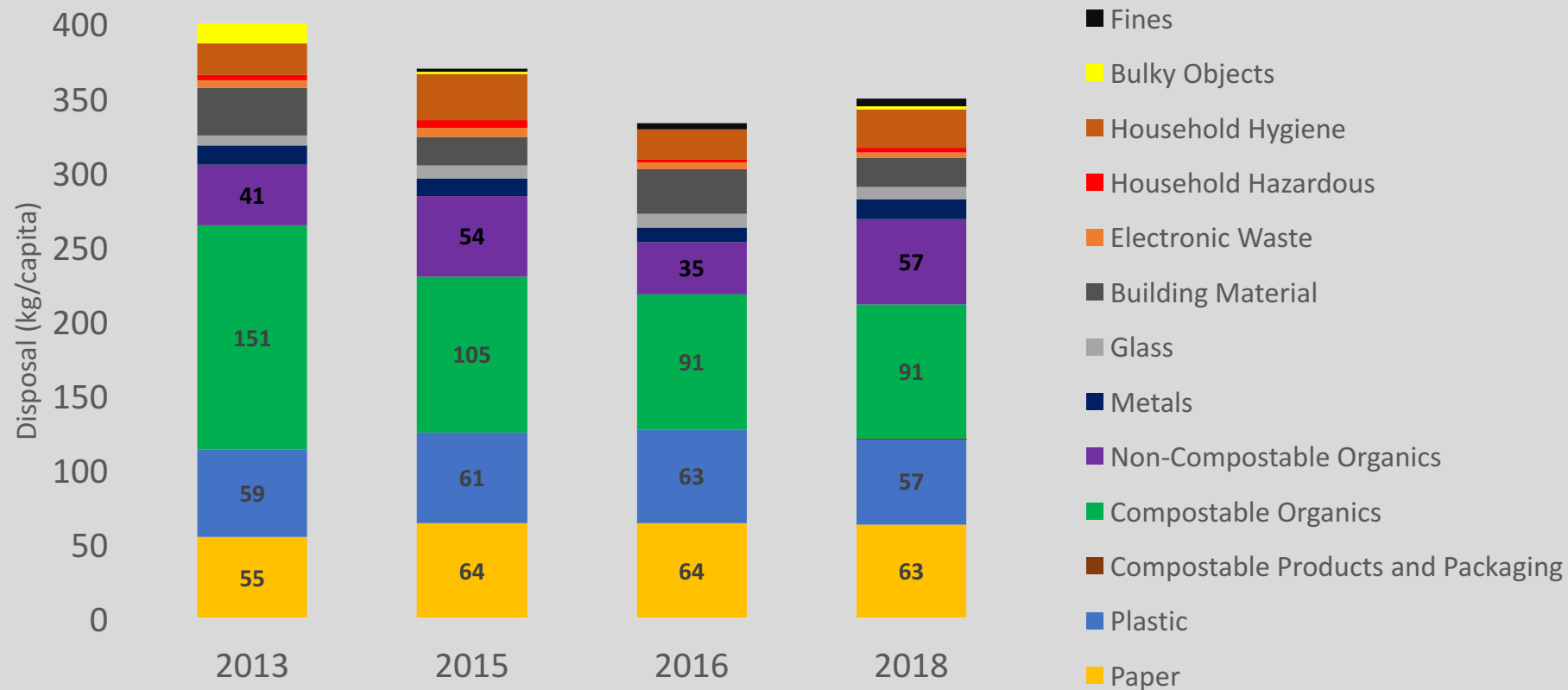
Conducted annually to obtain valuable metrics:

- What's in the waste stream
- Progress of various initiatives
- Materials to target for future programs & policies
- Samples sorted into 161 categories

Alternates between full-scale and focused studies every other year:

e.g. Single-Use Items, food sector waste, streetscape, etc.





Composition Over Time

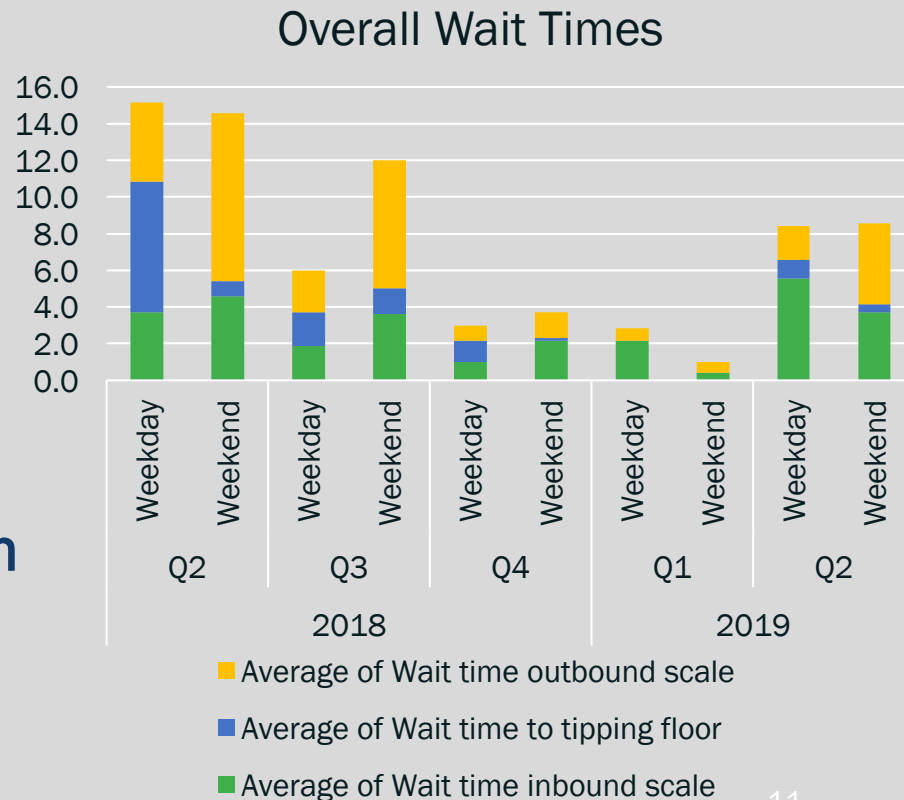
Facility Performance Monitoring

Staff Inspection of Transfer Stations (twice monthly)

- Infrastructure conditions
- Cleanliness
- Maintenance Deficiencies

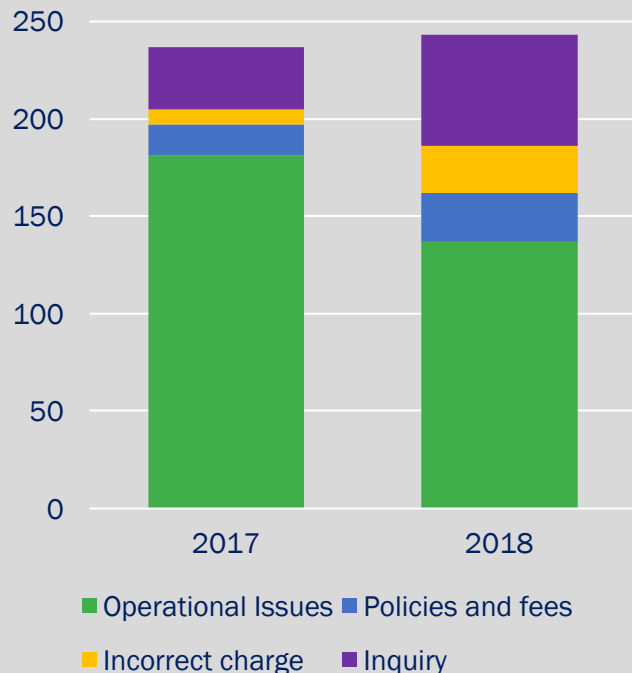
Unannounced Inspections Program

- Customers' perspective of service levels and experience

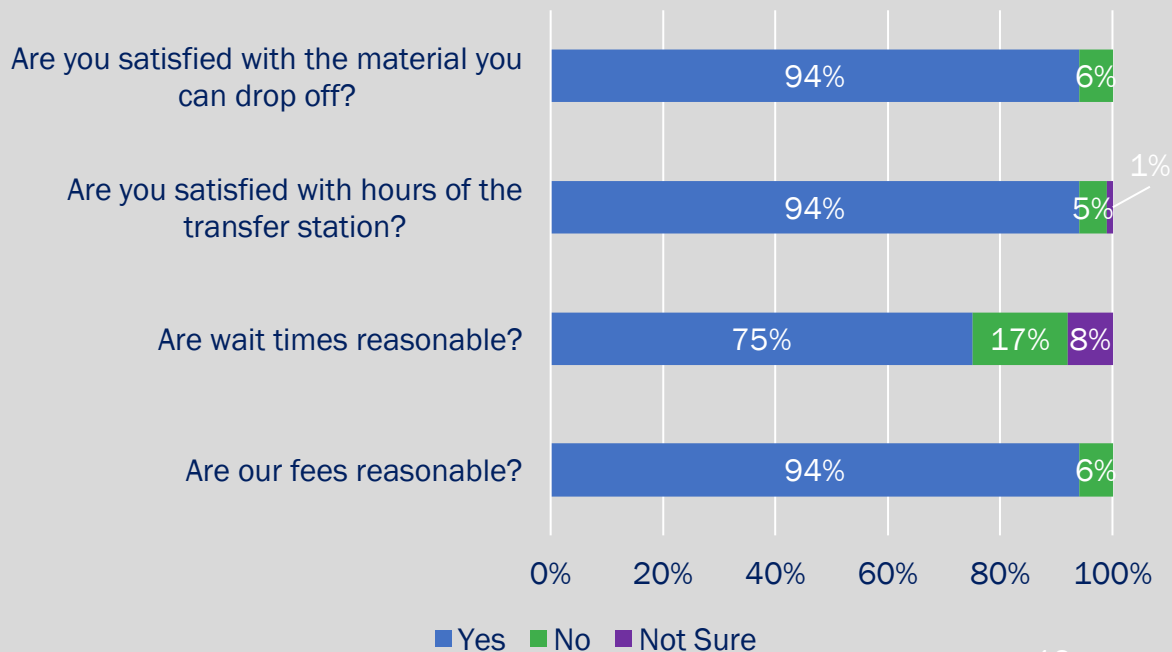


Customer Feedback Monitoring

Customer Inquiry Topics - Annual Comparison



Customer Service Survey – Coquitlam Transfer Station



Surveys to Evaluate Progress on Diversion Efforts

Telephone Survey of Apartment and Condo Residents (2017) on Organics Recycling



90%
have access to
green bins

88%
of those who
have access to
a green bin
use it

Behaviour Change Post-Campaign Surveys

50%
are more likely to
donate unwanted
clothing

43%
will buy clothing
that lasts longer

28%
discussed the
message with
others



27%
will repair
clothing

35%
will buy less
clothing



77%
found the advertising to be
effective in making them think
about celebrating the holidays
with less waste.

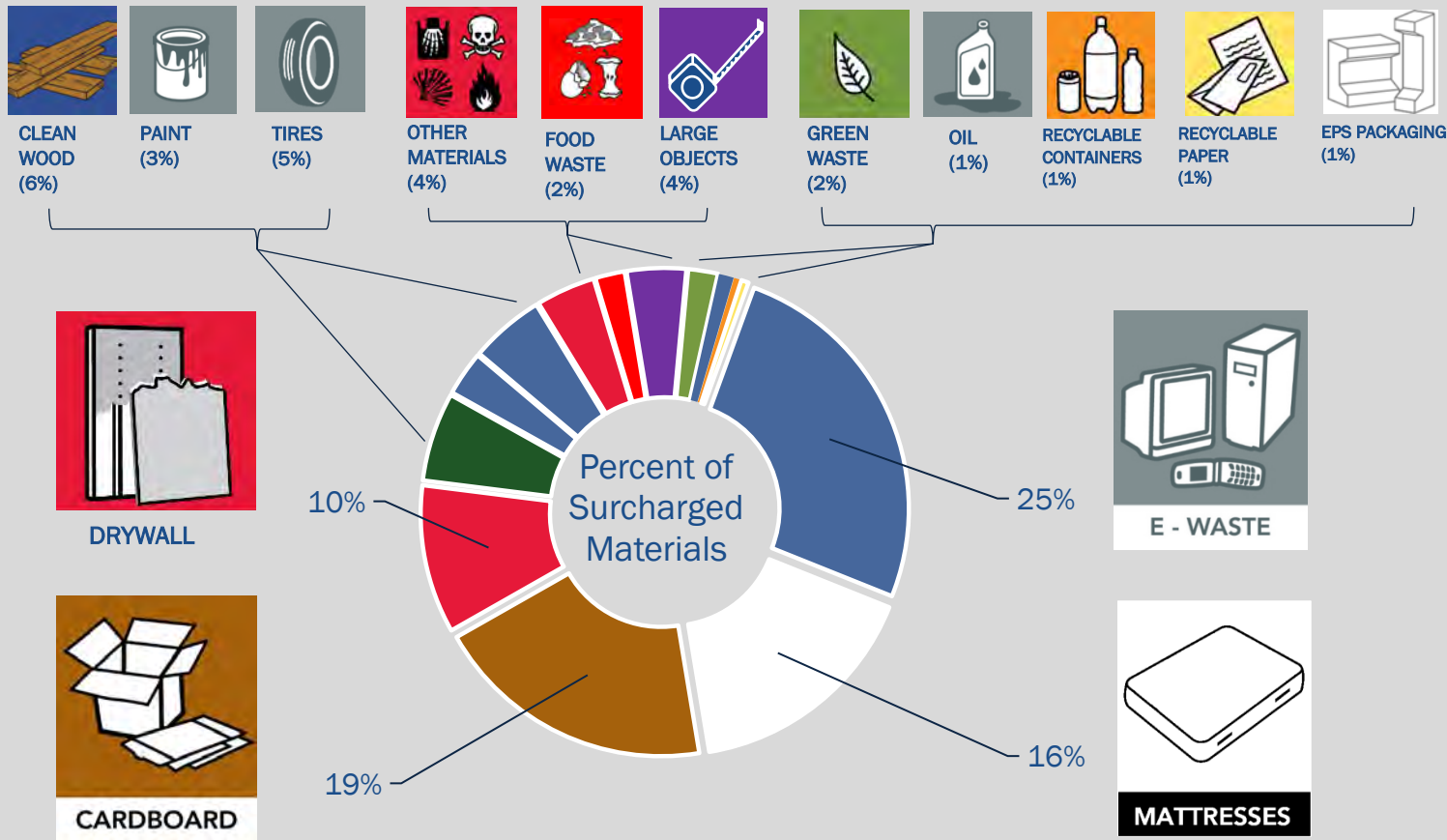
40%
of residents
recall
seeing the
campaign.

Among
residents who
recall the
campaign,



Metro Vancouver Disposal Ban Program

2018 Surcharged Materials



2018 Disposal Ban Program Data

Customer Type	Loads Inspected	Surcharge Notices Issued	Surcharge Rate
Cash Customers	113,277	356	0.3%
Municipal	12,585	293	2.3%
Commercial	62,273	2,905	4.7%
Total	188,135	3,554	1.9%

Total Garbage Loads Received = 741,600

Overall Inspection rate = 25%

Total Surcharge Revenue = \$337,213

Electronic Surcharge Application

- Provide disposal ban surcharge notice and photographs to haulers in real time
- Keep inspectors on tipping floor inspecting vehicle loads
- Use mobile technology
- Integrate with existing weigh scale software



An aerial photograph of a Waste-to-Energy (WTE) facility. A tall, red and white striped smokestack is prominent on the left, emitting a large plume of white steam or smoke that drifts across the middle of the image. The facility consists of several large industrial buildings with flat roofs, some with solar panels or skylights. There are also large cylindrical storage tanks in the foreground. The facility is surrounded by green grass and trees, with a parking lot and other industrial structures visible in the background.

Waste-to-Energy Facility Environmental Monitoring and Reporting

Waste-to-Energy Facility Environmental Reporting

All environmental reporting posted on the website:

- Real-time emission monitoring data
- Monthly and annual compliance reports
- Stack tests
- Bottom ash analytical results
- Fly ash analytical results

½ Hour Emissions Data - 09/26/2019 08:00:00				
Parameter	Response Limits	Response Values		
		Boiler #1	Boiler #2	Boiler #3
Opacity (%)	5	0.68	1.92	1.55
Carbon Monoxide (mg/dscm)	100	62.9	11.9	30.3
Hydrogen Chloride (mg/dscm)	No current limit	67	88	79
Sulphur Dioxide (mg/dscm)	No current limit	85.5	60.2	35.9
Nitrogen Oxides (mg/dscm)	350	132.7	139.5	141.6
Total Hydrocarbons (mg/dscm)	20	0.63	0.06	0.31

Metro Vancouver Proposed Enhanced Regulatory Framework

- Bylaw 181 Update and Commercial Hauler Licensing Bylaw elements:
 - Wider range of facilities requiring license and reporting
 - Commercial Hauler Licensing
 - Ensure containers are in place and separately managing recyclables from waste
 - Report origin and destination of all waste
- B.C. Minister of Environment and Climate Change Strategy
 - “significant change to the waste management regulatory system, such as that which is contemplated through the proposed bylaws, would be best considered as part of a robust solid waste management planning process”

Summary

- Metro Vancouver has been successful in reducing waste and increasing recycling
- Metro Vancouver solid waste system provides for a high degree of transparency and accountability
- Metro Vancouver will initiate a review of its solid waste management plan



Thank you



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