

# Metro Vancouver Solid Waste Management Plan Development

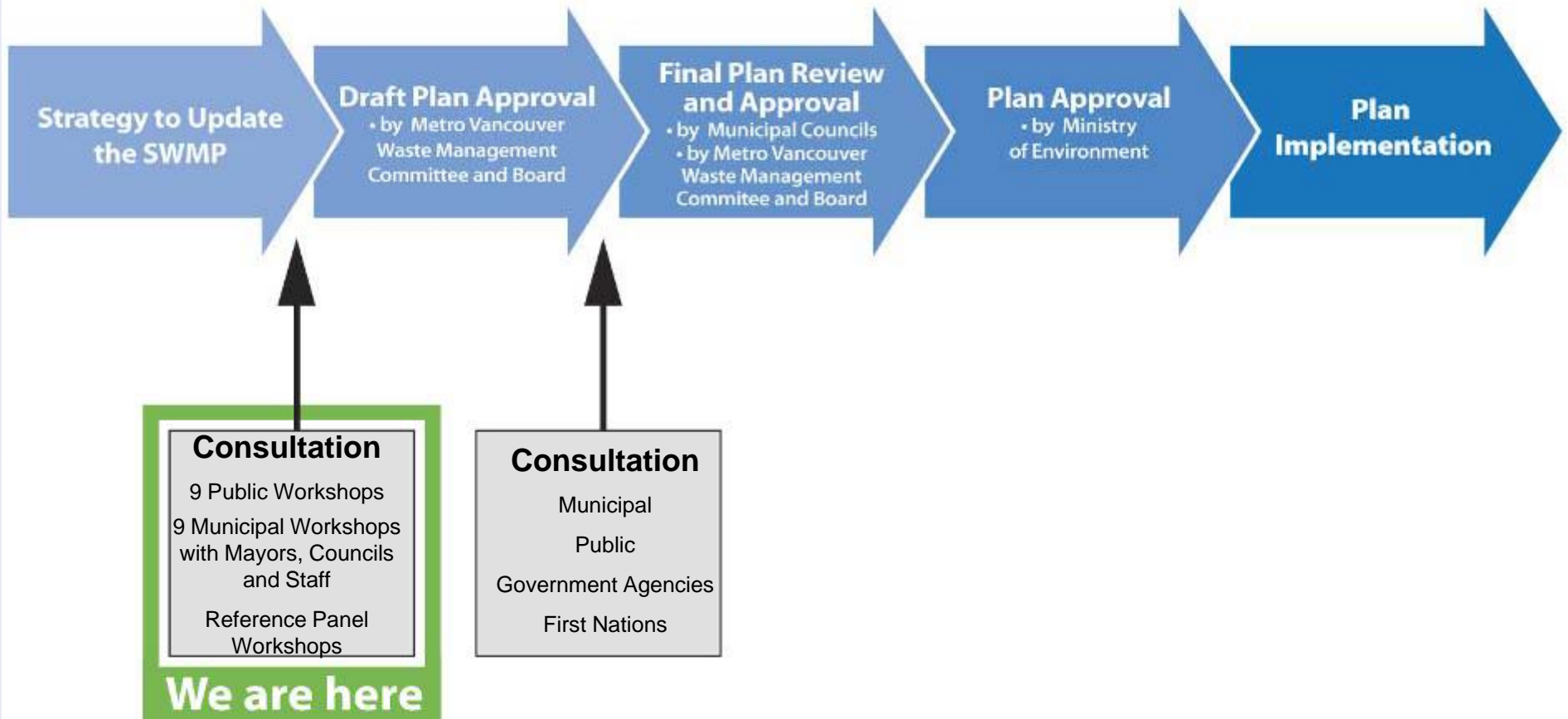
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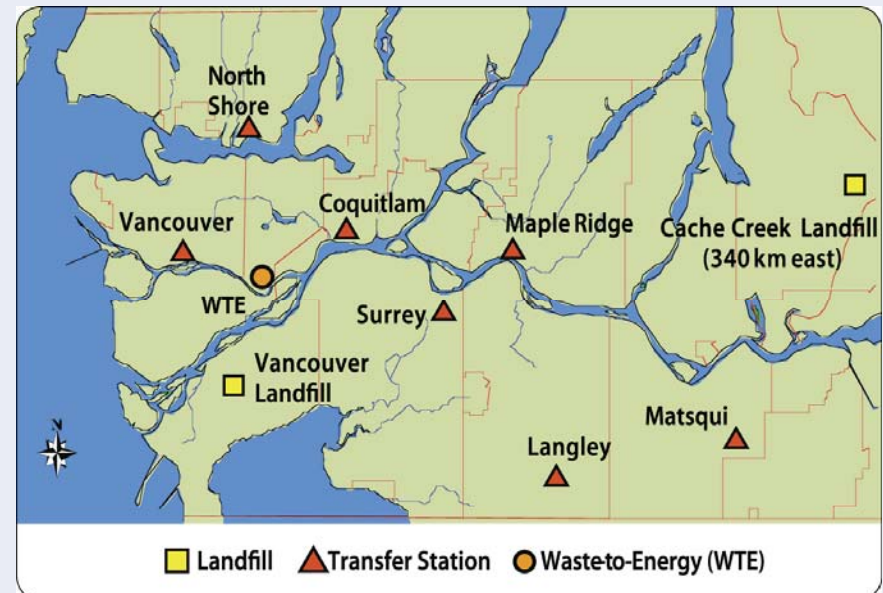
# Solid Waste Management Plan (SWMP) Process



# Current Facilities

1995 Solid Waste Management Plan  
Set out Metro Vancouver's management role

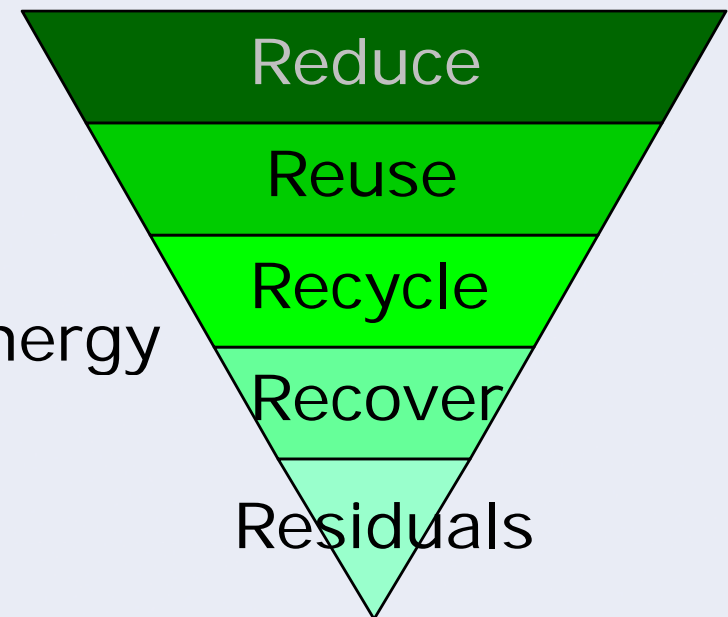
- Cache Creek Landfill
  - Closing in 2010
- Vancouver Landfill
- Waste-to-Energy Facility
- Seven transfer stations
- Various private facilities



# Approach to Updating the SWMP

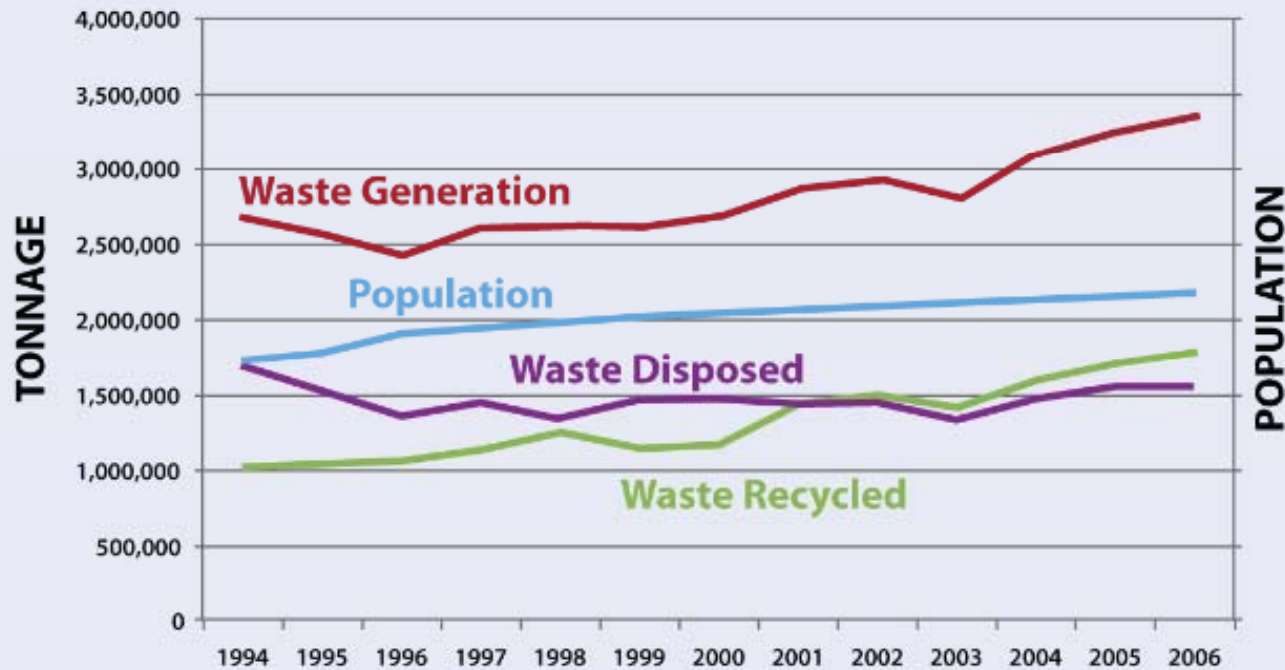
## The 5 R Hierarchy

- Reduce
- Reuse
- Recycle
- Recovery of Materials and Energy
- Residuals Management

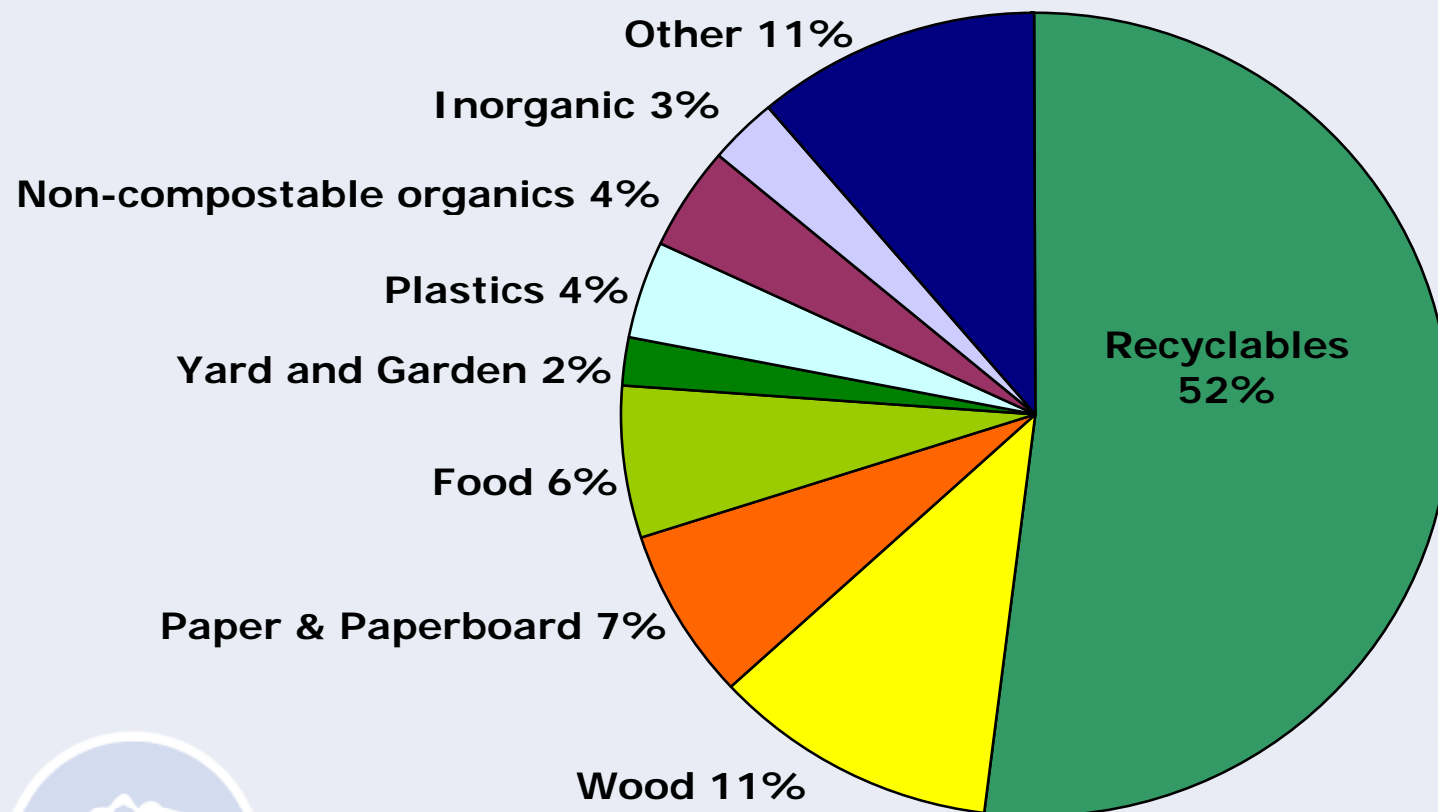


# Waste Quantities

*trends in waste management*



## Current Waste Quantities *composition of waste generated*



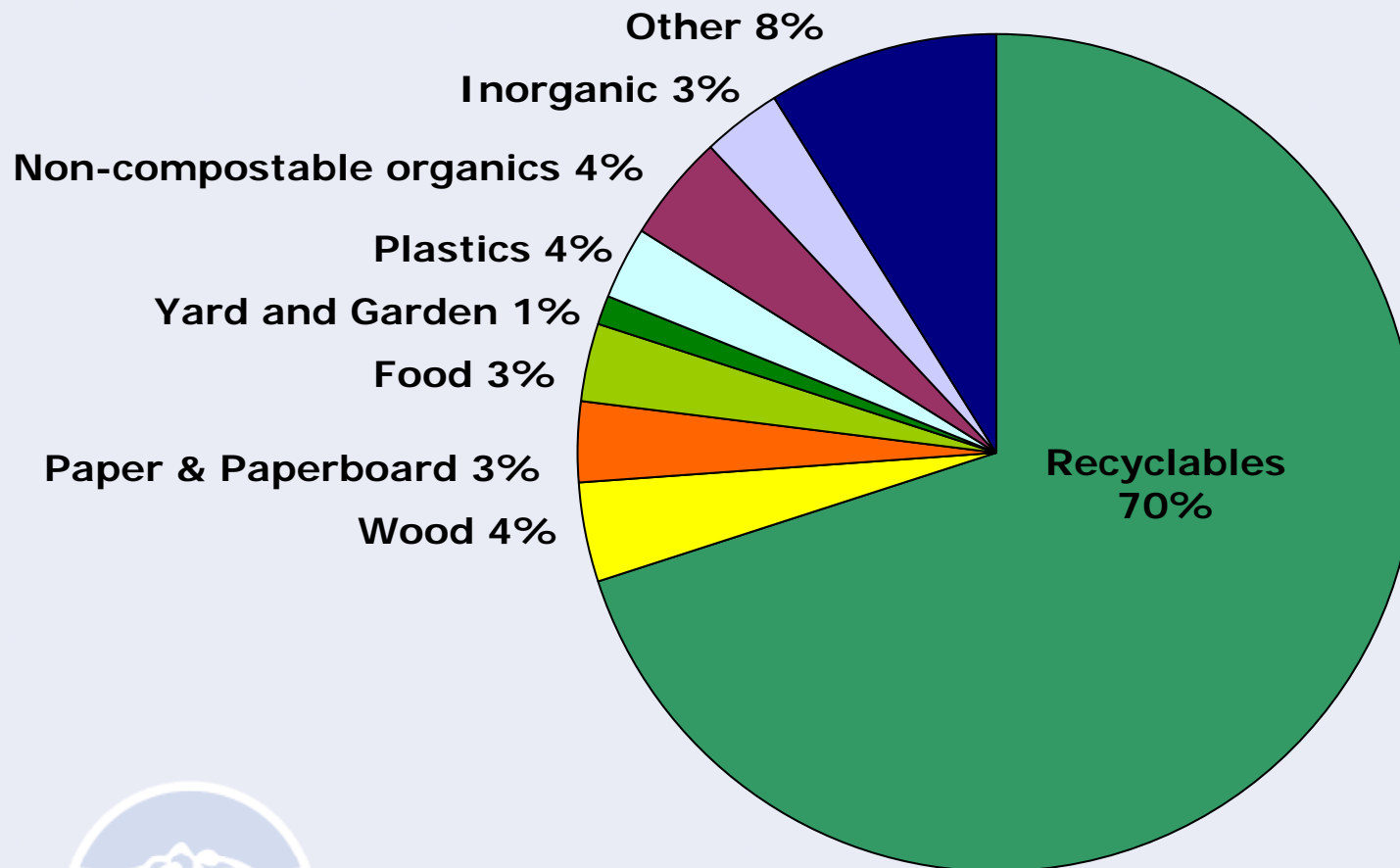


- Initiated in 2006
- Goal #1: Minimize waste generation
- Goal #2: Maximize reuse, recycling and material/energy recovery
- Public workshops, municipal workshops
- Input analyzed and considered in developing SWMP update strategy



# The First 3 Rs: Reduce, Reuse and Recycle

## Waste Diversion Goal



## Organics Management Facilities

- To process:
  - Yard waste
  - Commercial waste
  - Residential waste
  - Paper and paperboard
- Decrease organic waste disposed of at landfills
- Review organics technologies and potential sites
- Request for Information and Qualifications
  - Processing of Source Separated, Readily Biodegradable Organics



# The 4<sup>th</sup> R: Materials and Energy Recovery

## Options for Remaining Waste

Further Investment in 3Rs

- continue to seek opportunities
- limits to diversion

Materials Recovery

- Mechanical Biological Treatment (MBT)
- Material Recovery Facility (MRF)

Energy Recovery

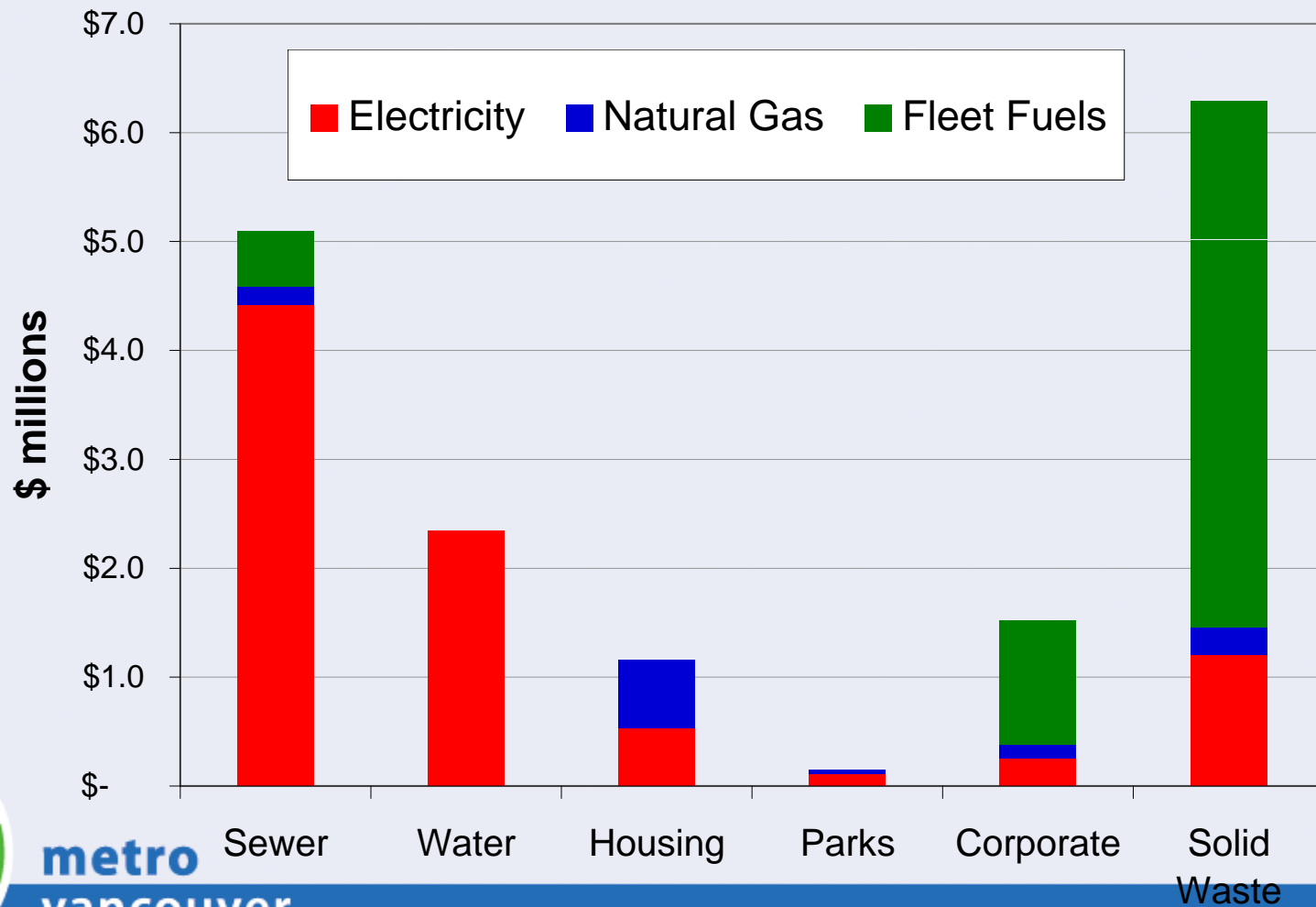


## 4th R Processing Drivers

- Long distance transport
- Managing waste within the region
- Provincial GHG Targets and Provincial Energy Plan
- District heating interest and opportunities
- Independent evaluator and REAC recommendation to explore alternate technology
- Business Case for WTE
- Minimizing waste to landfills



# 2006 Energy Expenditures by Sector and Fuel



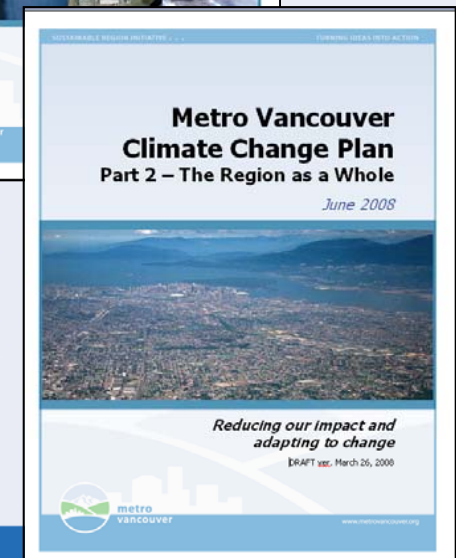
# GHG Reduction Drivers

- Global Estimates and Targets
  - Kyoto: 6-15% below 1990 levels
  - IPCC: 50-85% reduction by 2050 necessary
- Government of Canada
  - Federal “Turning the Corner Plan”: 150 MT GHG reduction (20%)



# GHG Reduction Drivers

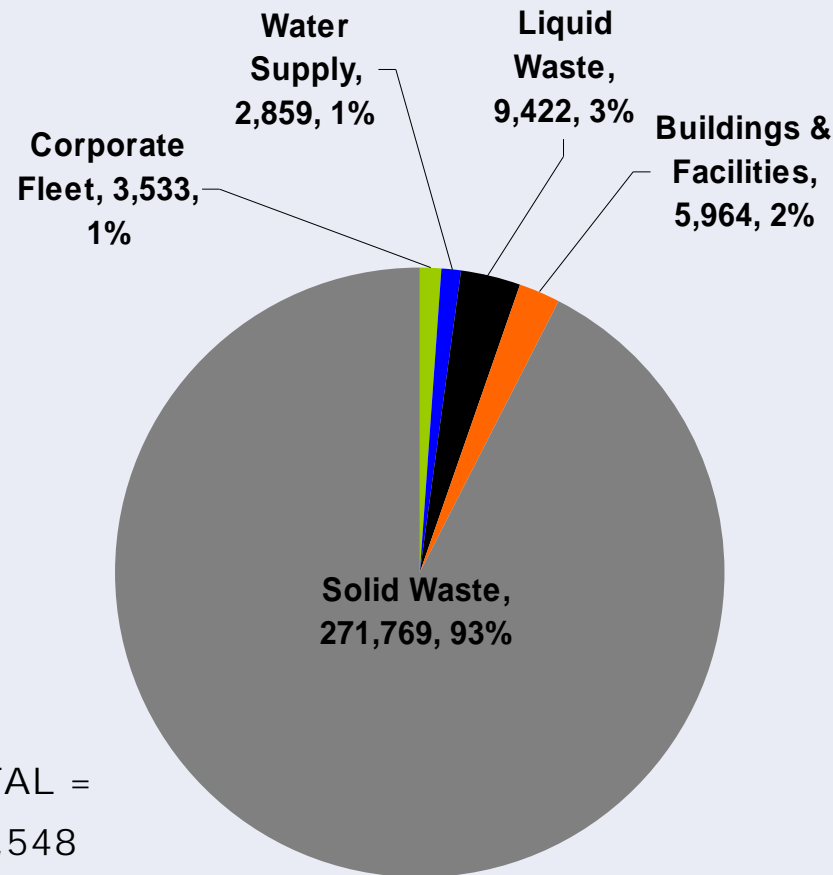
- Government of British Columbia
  - UBCM Climate Action Charter
  - Reduce B.C.'s greenhouse gases by 33% by 2020 and by 80% by 2050
  - Legislated targets, regional growth strategies, carbon neutral government & crown corps
  - Cap and trade market for carbon offsets
- Metro Vancouver
  - Regional GHG reduction targets of 33% by 2020 and 80% by 2050



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# Corporate GHG Emission Inventories

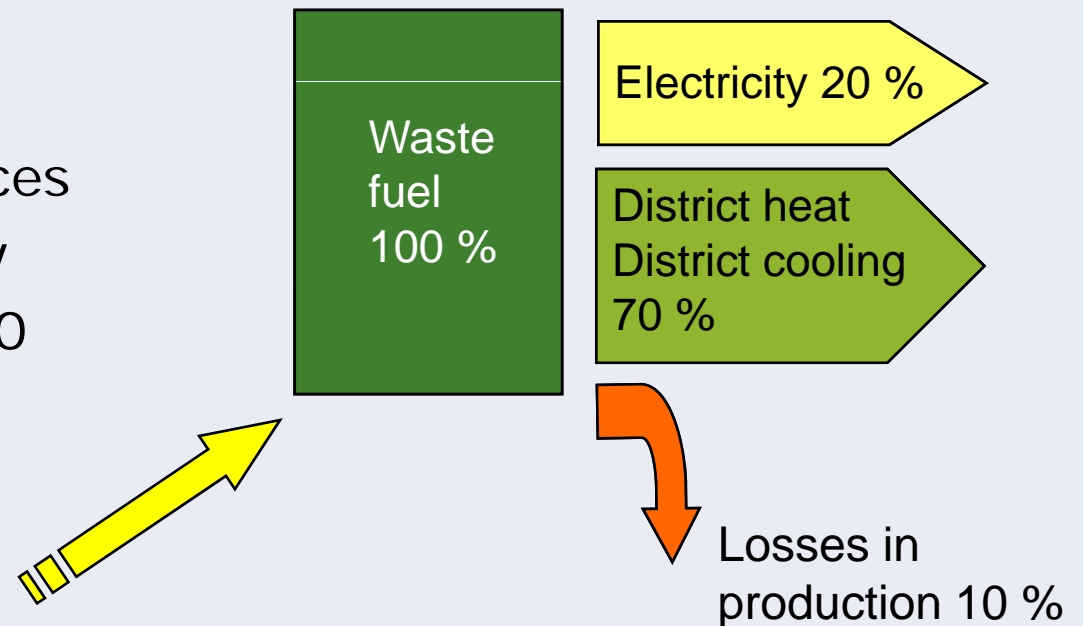
2005 Corporate GHG Emissions  
(metric tonnes)



# District Heating

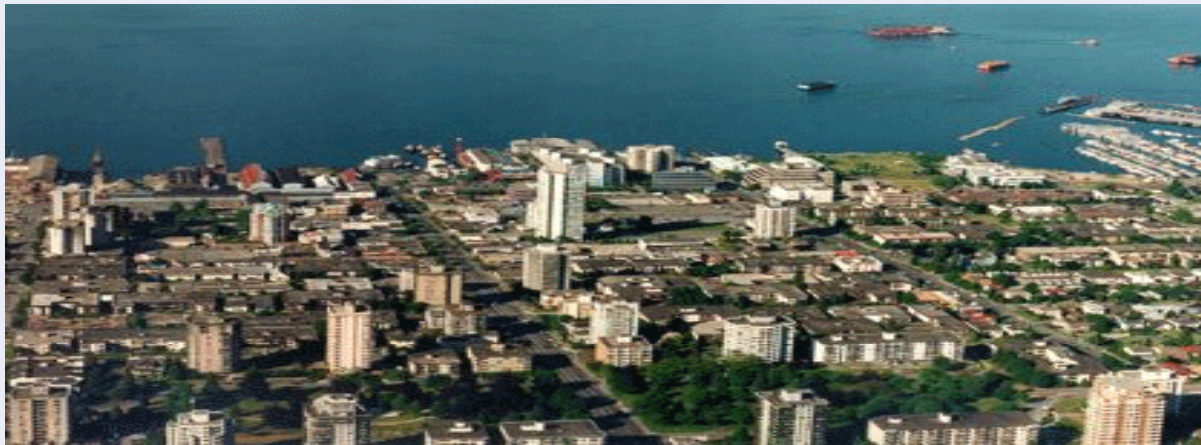
- Heating systems shared by groups of:
  - homes
  - businesses
  - industrial plants.
- Avoids greenhouse gas-generating energy sources
- Secure source of energy
- Potential heat for 40,000 homes
- European Experience
  - Over 400 WTE plants
  - Sweden—90% efficient

## Combined Heat and Power (CHP)



# District Heating

- City of North Vancouver
  - Lonsdale Energy Corporation to supply district heat to 3 million ft<sup>2</sup> of commercial and residential space in Lower Lonsdale
  - Expanding future coverage to Central Lonsdale



## Energy Recovery: Already Contributing



- Burnaby waste-to-energy facility currently supplies heat to industrial users
    - 115 GWh/yr electricity
    - 205 GWh/yr heat (steam)
- 

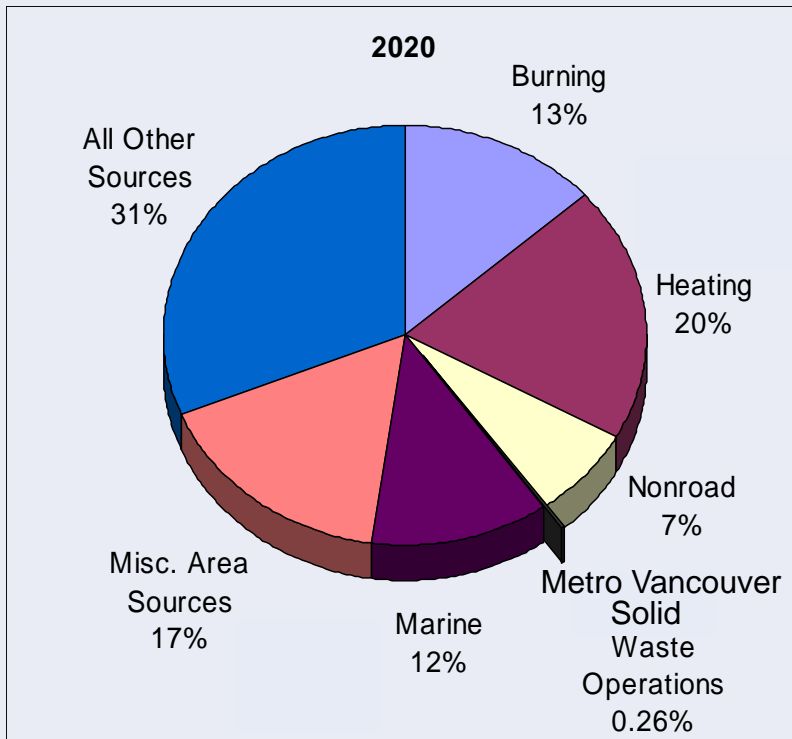
**Electricity equivalent of 12,300 homes,  
and heating equivalent of 6,600 homes**



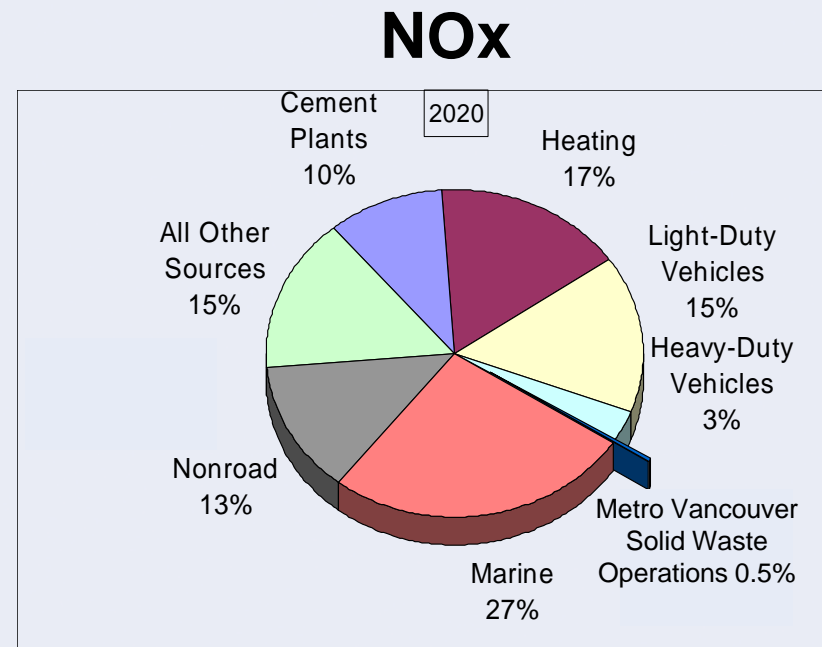
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# Regional Air Quality

## 2020 with additional Waste to Energy facilities



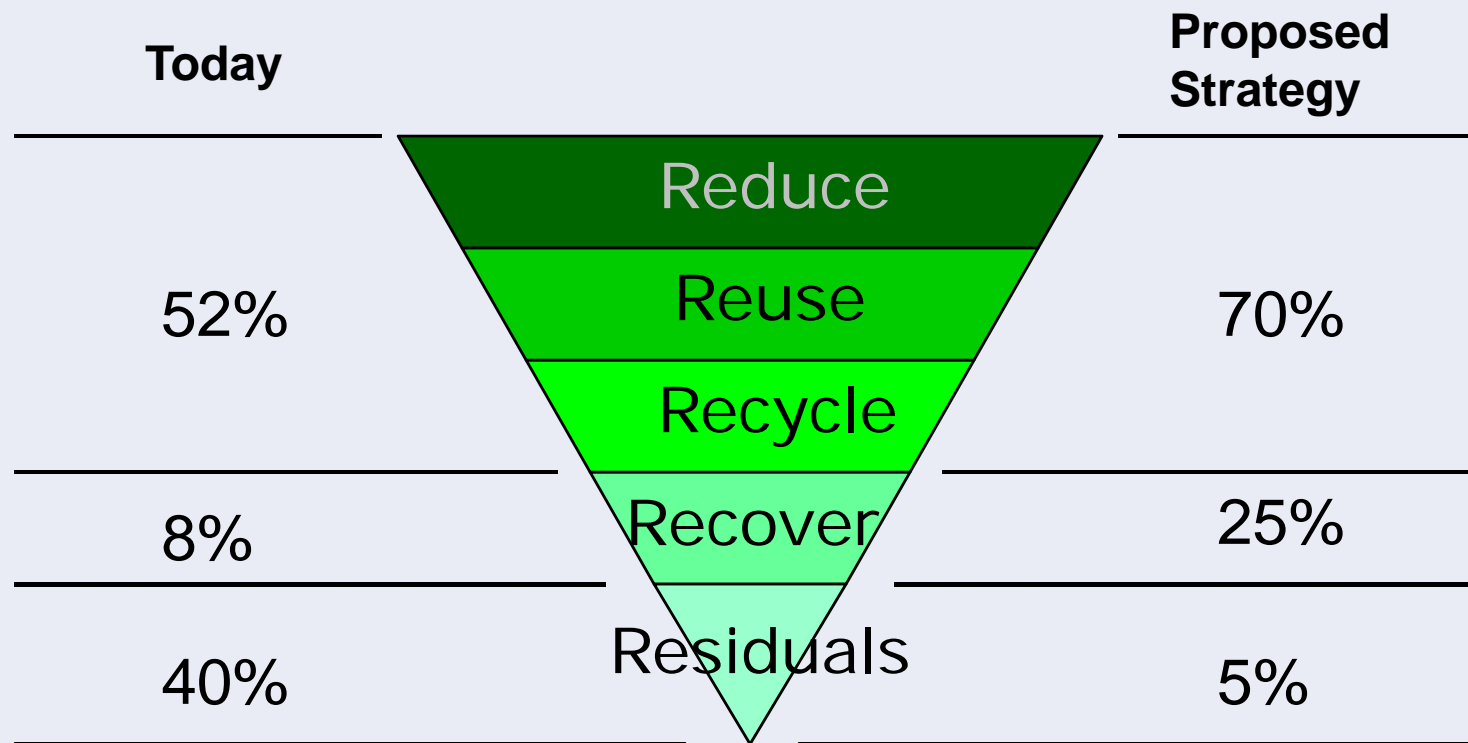
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# Approach to Updating the SWMP

## The 5 R Hierarchy



## Next Steps

- Develop a draft plan
  - Goals, Strategies, Actions, Measures
- Further consultation on draft plan
  - public, municipal, FVRD, First Nations, agency input
- Finalize plan for Board approval
- Submit plan to Ministry of Environment for final approval

