

# Airport Air Quality Management

Vancouver International Airport

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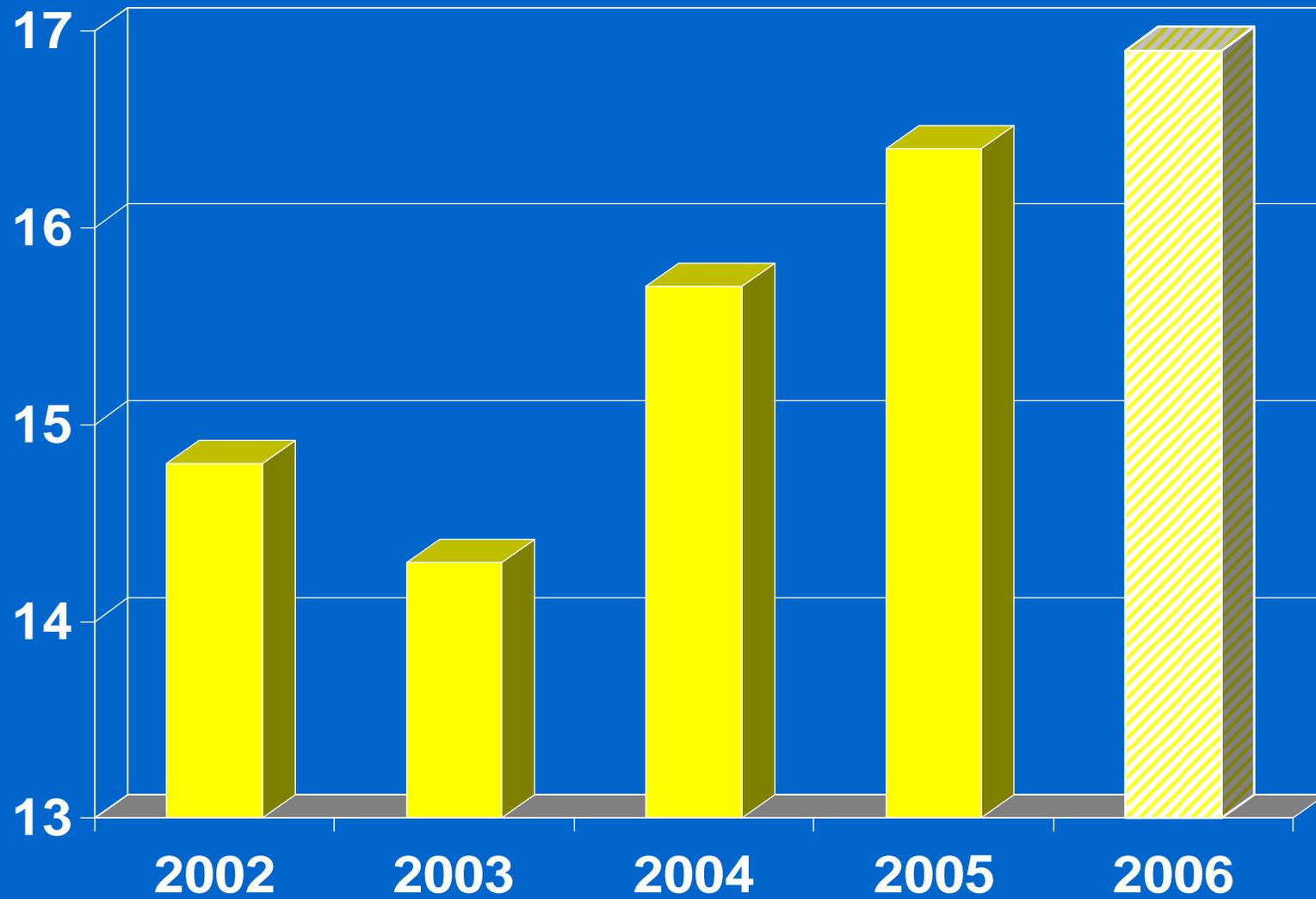
# Overview

- Vancouver International Airport
- Emissions Inventory
- Air Quality Initiatives
  - Vehicles
  - Ground support equipment
  - Airport facilities
  - Aircraft operations

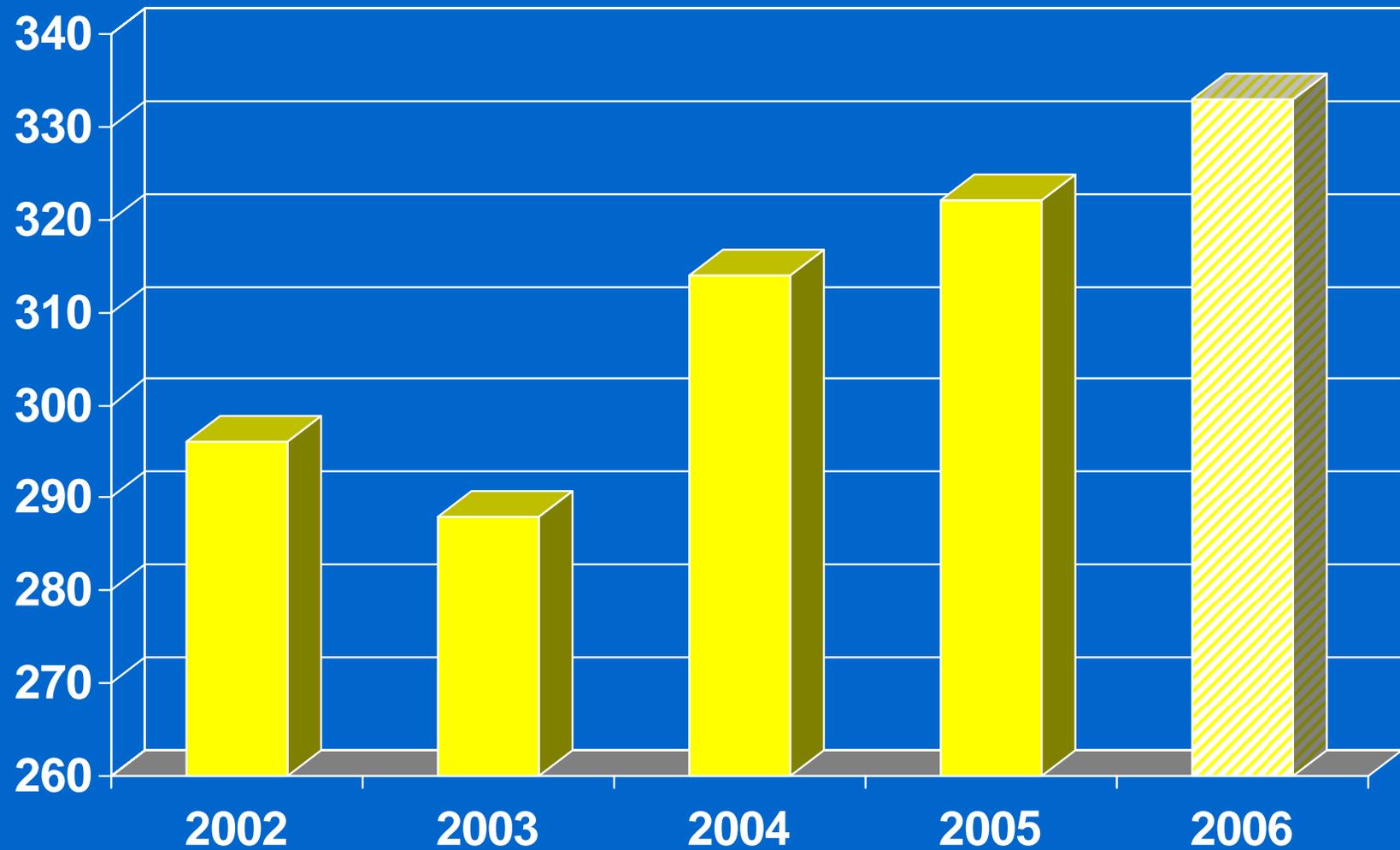
# Vancouver International Airport



# Passenger (in millions)



# Take-offs and Landings (in thousands)





NOTE: Detailed elevation data for the area north of the FVRD was unavailable at the time of map preparation. This gives the topography a flat appearance.

# Air Emissions Inventory Project Goals

- Develop an emissions baseline
- Improve equipment
- Focus air quality initiatives
- Prioritize equipment for replacement or retrofit



# Air Emissions Inventory

- Ground Support Equipment

- Deicing trucks

- Baggage tugs

- Belt loaders

- Forklifts

- Air conditioners

- Aircraft pushback trailers

- Fuel, food, and lavatory service trucks

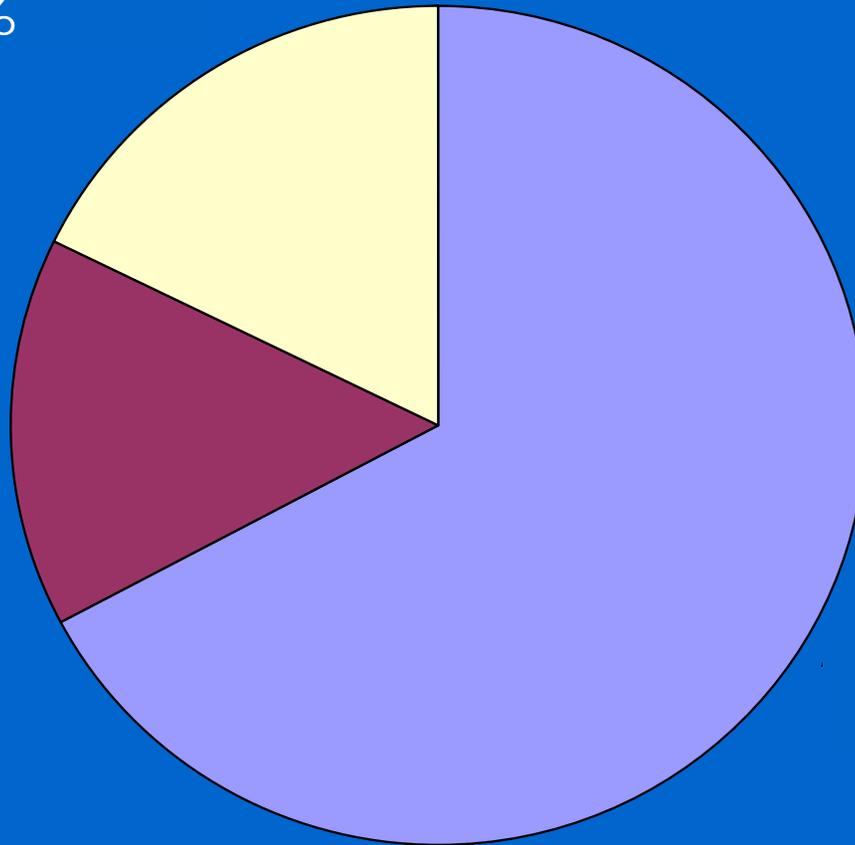


# CO<sub>2</sub> Emissions

VEHICLE TRAFFIC  
18%

GSE  
15%

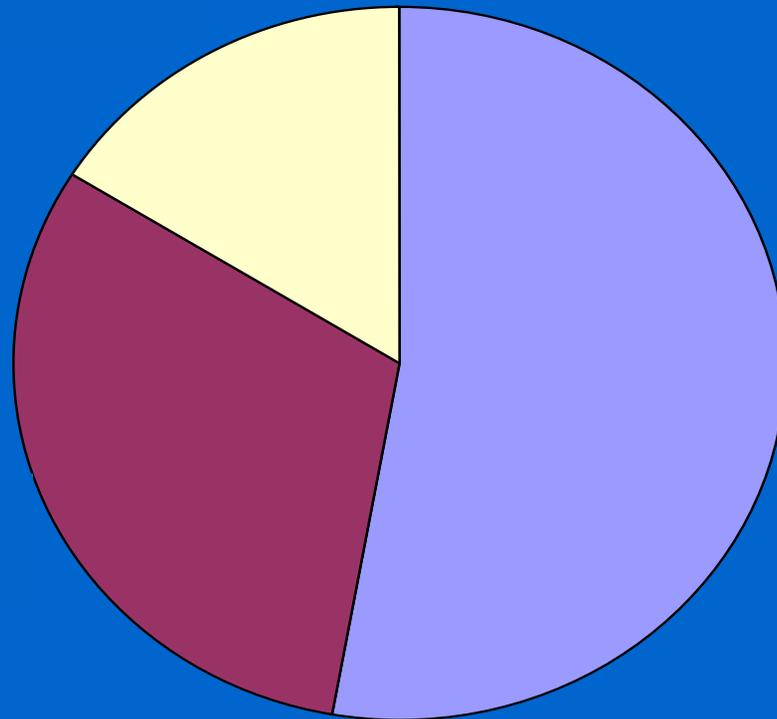
AIRCRAFT  
67%



# Smog Forming Emissions

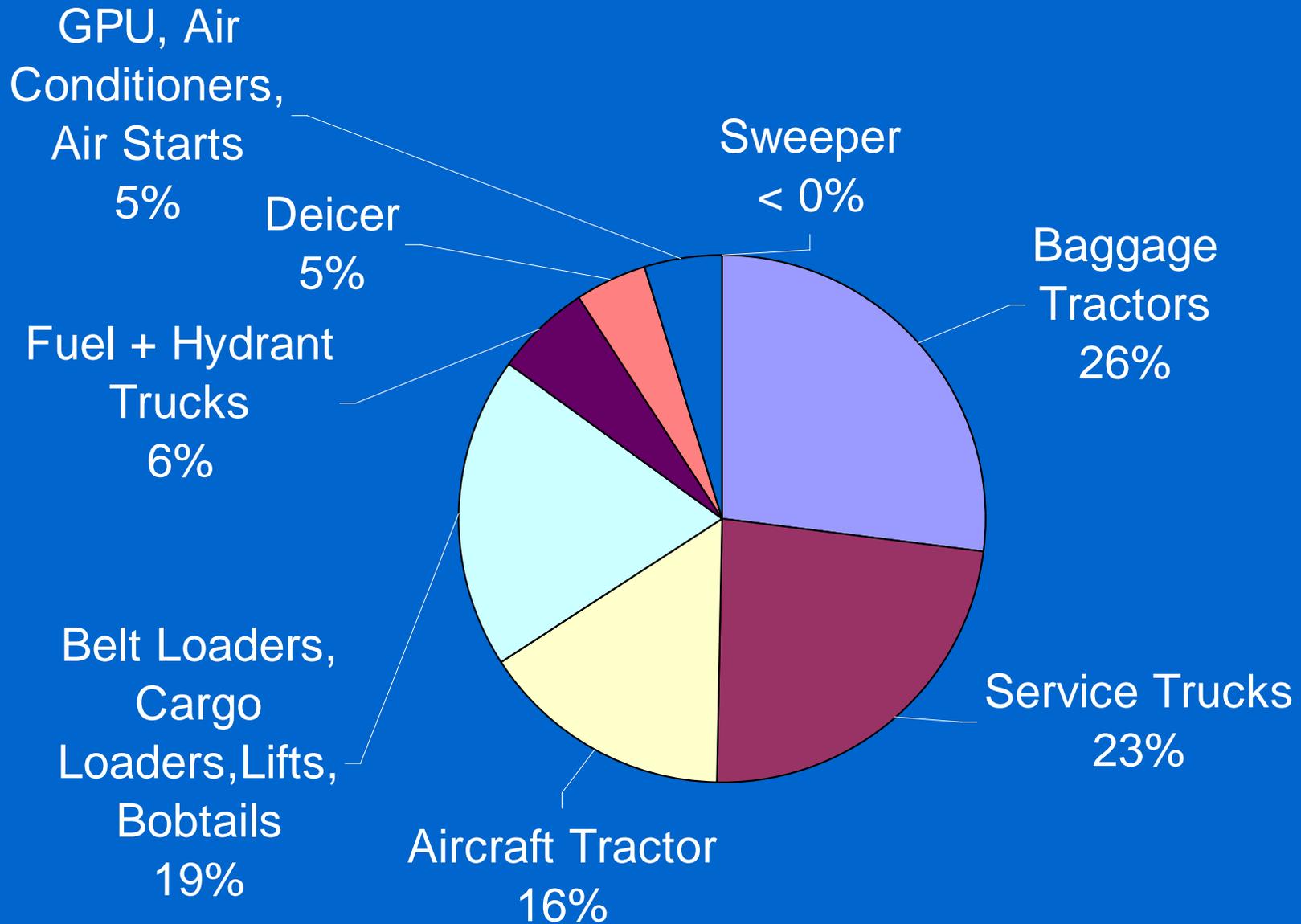
VEHICLE TRAFFIC  
16%

GSE  
31%

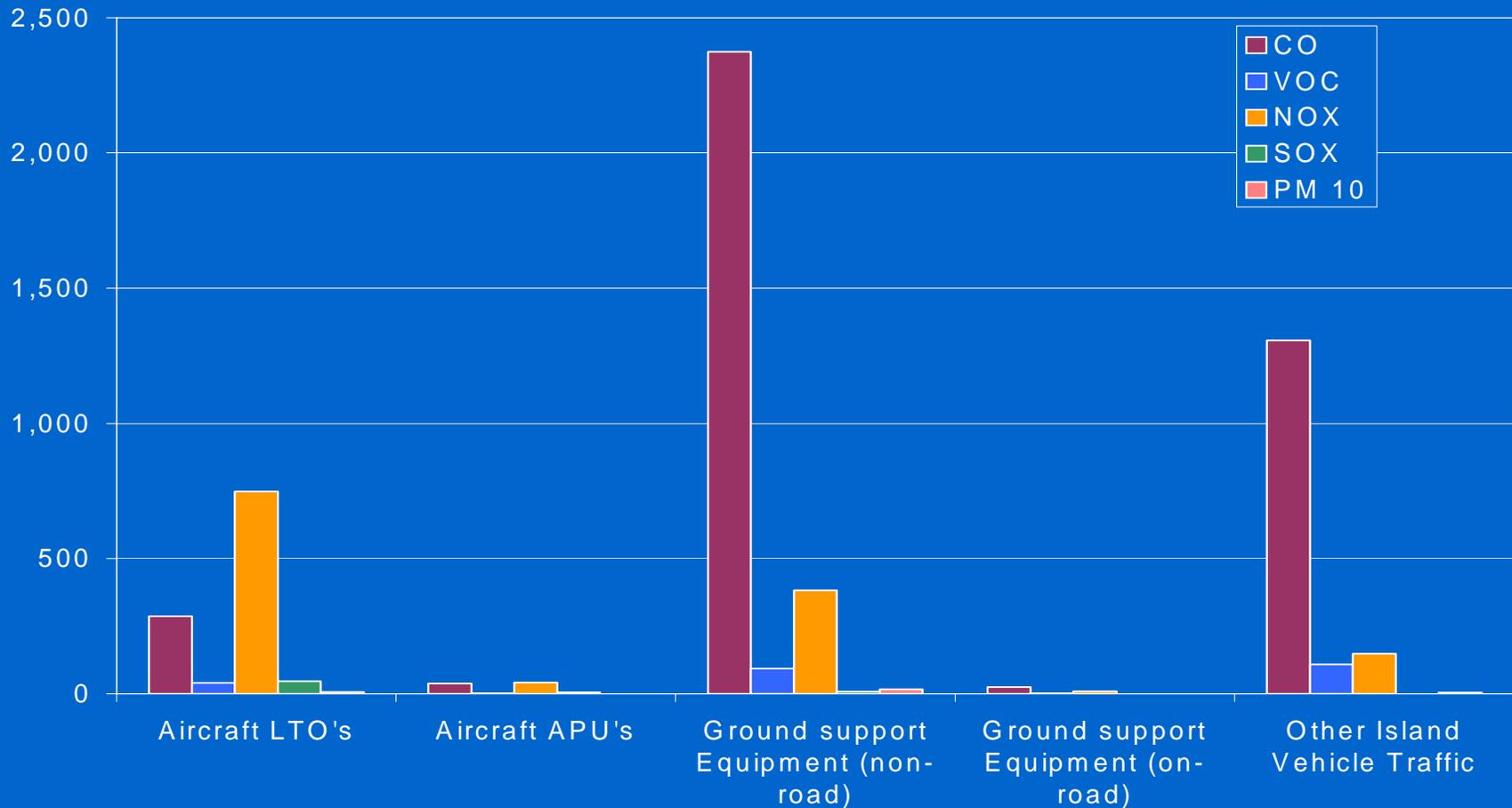


AIRCRAFT  
53%

# GSE Smog Forming Emissions



# Air Contaminant Emissions



# Airport Authority Fleet Targets

- Reduce CO<sub>2</sub> emissions 15% by 2009 relative to 2004
- Improve average fuel efficiency 15% by 2009 relative to 2004

# Airport Authority Fleet Actions



# Commercial Vehicle Actions

- Incentives
- Taxi rebate program
- Alternative fuels



# Transportation Demand Management

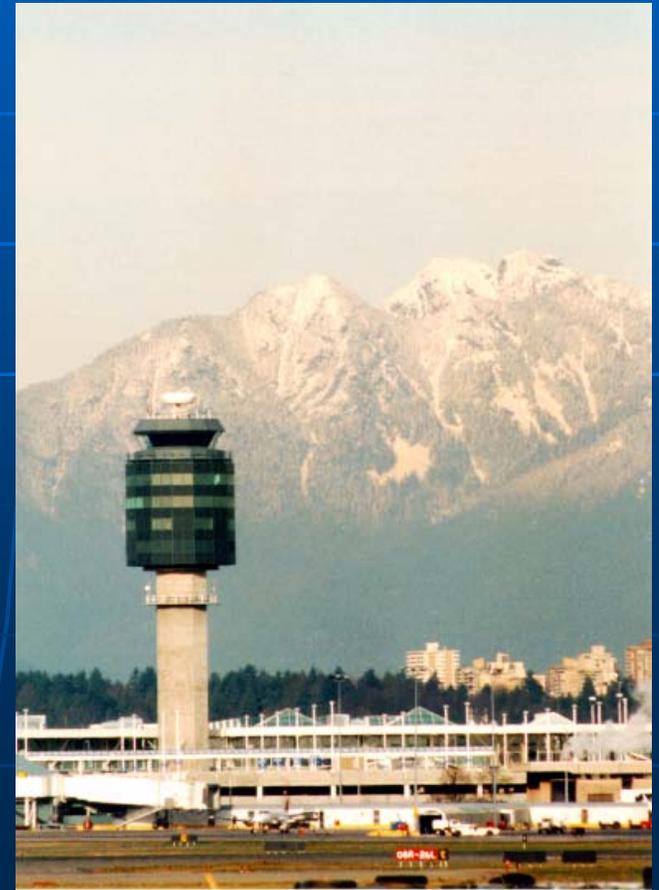
- New rapid transit line
- Employee "Green Transportation" Rebate
- Parking strategy
- Cycling upgrades
- Formal TDM committee





# Ground Support Equipment

- Phase out of indoor equipment
- Demonstration projects
- Alternative fuels



# Airport Design & Facilities

- Preconditioned air and 400 hz power at gates
- Long term development plan identifies new taxiways and capacity enhancements

# North South Taxiway

- Reduces
  - Taxi distance and time
  - Fuel and operating costs
  - Emissions
- Improves capacity
- Enables terminal expansion

# YVR With New Taxiways



# Aircraft Operations

- Delay reduction initiatives
- Simultaneous parallel runway operations
- Integrate air quality, fuel burn, noise and capacity considerations to optimize operations
- Collaborative approach

# Questions?



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