Fairfax Connector

Emissions Reduction Program

Emissions Reduction Strategy

- 5 Components
  - Ultra-Low Sulfur Diesel
  - Horsepower Reduction
  - Engine Idle Reduction
  - Diesel Particulate Filter
  - Hybrid Support Vehicles

Ultra-Low Sulfur Diesel

- 30 PPM compared to 550 PPM for diesel
- At least 10 percent reduction in converting to ULSD
- New York City reductions achieved:
  - particulate matter 23%,
  - carbon dioxide 29%, and
  - hydro carbon 76%

Horsepower Reduction

- Reduction from 275 to 250 in horsepower
  - 25 – Detroit diesel series 50 engines in 30 ft. buses
- 5% per bus reduction in fuel consumption
  - 9,000+ annual gallon reduction
  - $17,000+ annual cost savings
- 1% overall fleet emissions reduction

Engine Idle Reduction

- 50% of engine time is in idling (engine running)
  - Layovers and garage idling
- Consumption
  - approximately 8 tenths of a gallon/hour of idling
- Fleet has been programmed
  - auto shutdown after minimal idle time
- Anticipated results
  - 73,000+ annual gallon reduction
  - $138,000+ annual cost savings
- 5.25% emissions reduction

Diesel Particulate Filter (DPF)

- **Pilot program**
  - test performance of DPFs
  - provide County with the operational cost impacts
  - make a determination to retrofit
- **90% emission reduction**
  - DPF systems in conjunction with ULSD
- **Bus specifications**
  - ULSD requirement
  - DPF equipped

Hybrid Support Vehicles

- Fairfax Connector
  - 19 support vehicles
  - 47% are hybrid
  - 89% within 5 years

Example of exhaust pipes without and with DPF system