

City of Long Beach Green Fleet Program

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Agenda

- Fleet Overview
- Current Metrics, Goals, and Initiatives
- Alternative Fuels
- Technology
- Future Outlook



Fleet Overview



- Total fleet size: approximately 2,100 units (1,680 motorized)
- Typical purchase: about 200 vehicles per year
- Fuel use: about 2 million gallons per year
- Ranked #3 in the Top Public Fleets in North America - 2020 Leading Fleets Program
- Ranked #14 in the 100 Best Government Fleets - 2020 Tom C. Johnson Green Fleet Award Program
- One of the Top 25 Green fleets in the country; Heavy Duty Trucking Magazine, 2019

Current Metrics and Goals

- Currently, 46% of motorized fleet is alternative fuel; 65% non-safety
 - 2020 goal: 45%
- Consistently purchasing 50% or more alternative fuel vehicles



Current Sustainability Initiatives

- Continued aggressive approach to fleet sustainability
 - One of few fleets with a dedicated green fleet analyst
 - Focus on reducing the City's fleet environmental footprint
 - Green Business Certified
- Implementing Battery Electric Vehicle Policy (AR 37-1)
 - Interdepartmental BEV Task Force
 - Infrastructure in progress
 - 70 EV sedans ordered through Climate Mayors EV Purchasing Collaborative



Current Sustainability Initiatives: GHG Reductions

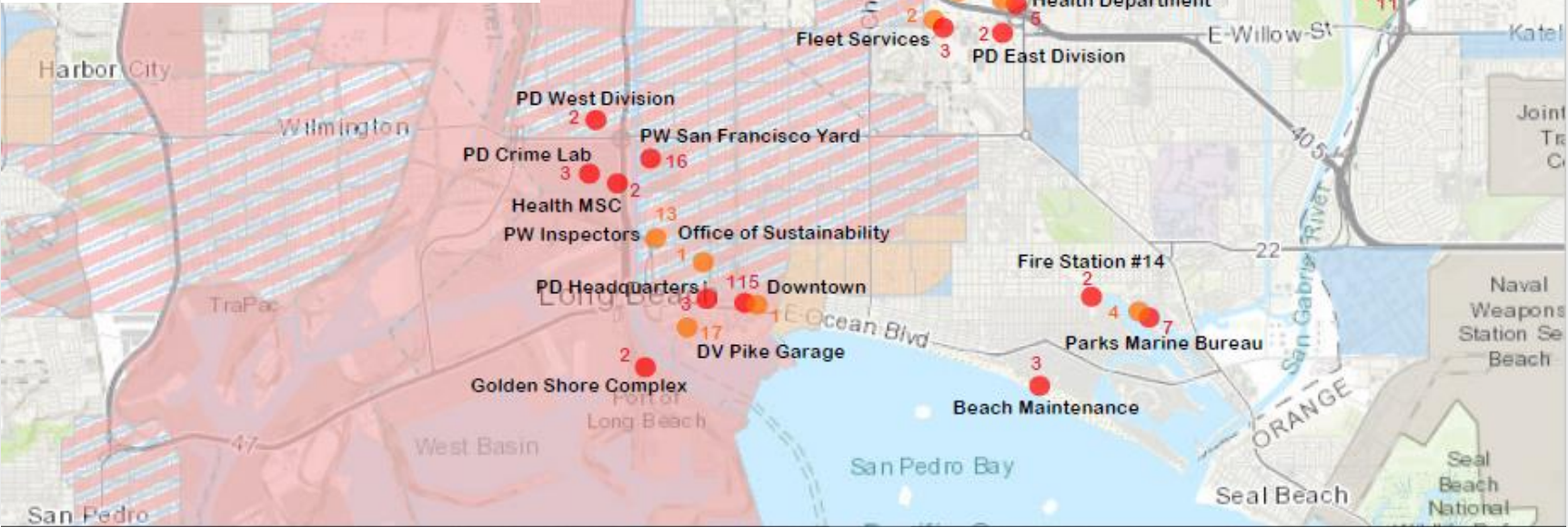


- GHG Reductions by Initiative
 - CNG Station - 2,141 tons of GHG
 - EV Charging Stations - 268 tons of GHG
 - BEV Taskforce and EV Adoption - 5 tons of GHG
 - Hybrid Van/PHEV Truck Pilot Testing - 29 tons of GHG
- Total GHG Reduction = 2,443 tons of GHG Emissions

Current Sustainability Initiatives: Environmental Justice

Legend

- SB 535 Disadvantaged Communities
- AB 1550 Low-income Communities
- SB 535 Disadvantaged Communities and AB 1550 Low-income Communities
- AB 1550 Low-income Communities within a 1/2 mile of a SB 535 Disadvantaged Community



Fleet
Overview

Metrics
and Goals

Alternative
Fuels

Technology

Future
Outlook

Alternative Fuels: Renewables



- Renewable Natural Gas
 - Liquefied Natural Gas (LNG), 34 vehicles
 - Reduced emissions, issues with equipment availability on the market
 - Compressed Natural Gas (CNG), 220 vehicles
 - Reduced emissions, cost savings, equipment readily available
- Renewable Diesel (RND), 171 vehicles
 - A “drop-in” fuel, reduces organic petroleum use, cleaner burn
 - 50-90% GHG emission benefits over traditional diesel, plus 9% less NOx
- 2020 fuel use projected to be 54% renewable, saving 8,200 tons of GHGs

Alternative Fuels: Natural Gas

- \$3.9M time-fill CNG station opened May 1, 2017
 - Supports up to 100 refuse trucks and street sweepers
 - 9,733 tons of GHG emissions have been avoided



Alternative Fuels: Hybrid Electric

- 216 conventional hybrids and 15 plug-in hybrids (PHEV)
- 46 Ford Escapes (PHEV) on order
- Benefits: reduced maintenance, fuel use, and emissions
- Challenges: infrastructure costs and planning for plug-ins



Alternative Fuels: Hybrid Electric

- 2019 Truck and Van pilot test of this technology
- 8 XL Hybrids PHEV F-150s and 11 Hybrid Vans



Alternative Fuels: Hybrid Electric

- Police pursuit vehicles
 - Ford Responder hybrid sedans - 5 units
 - Rated at 38 mpg, idling fuel use less than half of non-hybrid
 - 2020 hybrid Police Interceptor (SUV) - Up to 385 units
 - Rated at 24 mpg, idling fuel use less than half of non-hybrid



Alternative Fuels: Battery Electric

- Nissan Leaf (150 mile range)
- Chevy Bolt (238 mile range)
- BEV Savings



Alternative Fuels: Chargers

- Level 2 Chargers - 60 Ports
 - Infrastructure Support
 - 4-8 Hour Charge
 - Positive Air Quality Impact



Alternative Fuels: Solar Charging

- EV ARC Portable Solar Chargers
- Can charge up to 3 vehicles and provide emergency power



Alternative Fuels: Future Options

- Hydrogen Fuel Cell
- Medium and Heavy Duty Battery Electric



Technology Initiatives



- Active telematics, currently on about 660 City vehicles
 - Just finished upgrading with a state-of-the-art system
 - Expanding to idling, driver behavior, utilization, MPG
- Fuel Focus - passive telematics as well as fuel tracking
 - Covers the remaining 1,000 powered vehicles
- These initiatives support a data-driven fleet
 - Expect reporting to departments starting in 2021
- Fleet Cost Optimization through full application of telematics

Future Outlook...



- Stay current with alternative fuel technology
 - Acquire greenest possible vehicles
 - Move to zero emissions with an aggressive timeline
- Make full use of telematics and vehicle data
 - City-wide policies regarding idling and driver behavior
 - Monthly reports sent to departments
- Look at the potential of ride- and car-sharing
- Autonomous vehicles and integration into City fleet



Thank you!

Questions?