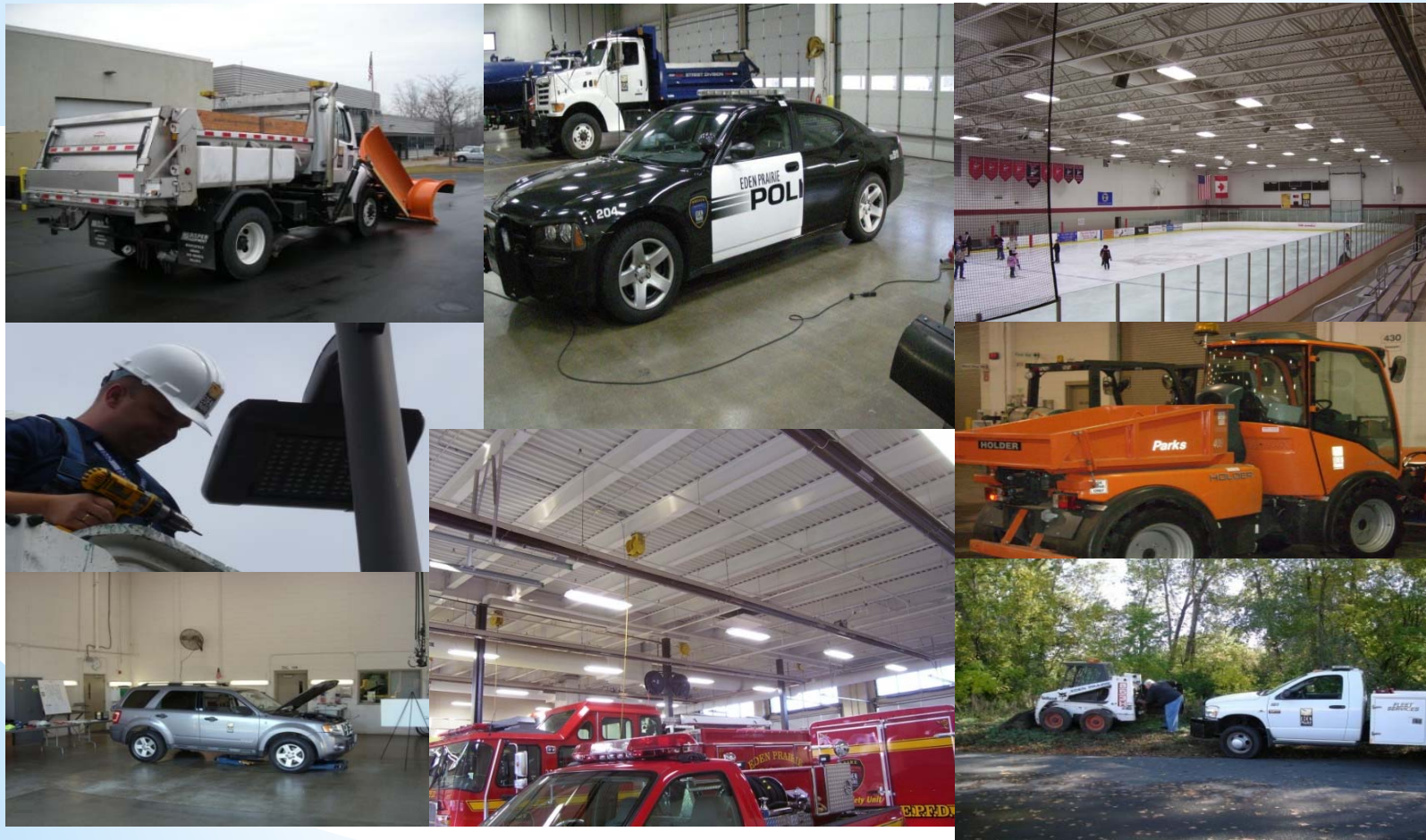


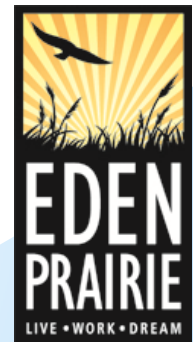
20-40-15 Final Report

February 16, 2016



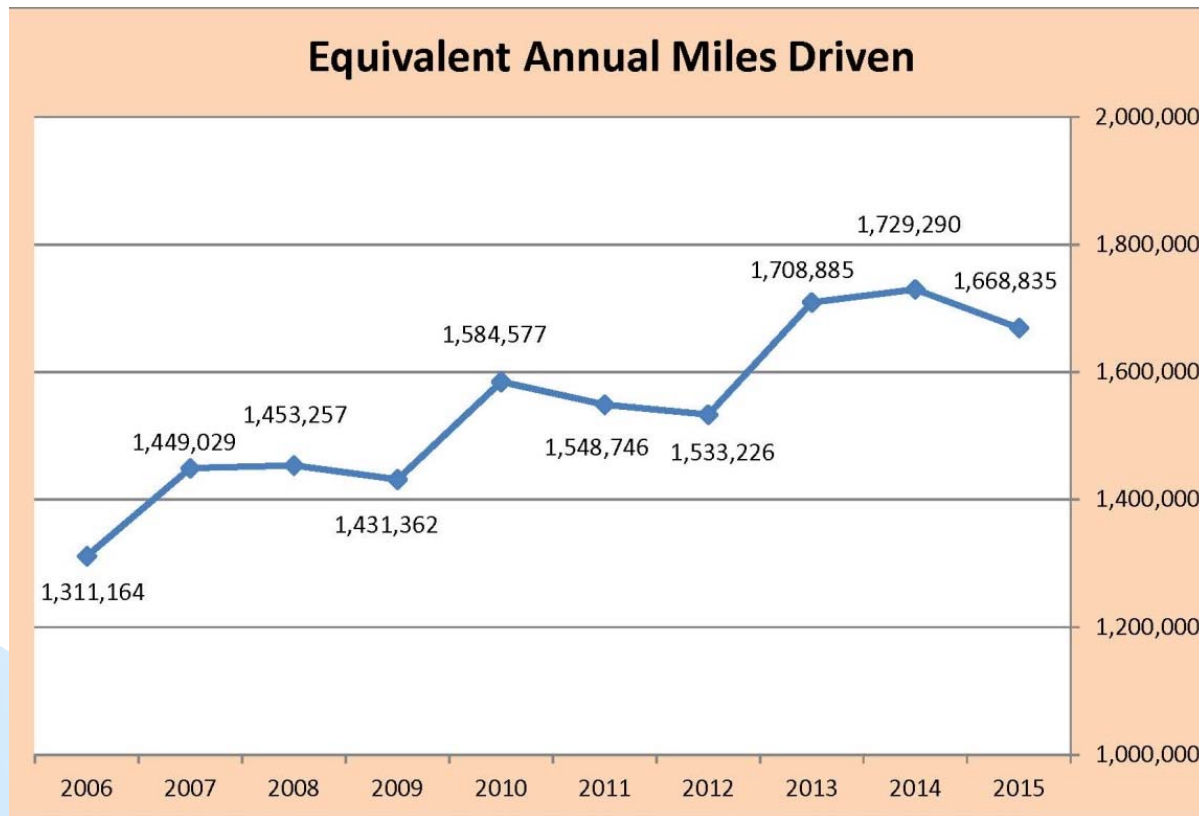
20-40-15 Fleet Services Goal

- Improve overall Fleet Fuel Economy by 40% in 10 years
- Increase the use of renewable fuels
- Reduce impact to the environment
- Reduce operating costs

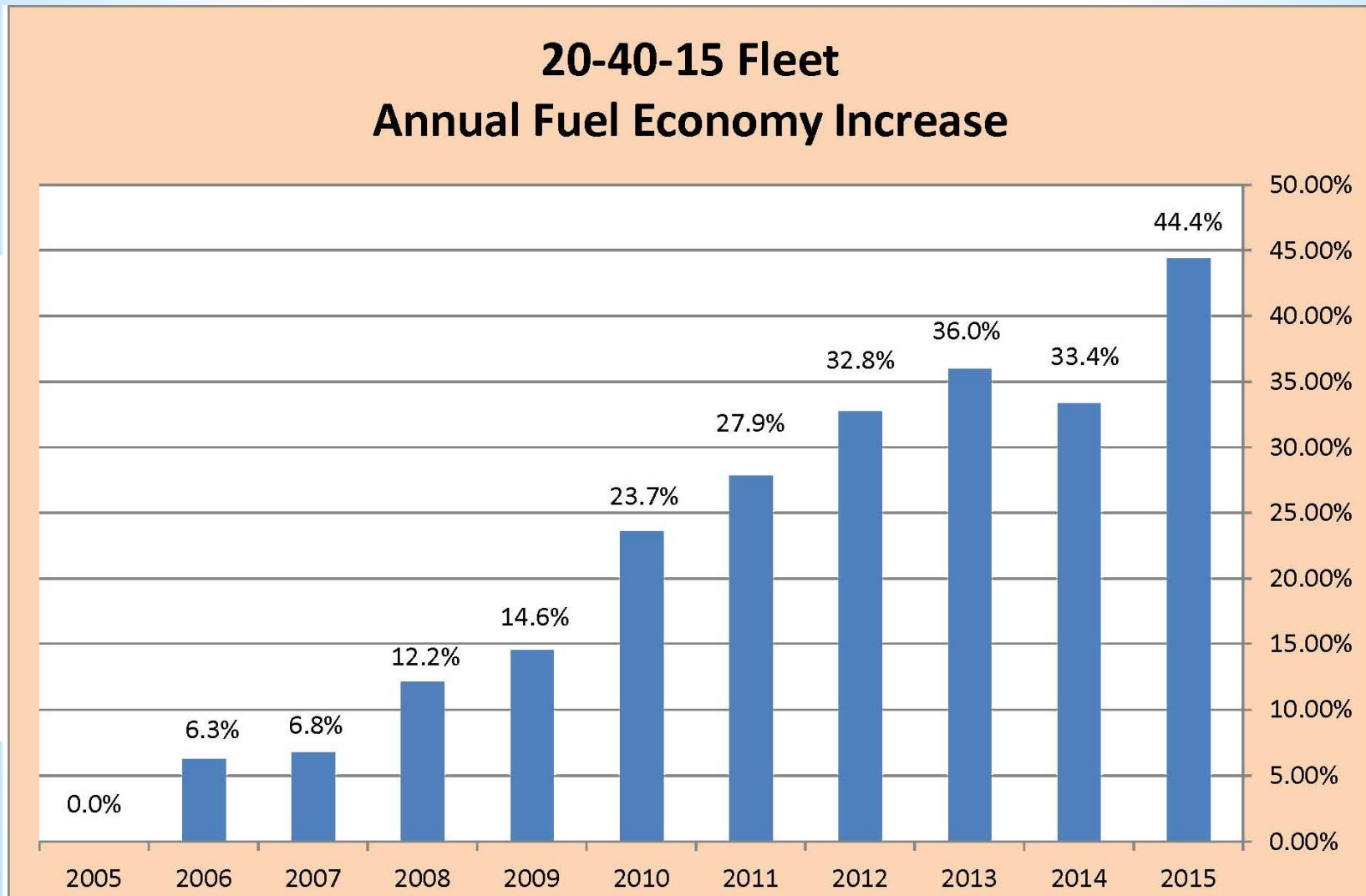


20-40-15 Fleet Profile

- 252 active vehicles and equipment in fleet
- Size ranging from tandem axle dump trucks to electric utility vehicle



20-40-15 Fleet Results



20-40-15 Fleet Results

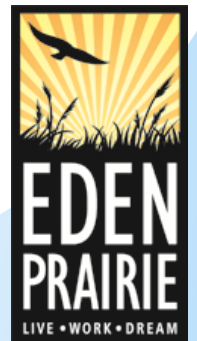
- Over the past 10 years, the City has saved an estimated 304,458 gallons of fuel
- At an average cost of \$2.50 per gallon, that's a net savings of \$761,145
- Improved from a fleet average MPG of 7.93 in 2005 to 11.45 MPG in 2015



20-40-15 Strategies

How Did We Get There?

- Reduced fleet size by 20 vehicles
- Replaced 29 gas engine medium and light duty trucks with B20 diesel fuel compliant engines
- Replaced 6 vehicles with electric hybrids including 2 Chevrolet Volt plug-in hybrids (3 Ford Fusions, 1 Toyota Prius)
- Replaced 32 squad cars with engine cylinder deactivation/management technology (Dodge Chargers)



20-40-15 Strategies

How Did We Get There?

- Replaced 11 full size 4X4 vehicles with compact utility vehicles getting 20+ miles per gallon
- Implemented the “Fuel Misers” award program and installed 20-40-15 window stickers in vehicles to increase employee awareness and participation in the program
- Reduced engine horsepower on heavy duty plow trucks to save fuel and better match the power curve for optimal performance
- Made fuel efficiency a primary criteria when selecting vehicles for replacement



20-40-15 Strategies

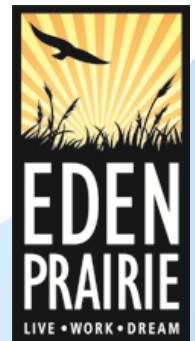
Chevrolet Volt

70-80 MPG Equivalent Mileage



20-40-15 Fleets Moving Forward

- Continue to right-size for optimal performance and fuel economy
- Phase-in additional electric hybrid and plug-in vehicles where cost effective and appropriate
- Continue our focus to reinforce positive energy conservation behaviors
- Continue to review and evaluate alternative/renewable fuel options and resources



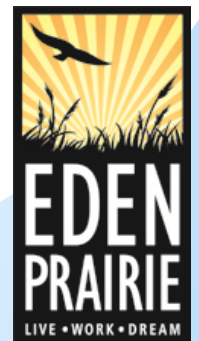
20-40-15 Facilities Goal

- 20% energy efficiency improvement in City owned buildings by 2015
- Base year for comparison is 2005
- Reduce impact to the environment
- Reduce operating costs



20-40-15 Facilities Results

- Increased energy efficiency by 21.8%
- Reduced energy costs by \$267,500 annually
- Reduced energy consumption by 18 billion BTUs over the 10 year period
- Greenhouse gas reduction equivalent to 2900 metric tons of CO₂ or 625 vehicles off the road



20-40-15 Strategies

Reduce energy consumption in City owned buildings

- More efficient lighting including LEDs
- Replaced older HVAC equipment with more efficient systems
- Installed solar panels at Community Center
- Additional insulation installed when re-roofing City buildings
- More efficient equipment installed and waste heat recovery heat exchangers incorporated with Rink-2 conversion to ammonia refrigerant



20-40-15 Strategies

Community Center Solar



20-40-15 Strategies

Improving Roof Insulation



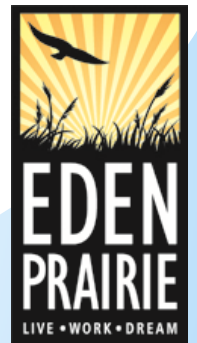
20-40-15 Strategies

Energy Efficient HVAC Upgrades



20-40-15 Facilities Moving Forward

- Continue to upgrade to more efficient equipment and lighting where cost effective as older equipment reaches the point where it must be replaced
- Upcoming Den Road (Liquor Store) re-roofing project will include additional insulation and new energy efficient HVAC equipment



20-40-15 Achieved

