

CITY OF SAN MARCOS

CLIMATE ACTION PLAN INITIATIVE

July 2018

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BACKGROUND

- ▶ June 2017 - Trump announces US withdrawal from Paris Climate Accord.
- ▶ June 2017 - Mayors National Climate Action Agenda issues statement committing to uphold goals of the Paris agreement.
- ▶ October 2017 - Council discussion regarding the US Conference of Mayors Climate Action Agreement.
 - ▶ Consider creating a San Marcos Climate Action Plan to reduce GHG emissions and impacts by setting benchmarks and expanding existing programs.
 - ▶ Council Direction- Measure City of San Marcos GHG emissions.

GREENHOUSE GAS (GHG) BASICS

- ▶ GHGs are a group of compounds that trap heat in the Earth's atmosphere.
- ▶ Primary GHGs are water vapor, carbon dioxide, methane, and nitrous oxide.
- ▶ Occur naturally in the atmosphere, but also produced by agriculture, deforestation and burning of fossil fuels.
- ▶ Measured in metric tons of CO₂ equivalents (MT CO₂e)

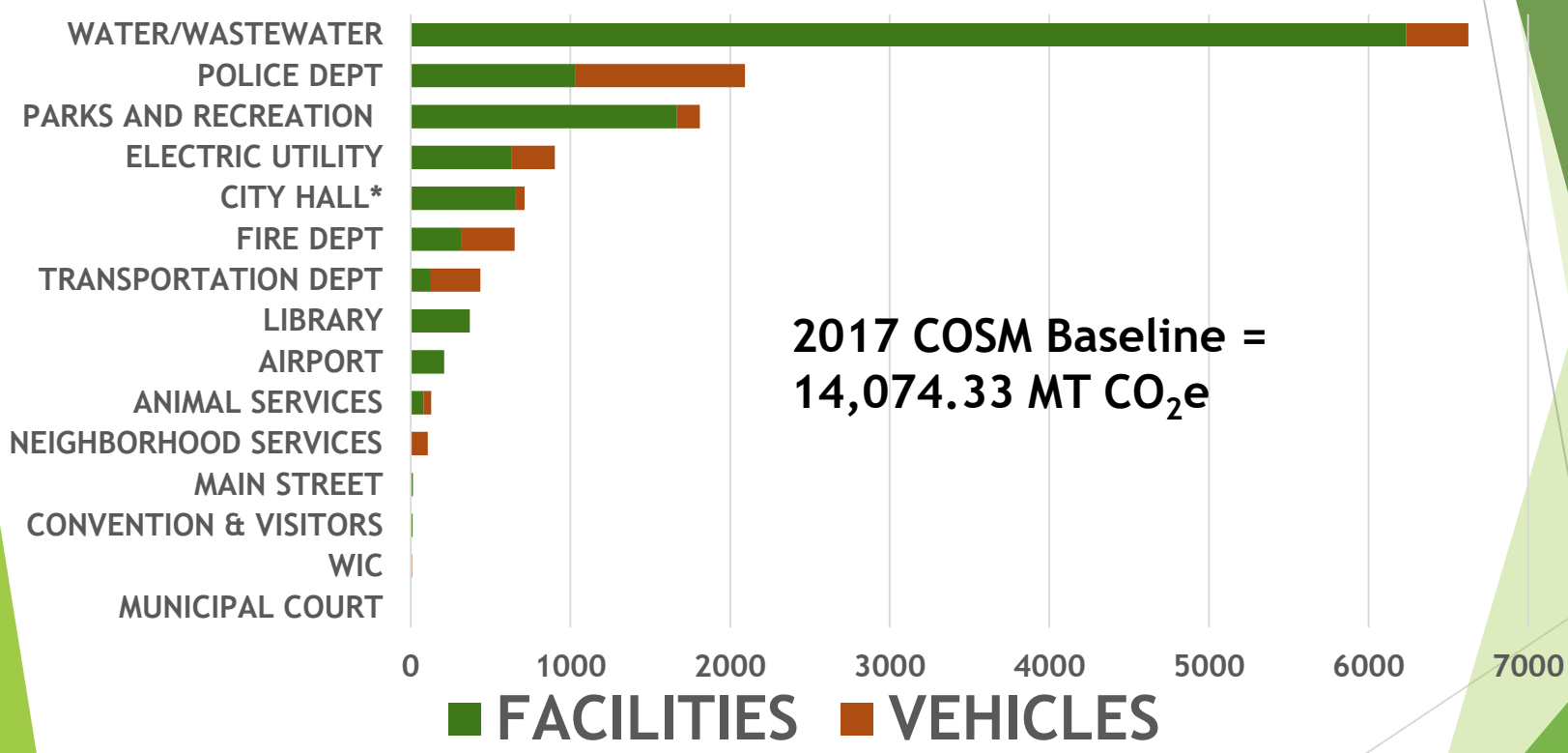
PURPOSE OF GHG INVENTORY

- ▶ Quantification of emissions from City facilities and operations including:
 - ▶ energy use for City buildings, W/WW utility
 - ▶ energy use for street lights and traffic signals
 - ▶ city-owned vehicle emissions
- ▶ Establish a baseline (2017)
- ▶ Ability to track achievements in sustainability or GHG emissions goals going forward

METHODOLOGY

- ▶ Investigated various methodologies and tools:
 - ▶ International Council for Local Government Environmental Initiatives (ICLEI) ClearPath software
 - ▶ EPA Local Greenhouse Gas Inventory tool
 - ▶ The Climate Registry reporting tool
 - ▶ Climate Action for Urban Sustainability (CURB) tool
 - ▶ Climate Risk and Adaption Framework and Taxonomy (CRAFT) reporting standard
- ▶ Used Local Government Operations Protocol Version 1.1 (March 2010)
- ▶ Provides a standardized set of guidelines to assist local governments in quantifying and reporting GHG emissions associated with their government operations.

GHG EMISSIONS BY DEPARTMENT



* City Hall includes departments at City Hall complex (CM, City Clerk, Legal, HR, Finance, IT, Planning, Engineering/CIP, Equipment Services, etc)

WATER/WASTEWATER DEPARTMENT

Includes:

- ▶ Surface Water Treatment Plant,
- ▶ Wastewater Treatment Facility,
- ▶ Pumping stations,
- ▶ Sewer lift stations,
- ▶ Fuel for equipment (backhoes, excavators, etc)
- ▶ Vehicle fuel

PARKS AND RECREATION DEPARTMENT

Includes:

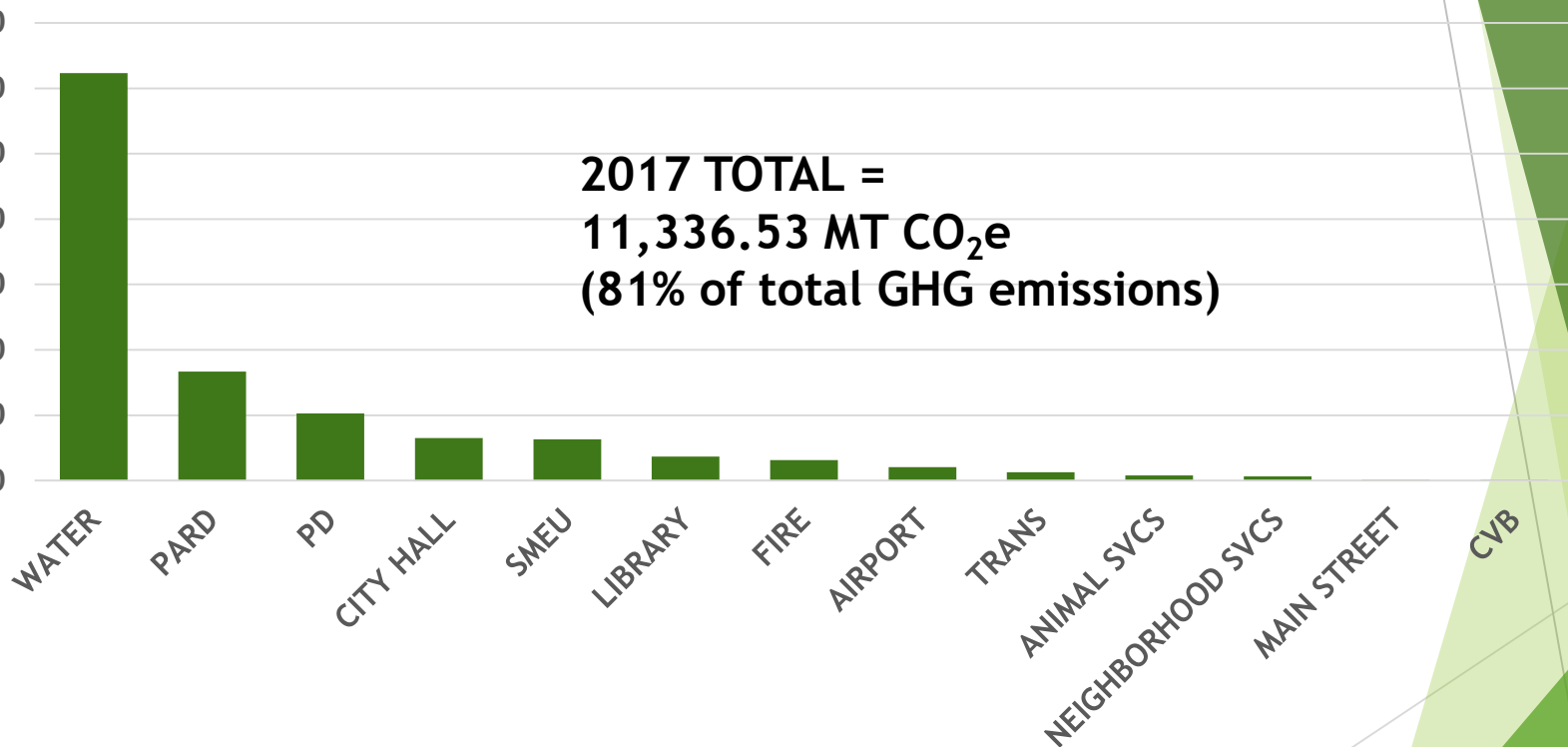
- ▶ Grant Harris Building,
- ▶ Activity Center, Dunbar, Rec Center, etc,
- ▶ Sports fields and City parks,
- ▶ Rio Vista pool and tennis courts,
- ▶ Fuel for equipment (mowers, tractors, etc)
- ▶ Vehicle fuel

POLICE AND FIRE DEPARTMENTS

Includes:

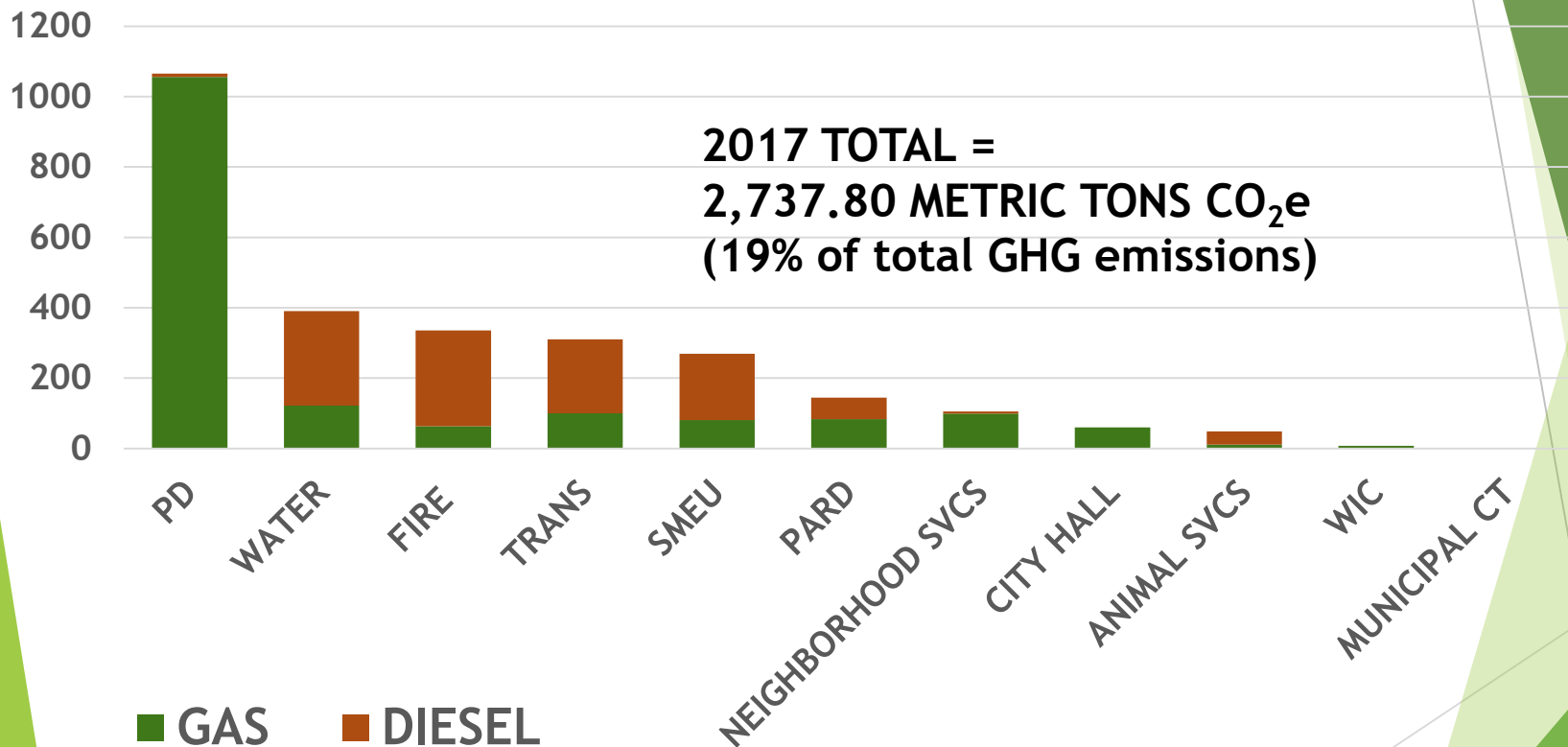
- ▶ Police and Fire Stations,
- ▶ Fuel for vehicle fleet,
- ▶ Fuel for fire trucks and equipment

GHG EMISSIONS FOR FACILITIES



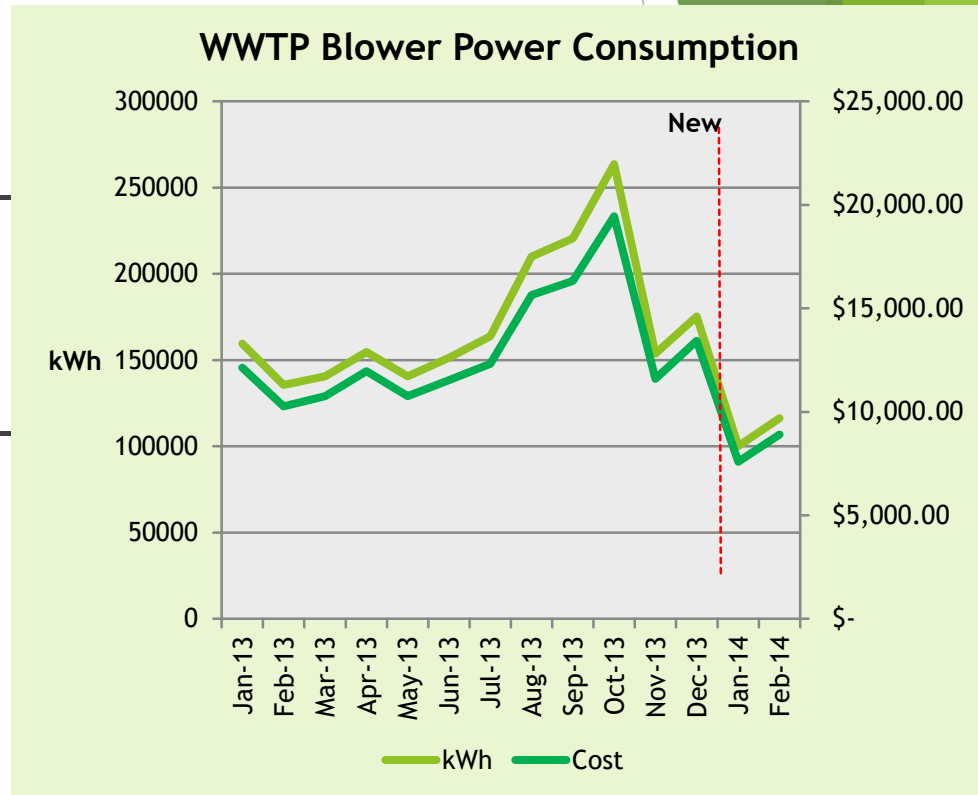
GHG EMISSIONS FOR VEHICLES

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Actions that have already reduced COSM GHG emissions:

- ▶ Air-bearing blower replacement at WWTP (2013)
- ▶ Streetlight LED conversion (2018)
est. savings 842,656 kwh/yr
 - 5% savings; = 58.5 homes
- ▶ Facilities lighting retrofits (2010)
est. savings 707,447 kwh/yr
 - 4% savings; = 49 homes

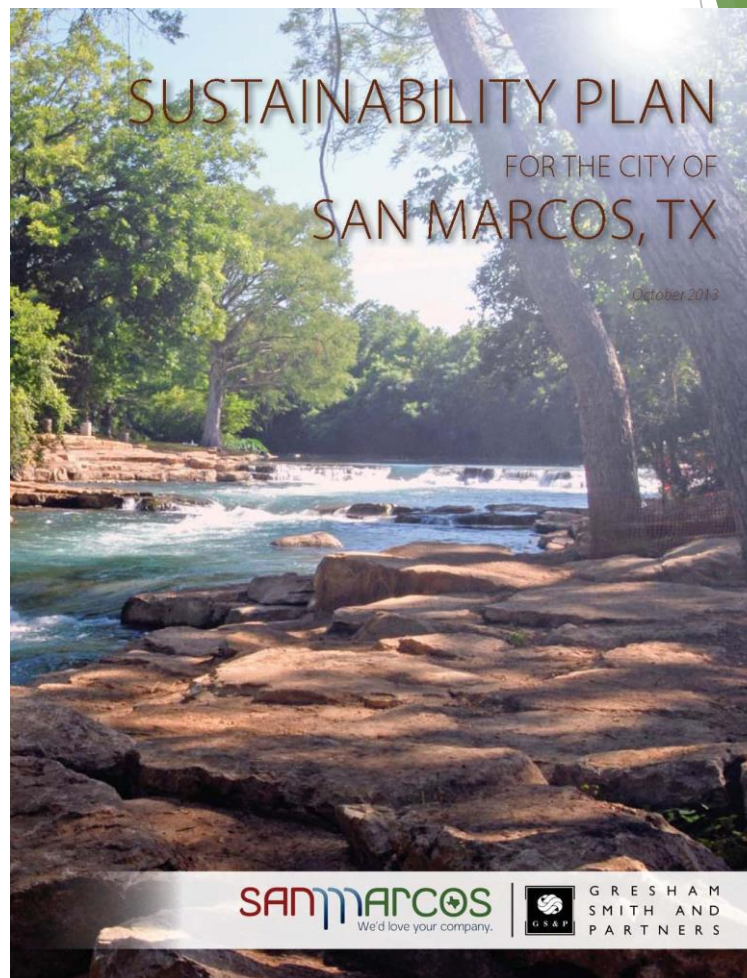


Next Steps - Additional opportunities for reducing GHG emissions:

- ▶ Construct new City buildings and retrofit existing buildings for energy efficiency (white roofing, daylighting, insulation, hvac, solar, etc).
- ▶ 2nd air-bearing blower replacement at WWTP.
- ▶ Continue purchasing hybrid, electric, flex fuel and TxLED (Low Emission Diesel) vehicles as appropriate.
- ▶ Automatic Vehicle Locating (AVL) system; implement/enforce no-idling policy for fleet.

Many more opportunities for reducing GHG emissions can be found in the San Marcos Sustainability Plan, adopted October 2013:

- ▶ 2.1 Air Quality and Greenhouse Gases
- ▶ 2.2 Energy Efficiency and Renewables
- ▶ 2.6 Green Purchasing



QUESTIONS?