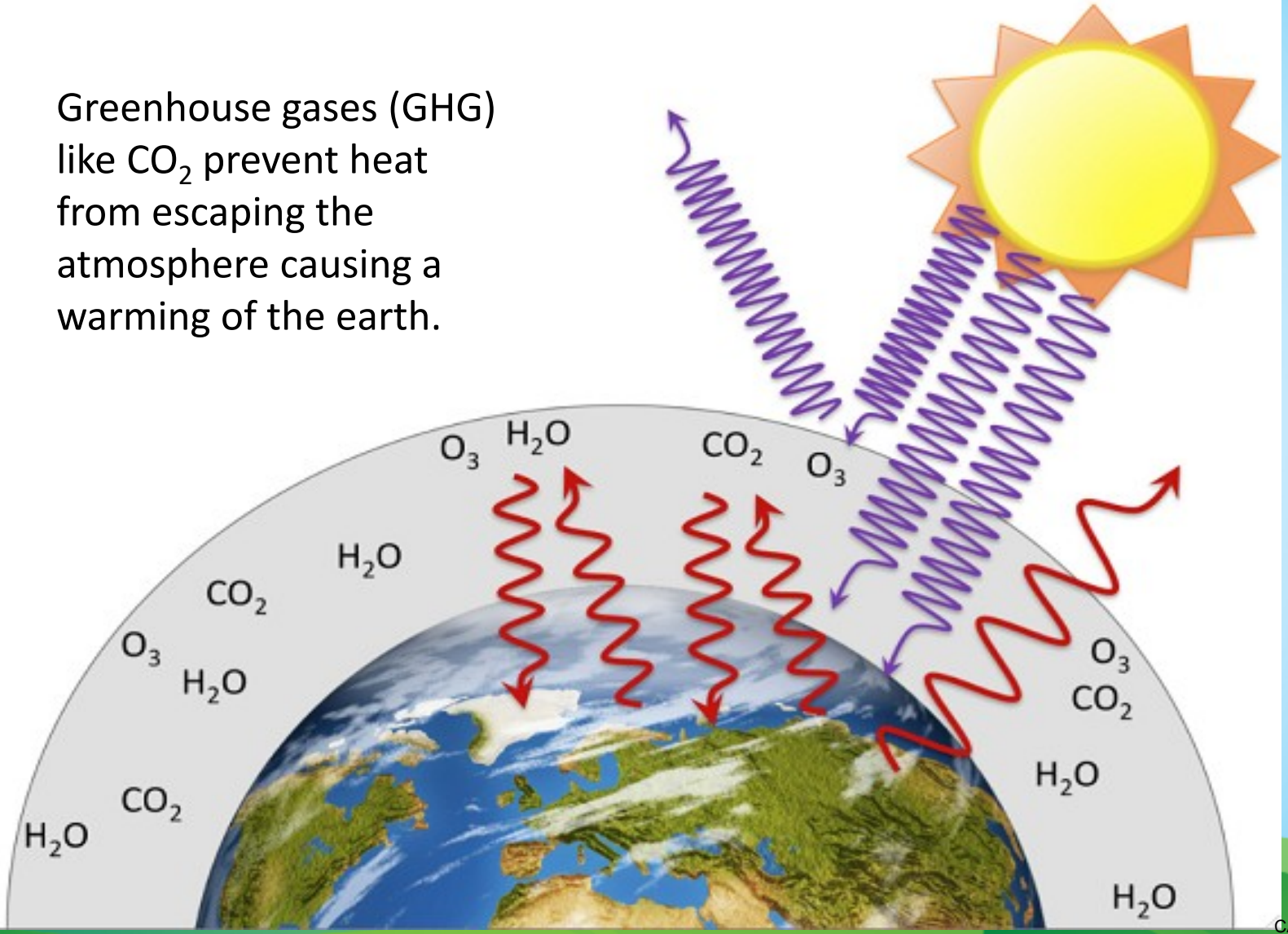
City of Fort Lauderdale's Carbon Footprint

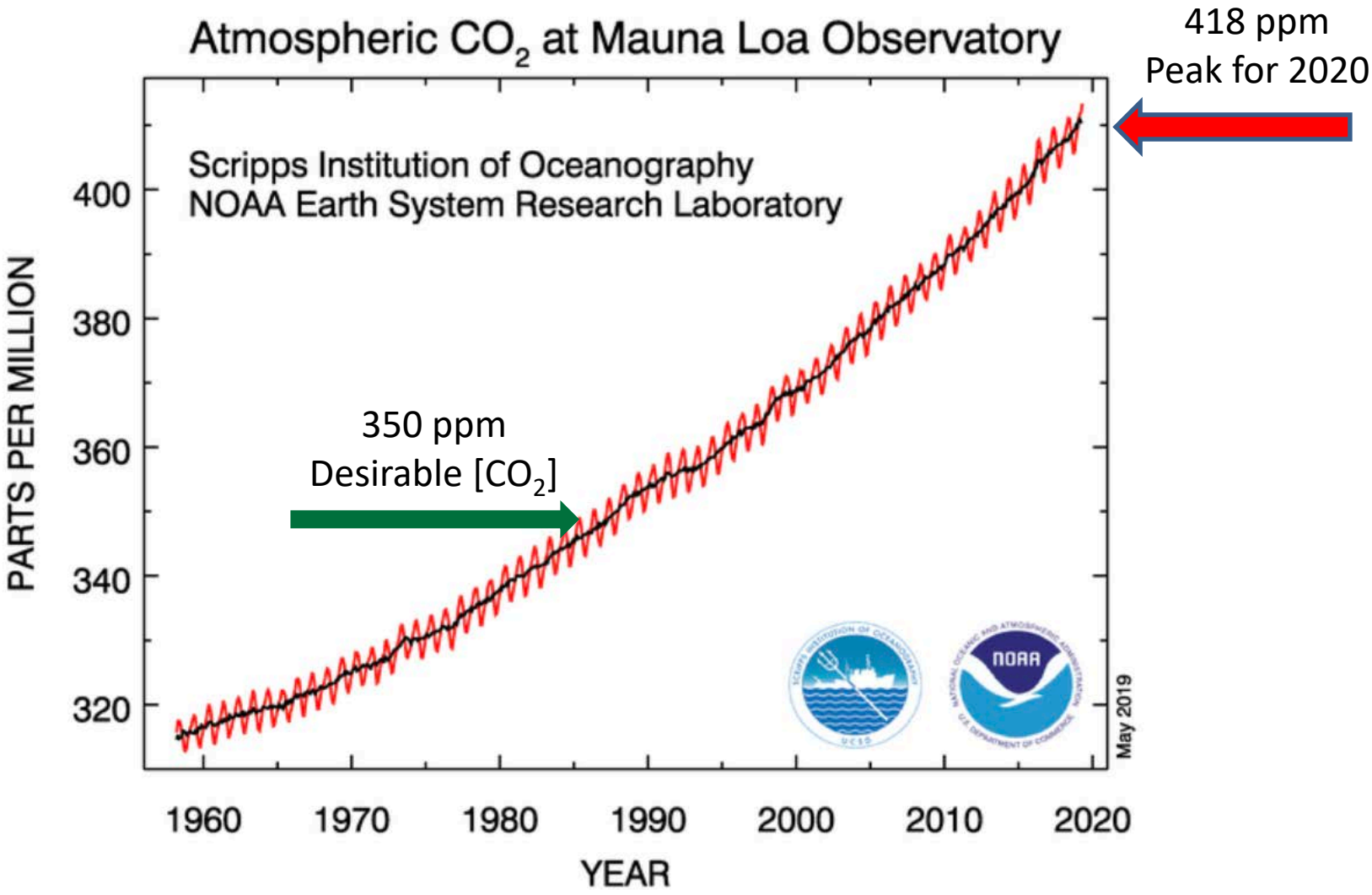
Commission Conference Presentation Nov 5, 2020

Greenhouse gases (GHG) like CO_2 prevent heat from escaping the atmosphere causing a warming of the earth.



Source: [Matawa First Nations]

Greenhouse Gas Trends



Source: https://research.noaa.gov/article/ArtMID/587/ArticleID/2461/Carbon-dioxide-levels-hit-record-peak-in-May

Sea Level Rise Trends

Scenarios are based on GHG emissions

Unified Sea Level Rise Projection
(Southeast Florida Regional Climate Change Compact, 2019)

Year	IPCC Median (inches)	NOAA Intermediate High (inches)	NOAA High (inches)
2040	10	17	21
2070	21	40	54
2120	40	92	136

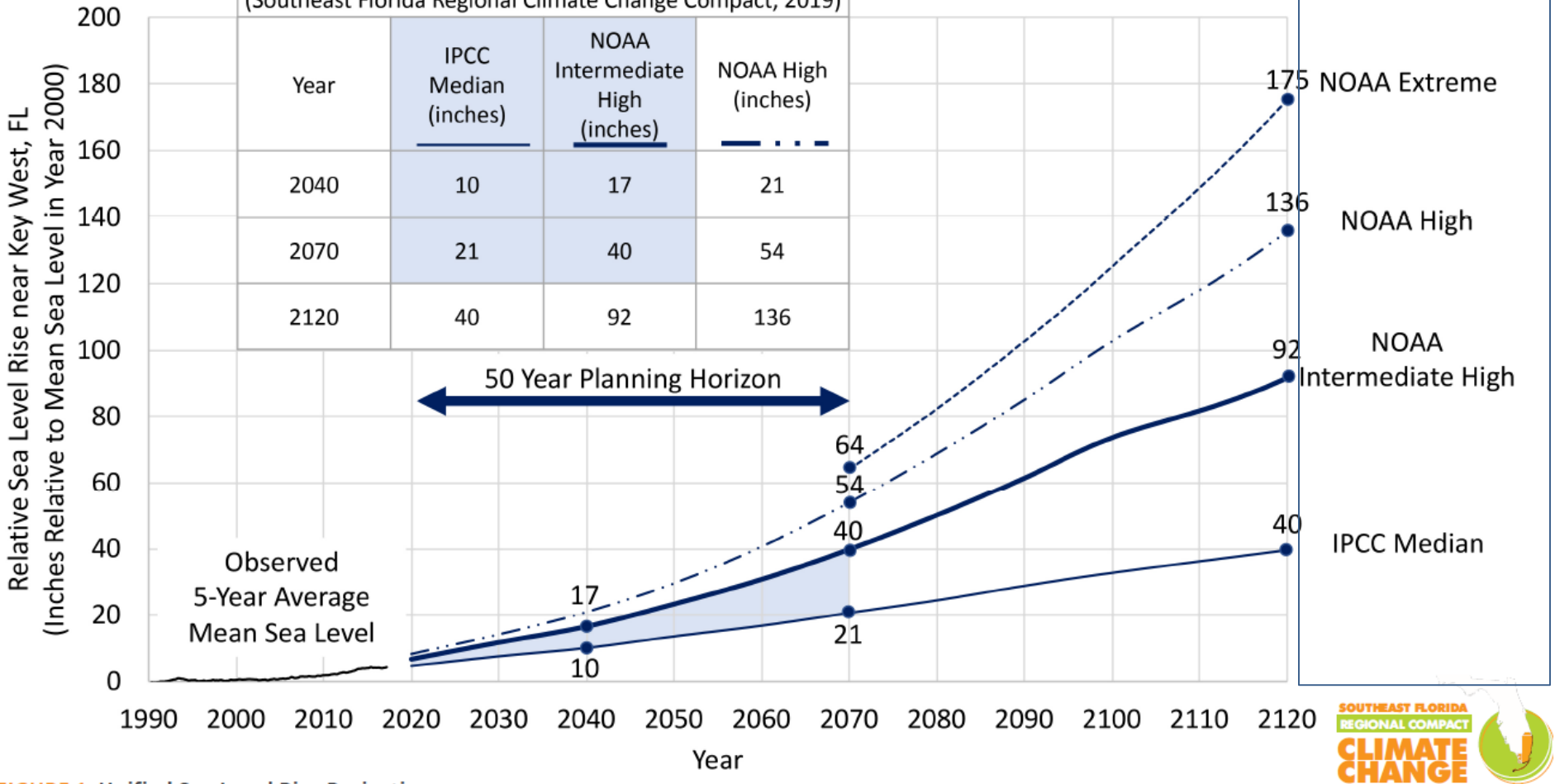


FIGURE 1: **Unified Sea Level Rise Projection**

Source: Southeast Florida Regional Climate Change Compact Sea Level Rise Work Group (Compact). February 2020. A document prepared for the Southeast Florida Regional Climate Change Compact Climate Leadership Committee. P. 10.

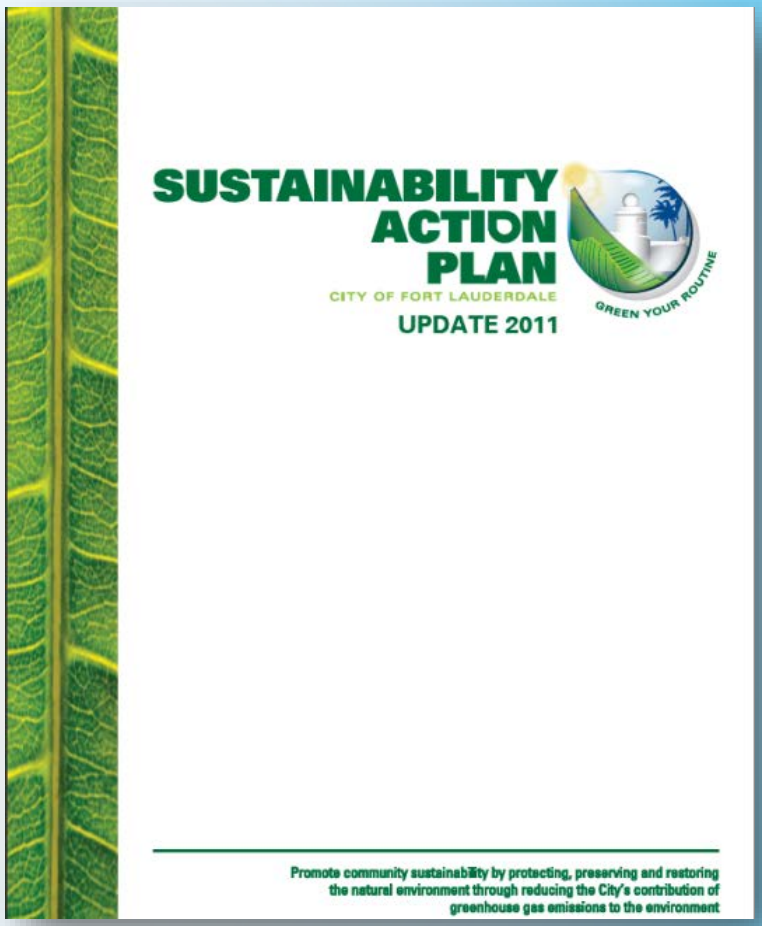
Strategic Alignment:
Sustainability Action Plan

GREENING OUR ROUTINE
CITY OF FORT LAUDERDALE

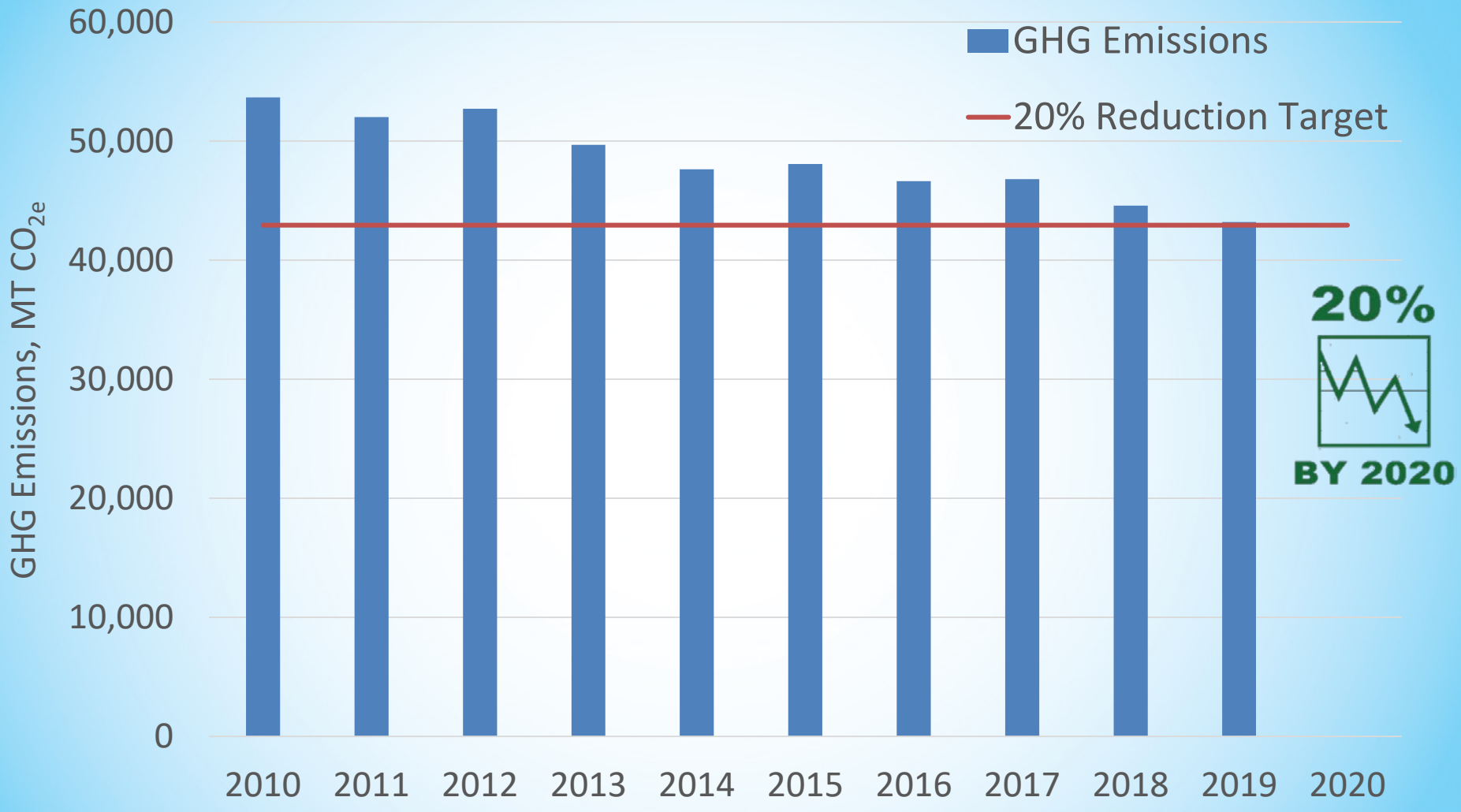
20%

BY 2020

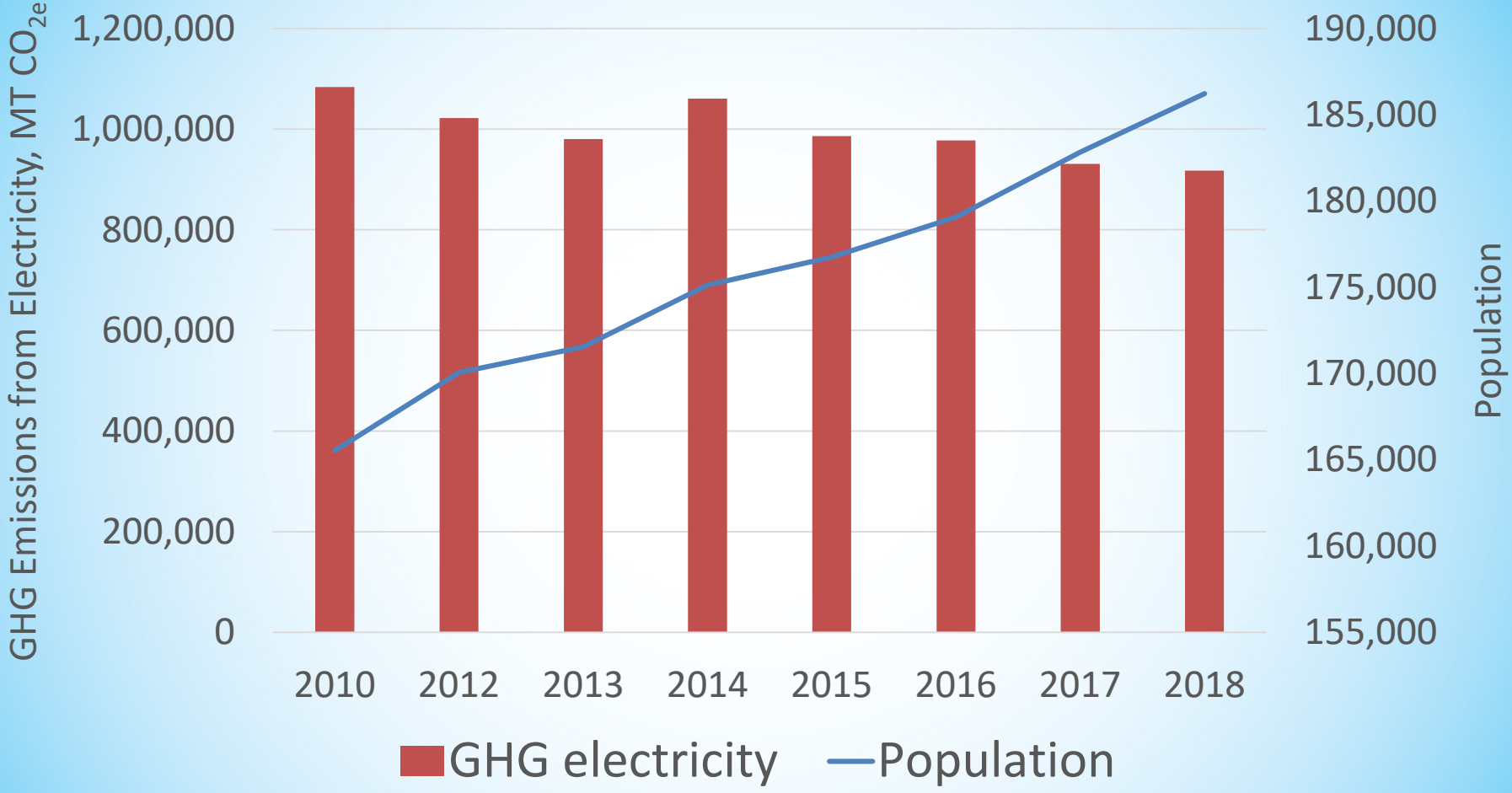
- AIR QUALITY
- ENERGY
- TRANSPORTATION
- WATER
- WASTE & RECYCLING



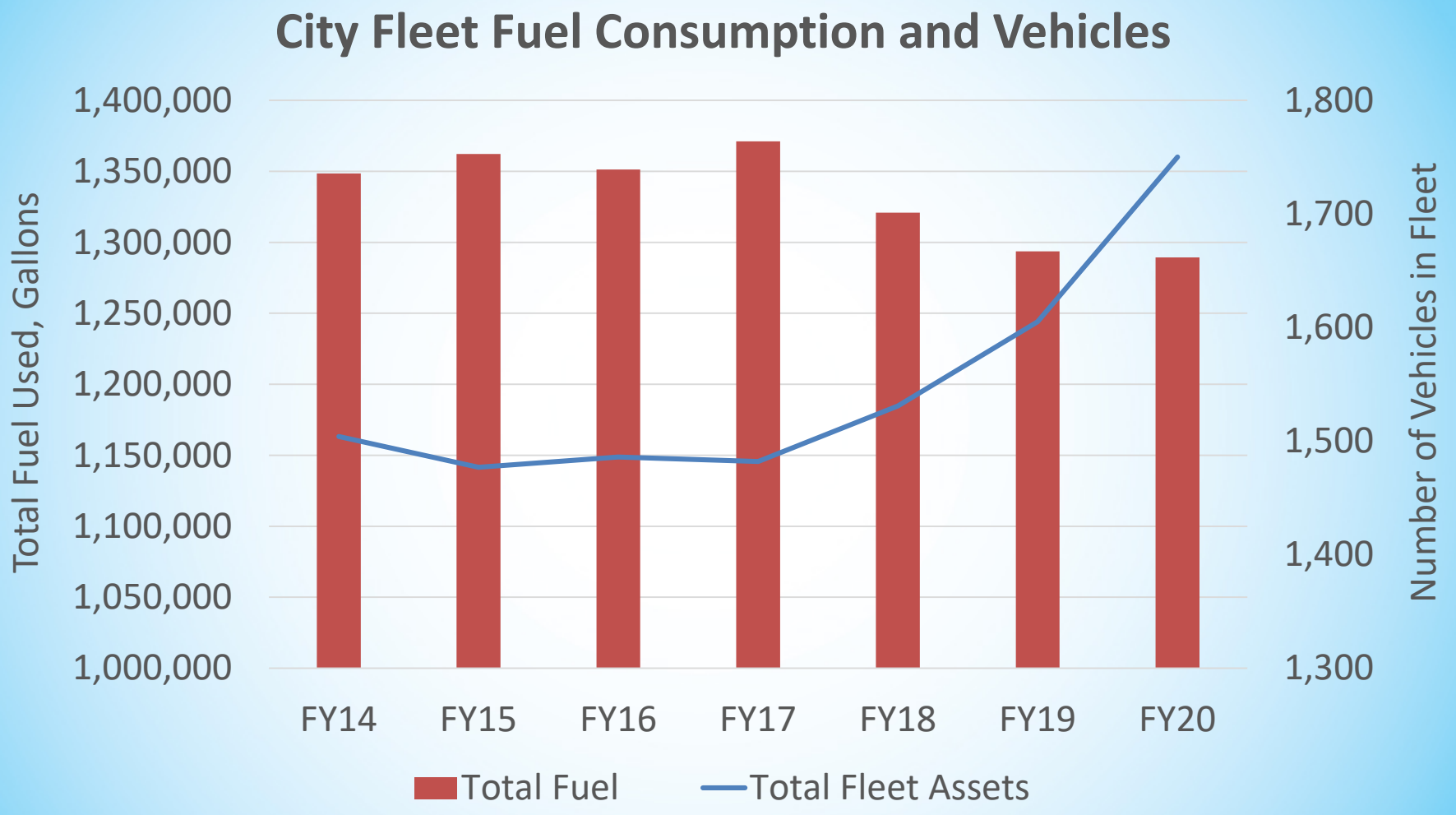
GHG Emissions from City Operations



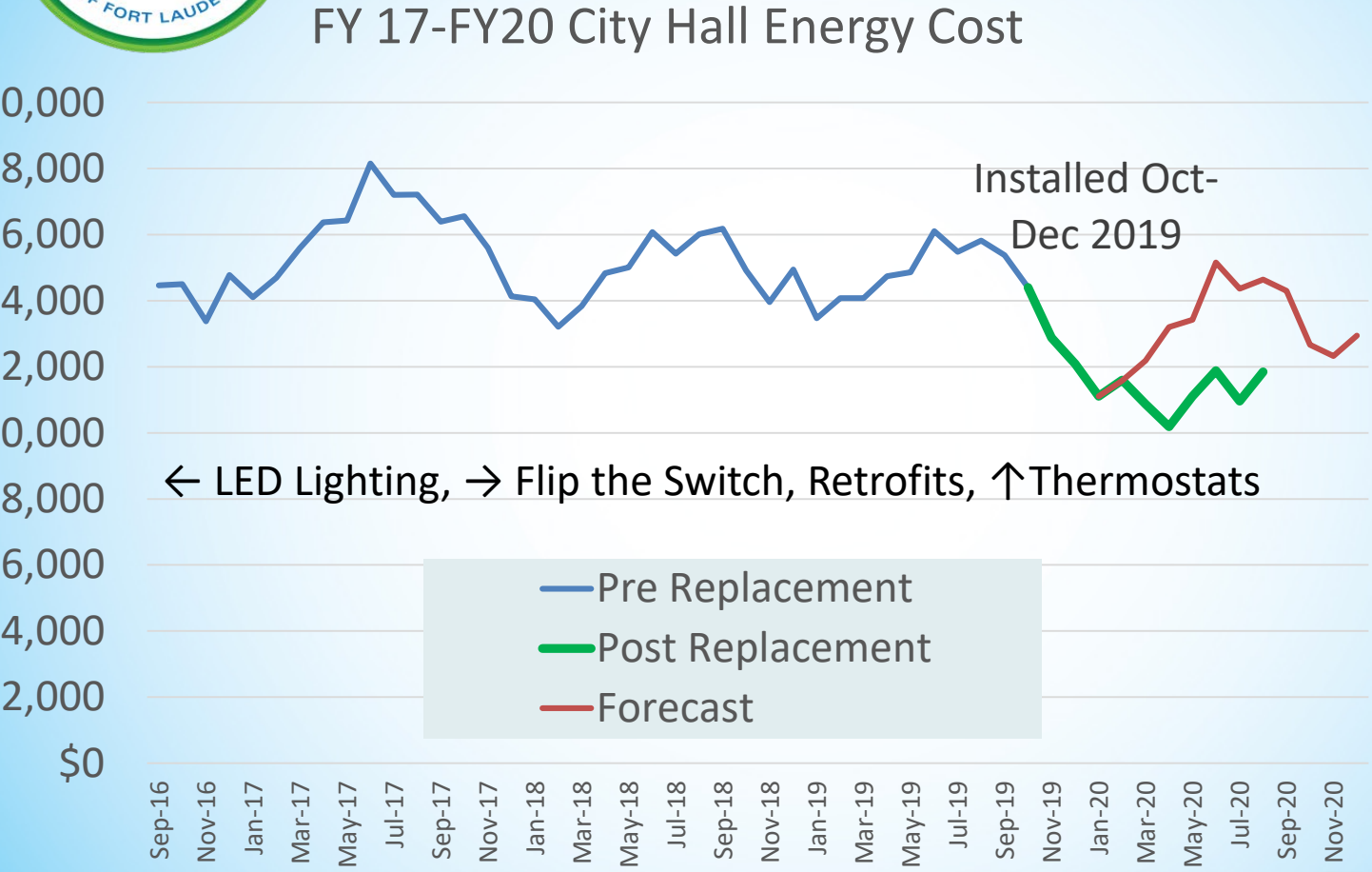
Community GHG Emissions
Electricity Sector and Population



Fleet Fuel


City Fleet Fuel Consumption and Vehicles
Total Fuel Used, Gallons
1,400,000
1,350,000
1,300,000
1,250,000
1,200,000
1,150,000
1,100,000
1,050,000
1,000,000
Number of Vehicles in Fleet
1,800
1,700
1,600
1,500
1,400
1,300
FY14
FY15
FY16
FY17
FY18
FY19
FY20
Total Fuel
Total Fleet Assets

Completed Projects- Energy Efficiency Retrofit



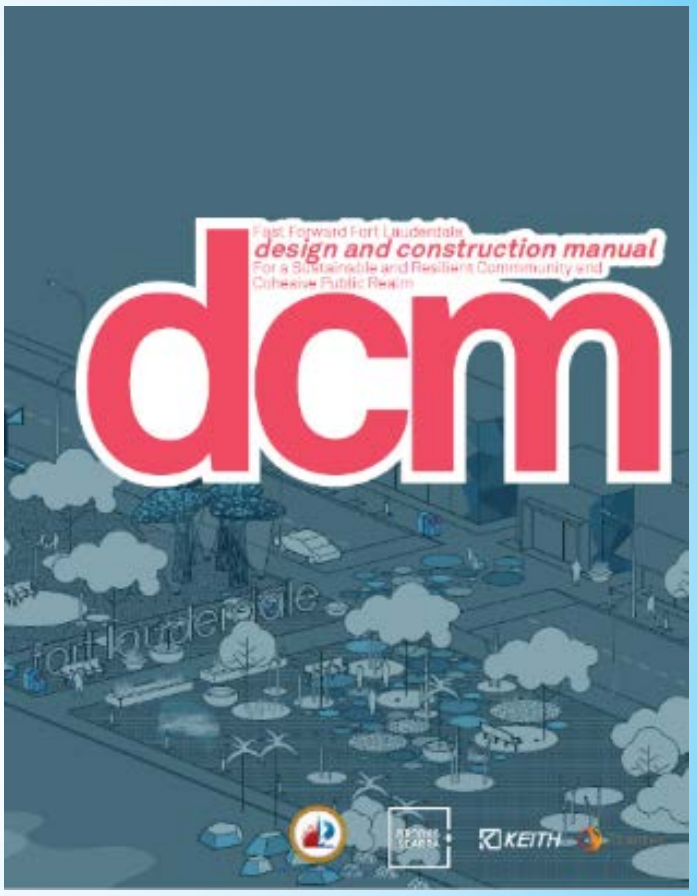
Completed Projects: Transportation

- Multimodal roadways
  - Expansion of bike lanes
  - Scooters/bikes rental
- Public EV charging infrastructure


Las Olas Garage

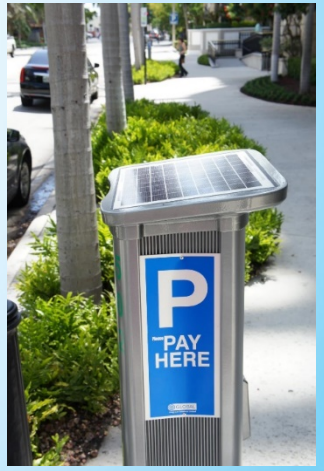
Completed Projects: Planning and Design

- Comprehensive Plan
- Design and Construction Manual



Completed Projects: Renewable Energy

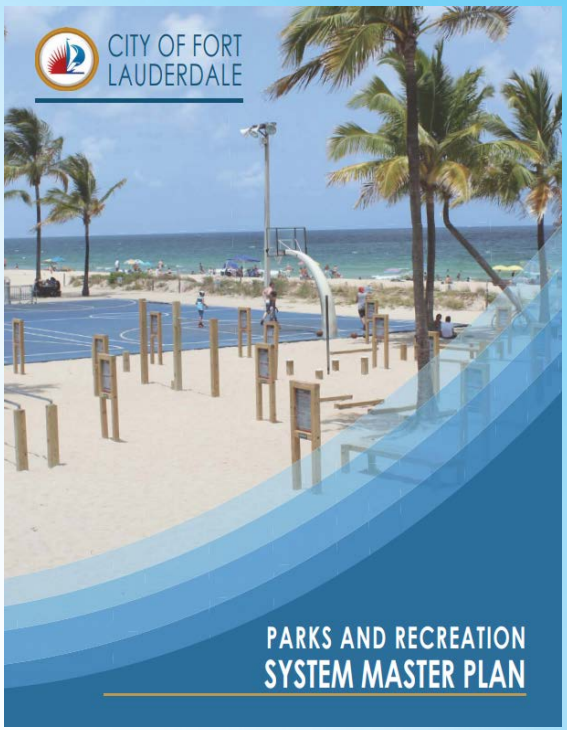
- Beach Community Center
- Geothermal systems
- Solar parking meters
- Solar traffic signals
  - 64 kiloWatts of renewable energy capacity to date



Recognition / Awards

- DOE Better Building Challenge Award Winner
- SolSmart Gold Designation (2019)
- Green Local Government Gold Level Certification (2019)
- 100 Best Green Fleets in North America (2020)
- Tree City USA Award for 41st year in 2019

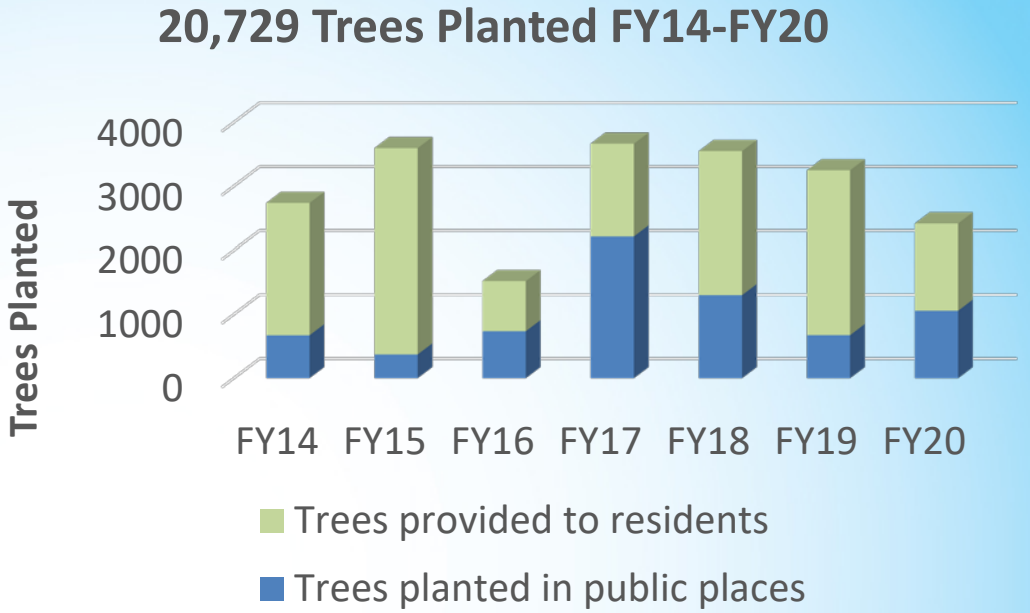
In Progress

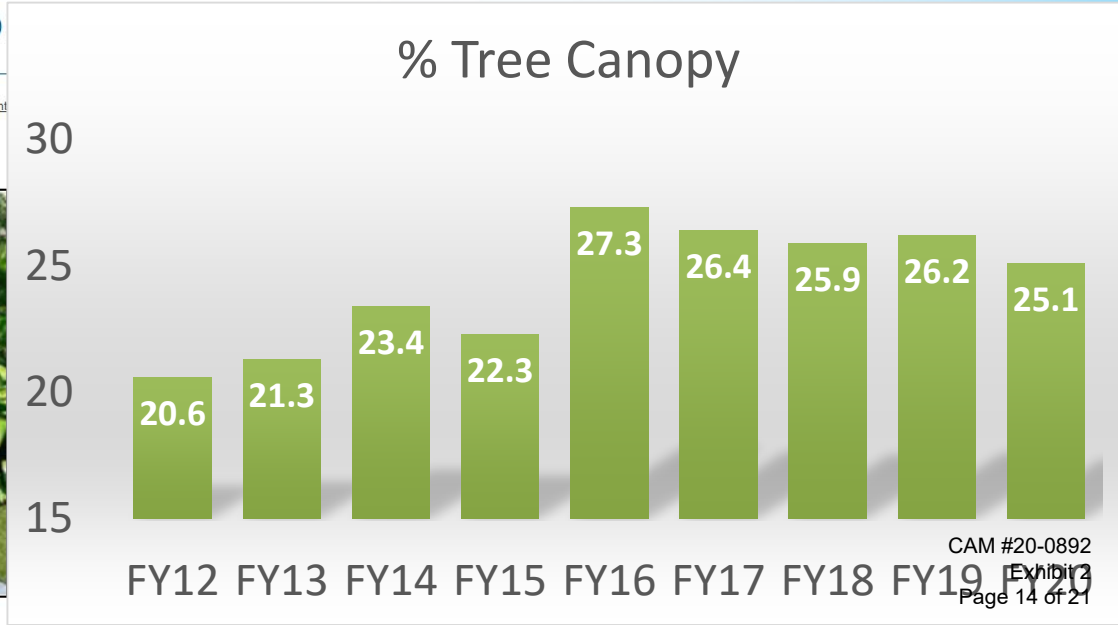


- Parks Master Plan
- Solar EV charging
- EV charging at City facilities

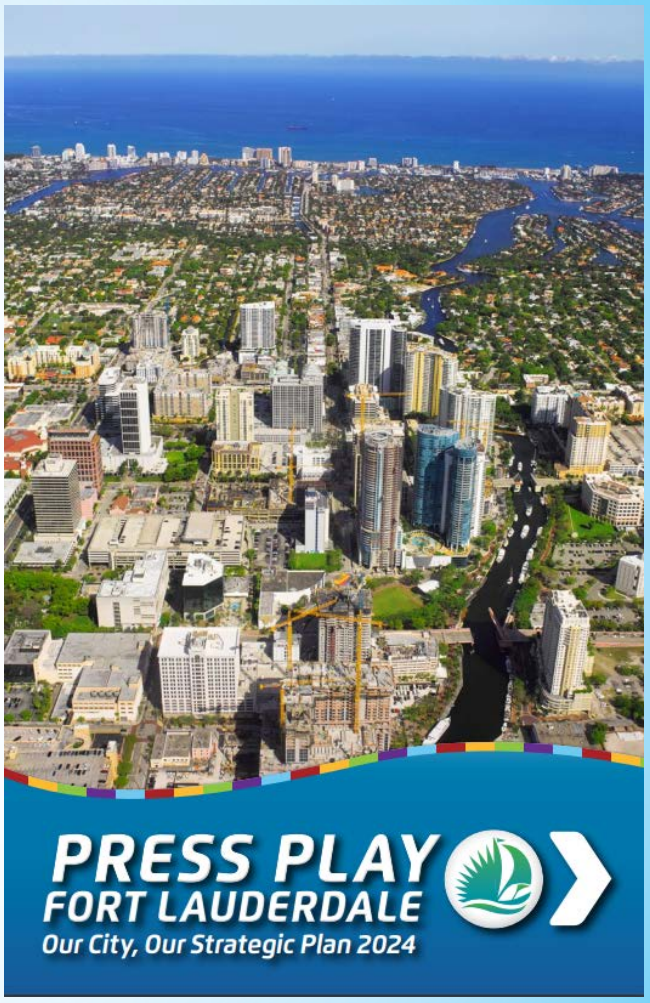
In Progress

- Tree ordinance revisions
- Tree planting & distribution
- Tree canopy tracking





Strategic Alignment:
Strategic Plan



Infrastructure Focus Area

- **Goal 1: Build a sustainable and resilient community.**
  - *Objective: Promote energy efficiency and the expansion of renewable energy sources*
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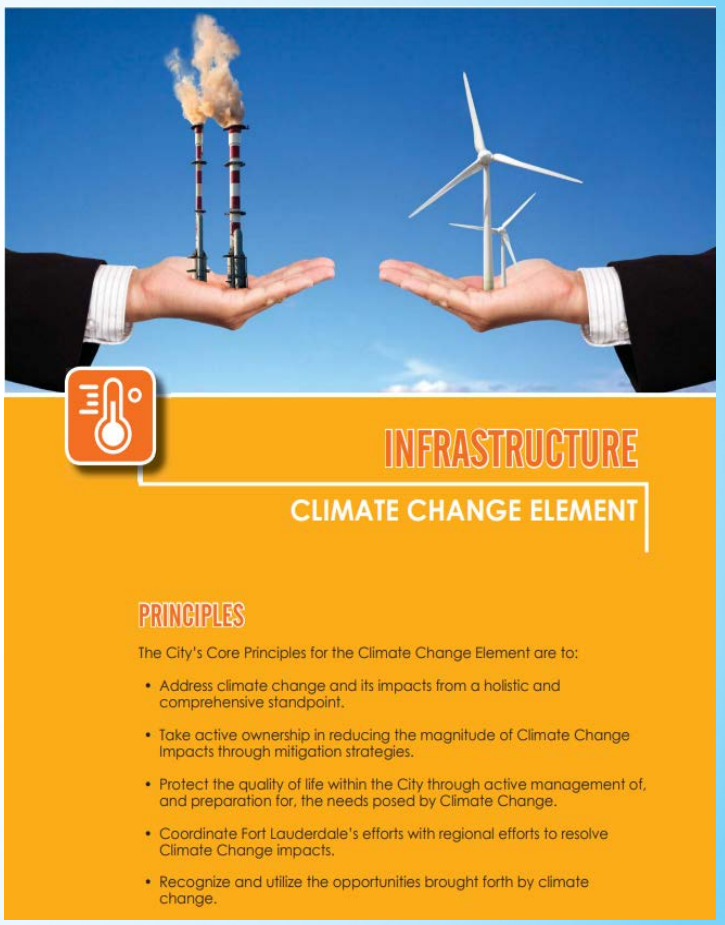
Internal Support Focus Area

- **Goal 8: Build a leading government organization that manages all resources wisely and sustainably.**
  - *Objective: Integrate sustainability and resiliency into daily operations*

Strategic Alignment: *Comprehensive Plan*

- **Evaluation Measures**
  - Reduce GHG emissions from City Operations by 80% by 2050 (EM CC 1.1.1)
  - Source 20% of electricity from renewable energy by 2030 (EM CC 1.1.6)
  - Reduce City vehicle fossil fuel use by 20% below 2015 levels by 2025 (EM CC 1.2.5)

- **Policies**
  - Consider GHG emissions in decision making (Policy CC 1.1.2)
  - Encourage mixed-use and other land-use policies that will reduce vehicle miles (Policy CC 1.2.6)
  - Ensure multimodal options of transportation exist along key corridors (Policy CC 1.2.7)



Next Steps

- Investment in renewables & efficiency
- Prioritizing at new and existing facilities
  - Implementation of energy efficiency
  - Installation of renewable energy

Policy Opportunities

- Set long term carbon goals
  - Carbon Neutral Cities
  - Ready for 100 Pledge
    (8 Florida cities)
  - Broward County pledge for Zero Emission Fleet by 2030

Regulatory Opportunities

- Potential ordinance changes
  - Cool roofs and hardscapes
    - Miami Beach
    - City of Miami
  - Green building requirements
    - Miami Beach
    - City of Miami

Regulatory Opportunities

- Potential ordinance changes
  - Energy benchmarking
    - Orlando Building Energy & Water Efficiency Strategy
    - Miami Dade County Building Efficiency 305 (proposed ordinance)
  - Solar ready
  - EV ready

Conclusions

- Substantial progress in reducing carbon footprint requires:
  - **Adopting scientifically-based long-term GHG reduction goals;**
  - **Developing regulations to support community emission reductions;**
  - **Funding the incremental costs of building greener facilities;**
  - **Continuing to invest in building retrofit and cleaner emission vehicles;**
  - **Shifting to more carbon-neutral design; and**
  - **Increasing organizational dedication to the mission of a carbon-free future.**
- Reducing emissions is essential to lessen climate change impacts.