

# **New Partners for Smart Growth**

## **Climate and Energy Track: Comparing Coastal Responses to Promote Regional Resiliency**

Linda Giannelli Pratt

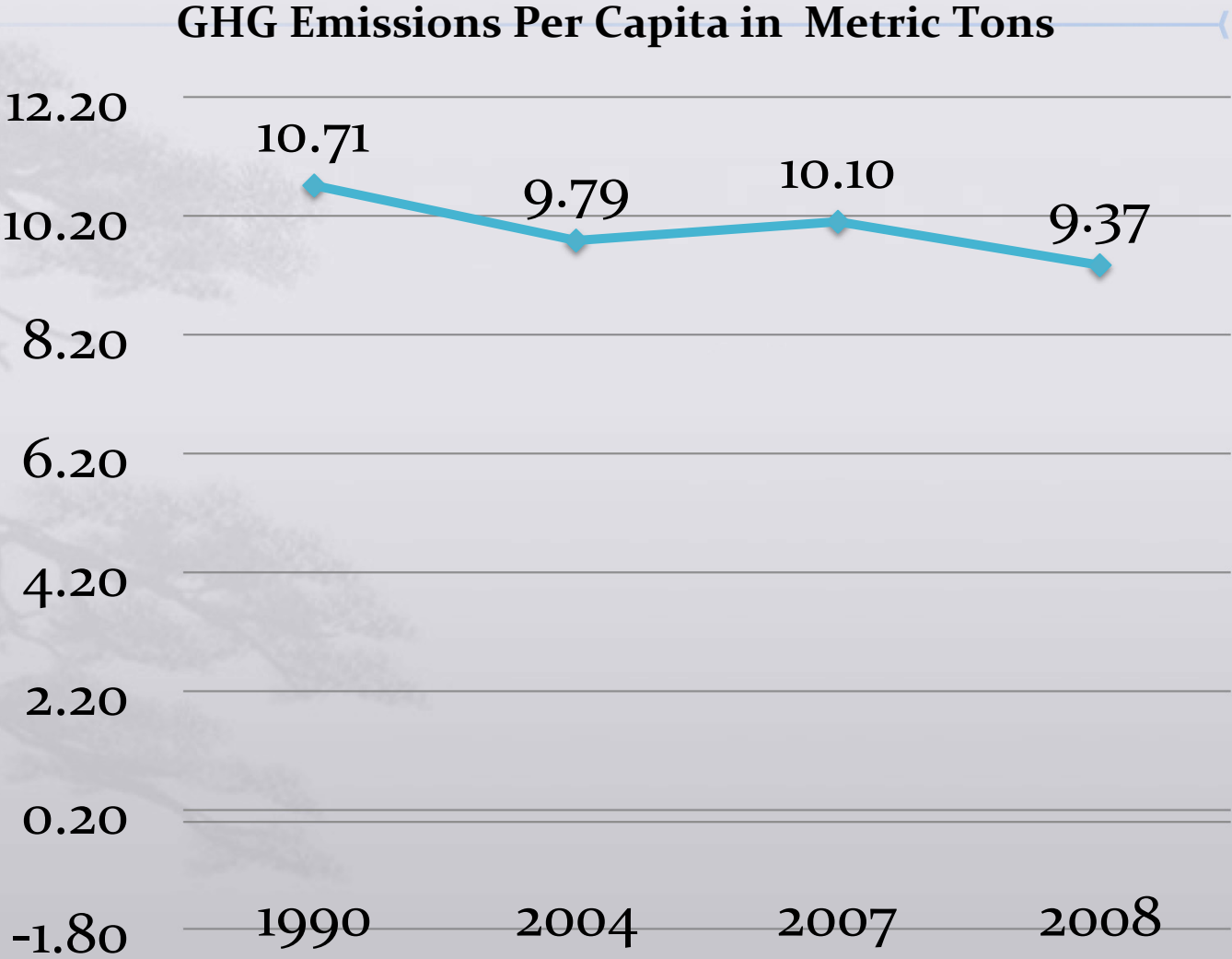
City of San Diego

Environmental Services Department

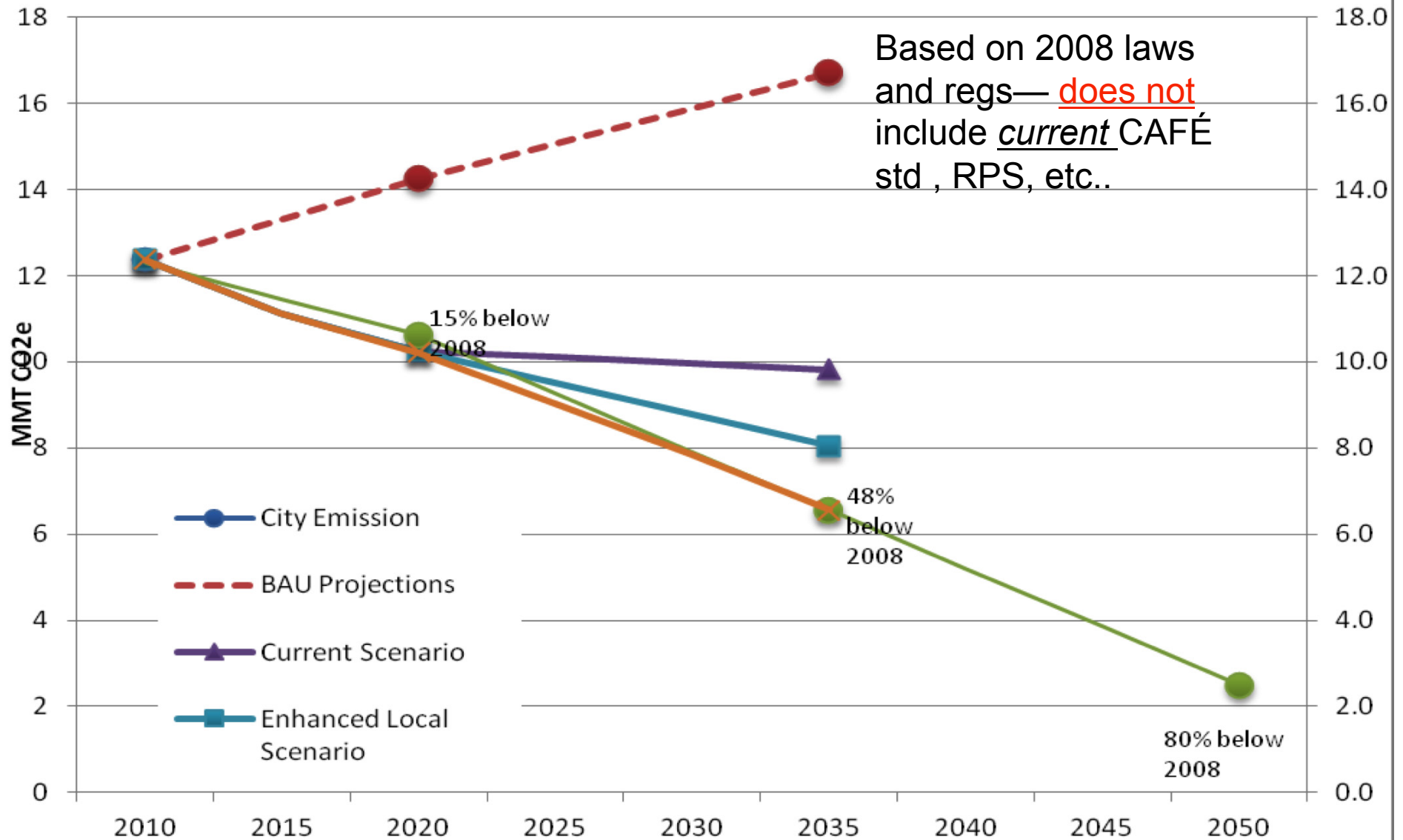
# What does Resilience look like?



# Greenhouse Gas Emissions *per capita* 1990-2008



# City of SD GHG Emissions Trends and Targets



# What Can We Do?

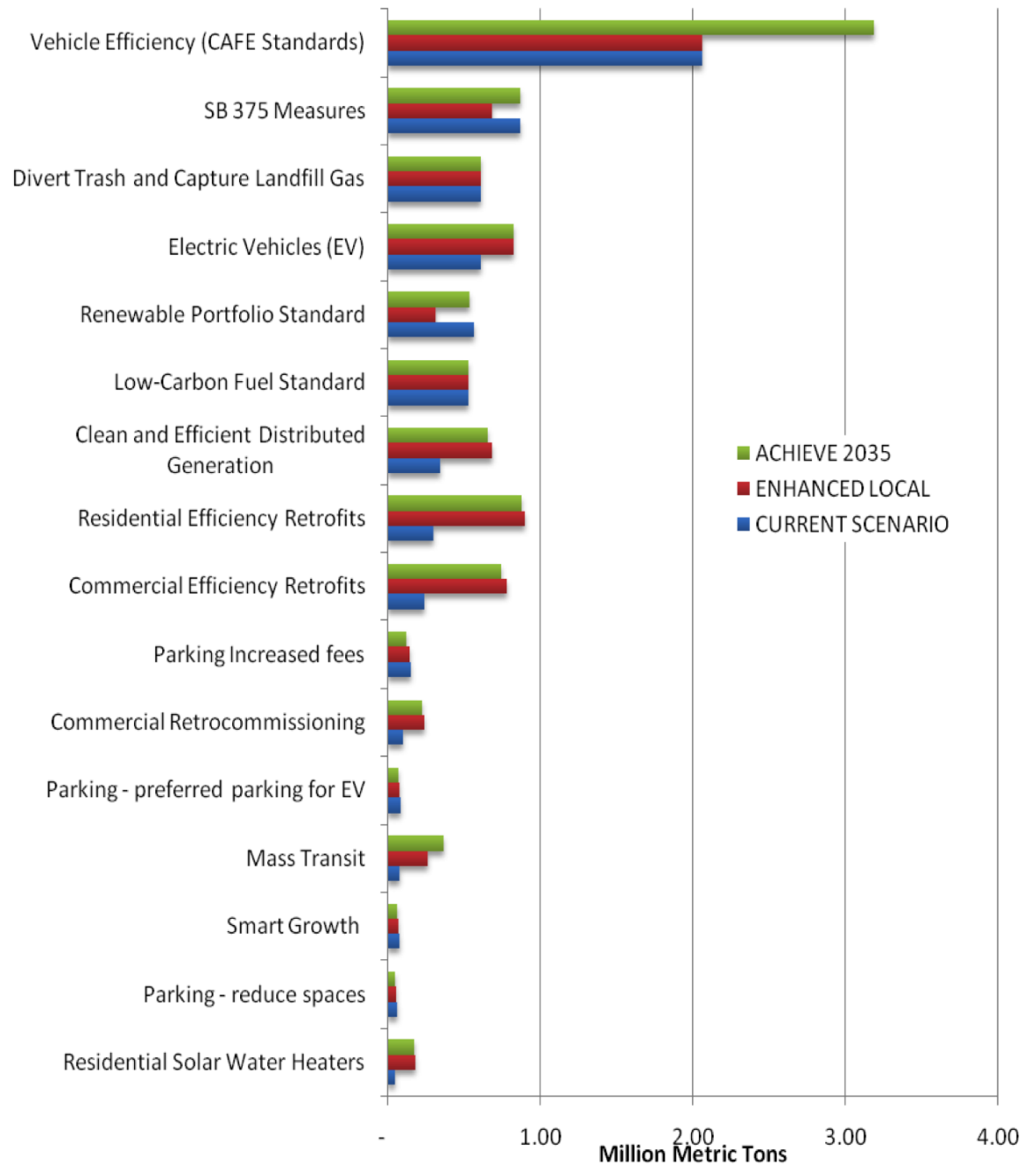
*1. Current Scenario*

*2. Enhanced Local Scenario*

*3. Achieve 2035 Scenario*

*\* See page 7 of summary*

**Selected CMAP Mitigation Measures - Comparison of Scenarios**



# Reframe to Include Adaptation

## Climate Mitigation and ADAPTATION Plan

### Integrating Adaptation Measures into Planning

- ✿ *Integrate climate projections into Multijurisdictional Hazard Assessments and the City's Office of Homeland Security. This will ensure adequate planning and preparation for more frequent and intense extreme events (such as wildfires, heat waves and storms).*
- ✿ *Raise community awareness of the need for adaptation and highlight actions they can take in their home and workplace to support and strengthen the City's climate change response.*
- ✿ *Understand the communication and risk disclosure requirements regarding impact vulnerability and land title for existing and prospective owners.*
- ✿ *Identify strategic planning processes that should be revised to incorporate climate resilience considerations.*

# Protecting Urban Infrastructure and Services

- ✿ *Assess potential for blocked access in low-lying areas due to flash flooding impacting residents, emergency services, local businesses, distribution networks, and through traffic causing mass delays. Consider seasonal drainage issues, additional pumping capacity and protocols in critical areas, highlight alternative routes and review emergency warning systems and traffic management.*
- ✿ *Address potential building and asset damage due to flash flooding in low lying areas surpassing drainage capacity, by reviewing flood preparedness programs, review drainage capacity and climate projections, promote flood preparedness in development approvals, assess stormwater harvesting potential to alleviate drainage issues and water supply pressures.*

# Coastal Management and Protection

- ✿ *Address potential inundation and erosion of soft shore, low lying coastal residential and recreation areas that will damage assets and displace residents; consider potential coastal protection measures and associated impacts.*
- ✿ *Consider potential inundation and erosion of soft shore, low lying coastal business and tourism areas which will cause economic losses by aligning with the recommendations and program; consider potential coastal protection measures and associated impacts; work with local businesses to identify opportunities for retreat.*
- ✿ *Consider potential inundation and erosion of soft shore, low lying coastal estuaries and wetland areas which will endanger local biodiversity and ecosystem services by working with relevant agencies to establish assessment and protection principles and protocols; ensure consideration of ecosystem services in assessing vulnerability and values.*



# Example- Sand Replenishment

---

- \* 2001- 2.1 million cubic yards
- \* 2012- 1.4 million cubic yards, current construction costs are \$22.8 million
- \* Proposed Benefits from 2012 Project-
  - \* \$35 in recreational / tourism
  - \* \$40 million to prevent storm damage

# Storm Drain System Capacity

- ✿ CMAP will include a cost analysis of the expense to the City for one Storm Drain system that is beyond its carrying capacity.
- ✿ Extreme Storms will compound the problem, and so projections are made for 2050.
- ✿ ACTION: Review current flood preparedness programs; review current drainage capacity and constraints; promote flood preparedness measures in development approvals; assess stormwater harvesting potential using localized retention basins augmented by existing drainage network.

# Resilience

---

## Noun

- \* re·sil·ience (r-zlyns) *n.* **1.** The ability to recover quickly from illness, change, or misfortune; buoyancy.

**Recovery depends on the ability to conduct adequate risk evaluations and having climate vulnerabilities integrated into existing planning efforts.**

*For More Information*

Linda Giannelli Pratt  
[Lpratt@sandiego.gov](mailto:Lpratt@sandiego.gov)

Please check the website for  
calendar of events and updated reports  
[www.SDClimateMAP.org](http://www.SDClimateMAP.org)