The San Diego Foundation’s Climate Initiative

Presented by Emily Young, PhD
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The San Diego Foundation’s Climate Initiative

Work with government, business, and the community at large to advance regional efforts to curb greenhouse gas emissions and reduce our vulnerability to some of the most harmful effects of climate change.
Our Partners

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From Science to Solutions

EPIC
ENERGY POLICY INITIATIVES CENTER
UNIVERSITY OF SAN DIEGO SCHOOL OF LAW

Cities for Climate Protection

Institution of Civil Engineers

Institution of Mechanical Engineers
California is on the leading edge of efforts to address climate change

1. Global Warming Solutions Act and related legislation

2. Implications for local governments
With climate change, there are two fundamental issues for cities to address...

1. Greenhouse gas emissions
   mitigation strategies

2. Climate change impacts
   adaptation strategies
Our region’s “Carbon Footprint” and reduction mandates

Figure 13. Theoretical GHG Reduction Targets for San Diego County

Source: www.sandiego.edu/epic/ghginventory
Impacts of Climate Change and Adaptation Strategies

“Nearly half a million people and $100 billion in property…are at risk of major flooding…”  *San Francisco Chronicle*, 3/12/09

“Current building, land use and planning practices assume a continuation of climate as it has been known in the past.”  *National Research Council*, 3/12/09
San Diego: Uniquely at risk

- Enviable mild climate
- 70 miles of coastline
- Exceptional combination of beaches, canyons, mountains, & deserts
- Unique hot-spot for biodiversity, with many already threatened species
- Severe existing wildfire conditions
- International border with Tijuana
- Reliance on imports for up to 95% of our water needs
Focus 2050 Study

**Primary Question:**
What will our region look like in 2050 due to climate change, if current trends continue?

(King County model)

- To understand the unknown costs and risks associated with a changing climate
- To build sense of urgency around agreed upon set of facts

The San Diego Foundation.

Climate Initiative
Regional Climate Change

Average annual temperatures will be between 1.5 & 4.5°F higher by 2050

- Early November will “feel” like September currently does.
- Our region will become even more vulnerable to drought.
Despite plans for water conservation, desalinization, and recycling, demand for fresh water will outstrip supply by 2050. There will be growing potential for conflicts among multiple users.
Managing regional energy demand will be even more challenging by 2050

Peak electricity demand will increase by over 70% with warmer temperatures causing about 7%.

Projected change in summer daytime peak temperatures in San Diego County in the year 2050

If global greenhouse gas emissions are sharply reduced.

If global greenhouse gas emissions continue to increase every year.
Sea Level Rise

Sea level is projected to rise by as much as 18 inches

This, combined with tidal and storm surges, will cause harm or loss of our sandy beach areas, wetlands, coastal commercial, municipal, & residential properties.
Sea Level Rise by 2050 in Imperial Beach
Sea Level Rise by 2050 in Mission Beach
Public Health

Increased heat and air pollution will take a toll on public health, particularly for the elderly, who will comprise almost a $\frac{1}{4}$ of the population by 2050.

The number of days over 84°F in Chula Vista between May & September could triple.
Plant and animal habitats in San Diego will be increasingly threatened due to

- climate change too rapid for some species to adapt
- increased wildfires & more intense droughts
- habitat fragmentation and urban sprawl

The southern Sagebrush Lizard is found only at elevations above 5,000 ft. With already reduced populations, they may disappear from local mountains that “top out” at 6,000 feet if temperatures continue to rise.
What Local Governments Can Do in the Border Region

- **Develop inventories** of local greenhouse gas emissions
- **Assess local vulnerabilities** from climate change
- **Adopt targets** for reducing emissions & prioritize areas for climate adaptation
- **Enact programs and policies** to reduce emissions and vulnerabilities to climate change
- **Assess progress** and refine policies/programs
What The San Diego Foundation Can Do for Local Governments

- Information & Research
- Community Outreach to Build Public Support for Local Climate Action
- Facilitate Communication and Networking among Regional Practitioners in the Field
- Coordinate Disparate Resources
Snapshot of Progress To Date

**ICLEI Partners** (*New ICLEI partners in 2009 are shown in blue)*

- Carlsbad
- Chula Vista
- Encinitas
- Imperial Beach
- La Mesa
- National City
- Poway
- San Diego
- San Diego County
- San Marcos
- Solana Beach
- Vista

**SB375 Sustainable Communities Plan**

- SANDAG

**California Climate Action Registry**

- Carlsbad
- Chula Vista
- Coronado

**US Mayors Climate Protection Agreement**

- Chula Vista
- Del Mar
- El Cajon
- Imperial Beach
- La Mesa
- San Diego
- Solana Beach
- Vista

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Please visit www.sdfoundation.org for the full text of this report