Responding to Climate Change:
What You Can Do and How You Can Get Involved in the Bay Area

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Hope is a verb with its sleeves rolled up.

David Orr (2011)
Scientists increasingly concerned
... while the world seems to go numb

**Global Warming**

When his ship first came to Australia, Cook wrote, the natives continued fishing, without looking up. Unable, it seems, to fear what was too large to be comprehended.

Jane Hirshfield
*After* (2006)
Emissions Peaking After 2020: More than 1 Kyoto per Year

(Meinshausen et al. 2009b)
The challenge of mitigating climate change: lags in the climate system

The societal efforts needed to achieve emissions stabilization, let alone stabilization of concentrations, are enormous…
“Let no man say it cannot be done.”

President F. D. Roosevelt

State of the Union address on January 6, 1942, one month after the attack on Pearl Harbor, launching an all-out wartime mobilization of the American public and economy.
Lag times in societal change

Some examples…
- Design life of a power plant: 30+ years
- Design life of a dam: decades to 100 years
- Dominant economic paradigm and supporting social structures: decades to centuries
- Habits: years to a lifetime
- Values: change over generations
The Two Difficulties

- More “business as usual”
  - Crossing of tipping points
  - Degradation of life support systems
  - Coping with catastrophic impacts

- Transformative change:
  - Radical efforts in *mitigation* – reducing the causes of climate change – and
  - Beginning with *adaptation* now – i.e. preparing for and dealing with the consequences we could not avoid
“The uncertainty of our times is no reason to be certain about hopelessness.”

Vandana Shiva
The Two-Pronged Response

Climate Change & Extreme Events

Vulnerability of Human & Ecological Systems

MITIGATION

ADAPTATION & Disaster Preparedness

Economic Harm or Opportunity for the world, California, the Bay Area
To Bring About Transformative Change – 4 Categories of Action

- **Civil**
  - (Re)Building connections, community, (re)establishing civility, raising caring, stable, resilient children

- **Civic**
  - Voting, petitioning, political activism, pressure on people in positions of policy-making power

- **Economic**
  - Using the power of corporate leadership, of shareholders, as innovators in production processes

- **Personal**
  - Car, energy, food and stuff choices
What We Can Do about Climate Change

- Reduce emissions
  - Bus, bike, walk, skate
  - Electricity use in dorms, in class, at home
    - Lights out
    - Heat/AC down
    - Turn off unused appliances
    - No “standby’s”
  - Less “stuff”
  - Less waste
  - … food choices
Food choices = Energy choices

- Energy used in the food system as a proportion of total energy used in the US (2002)

Source: Graph by Michael Bomford, based on data in Canning et al. (2010)
Action Needed at All Levels: Local to Global
California is a Climate Policy Leader

Selected State Laws on Climate Change

- **2001-02:**
  - Senate Bill 812, 527 - Climate Action Registry
  - Assembly Bill 1493 - Vehicle emissions, GHGs (Pavley bill)

- **2006:**
  - Assembly Bill 32 - California Global Warming Solutions Act of 2006

- **2007:**
  - Assembly Bill 118 - Alternative Fuels and Vehicles Technologies
  - Assembly Bill 532 - State Property: Solar Energy
  - Assembly Bill 1103 - Energy: Renewable energy resources, hydrogen highway
  - Assembly Bill 1470 - Solar Water Heating and Efficiency Act

- **2008:**
  - Senate Bill 375 - Sustainable Communities and Climate Protection Act

- **2011-onward:**
  - Governor’s events on extreme events, support for local adaptation

For more info: [http://www.climatechange.ca.gov/policies/ca_activities.html](http://www.climatechange.ca.gov/policies/ca_activities.html)
California Adaptation Strategy

Governor Schwarzenegger Issues Executive Order Directing State Agencies to Plan for Sea Level Rise and Climate Impacts (November 14, 2008)

Given the serious threat of sea level rise to California’s water supply and coastal resources and the impact it would have on our state’s economy, population and natural resources, Governor Arnold Schwarzenegger issued an Executive Order (EO) S-13-08 to enhance the state’s management of climate impacts from sea level rise, increased temperatures, shifting precipitation and extreme weather events. For full text of the Executive Order: http://gov.ca.gov/news-released-1000

With the passage and implementation of the Global Warming Solutions Act (AB 32), California is leading the way in the mitigation of climate change through reductions in greenhouse gas (GHG) emissions. In concert with these efforts, the California Environmental Protection Agency has undertaken the complicated task of developing California’s first comprehensive Climate Adaptation Strategy (CAS). A new priority in the climate change arena, adaptation promises to offer solutions to climate impacts as a result of past and current emissions. Consequently, our efforts to adapt to expected climate change impacts through careful planning and preparation must occur in parallel to ongoing mitigation efforts.

Introduction of the CAS Vision and Principles [PDF file]

How Will Climate Change Affect California?
California is experiencing significant climate change impacts, including shifting precipitation patterns, increasing temperatures, sea level rise, increasing severity and duration of wildfires, earlier melting of snow pack and effects on habitats and biodiversity. These and other effects are predicted to intensify in the coming decades.

San Francisco Bay Scenarios for Sea Level Rise
SFO

Preparing for Impacts in all Sectors

- Public health
- Water
- Ocean resources & coastal areas
- Energy, transportation & other critical infrastructure
- Biodiversity & habitats
- Agriculture
- Forests
Developing Adaptation Strategies

- **No-regrets**
  - Improving scientific understanding, forecasting
  - Improving emergency preparedness, response capacity
  - Decreasing other stresses, pollution, pressures

- **Low-regrets options**
  - Restoring habitat with climate change in mind
  - Increasing buffers, open space, connection between habitats, improving building codes

- **Better than no-action options**
  - Building climate change expectation into long-term decisions

- Prepare plans for large-scale impacts and **transformative adaptation** (e.g., coastal retreat)
What’s Happening in the Bay Area

- 101 Cities
  - 54 ICLEI members
- 9 counties
  - 6 ICLEI members
- 1 region
  - Through Joint Policy Committee trying to find a common climate/energy/economic development strategy
Key Bay Area Climate Initiatives

*Sector 1:* Transportation and Land Use

*Sector 2:* Building Energy

*Sector 3:* Resiliency/Adaptation

*Sector 4:* Waste, Consumption, Materials Mgt.

*Sector 5:* Industry

*Bay Area Structure/General*
Adaptation/Resilience Activities (2/22/11)

Overall/ Cross-Cutting
Ecosystems
Sea Level Rise
Oceans/Bay

Water
Energy Supply & Demand
Infrastructure
Public Health

Economy
Other

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JPC Resilience Strategy

• **Goal of Phase I:**
  The Joint Policy Committee and other Bay Area leaders will agree to commit resources and work collaboratively to create and implement a Bay Area climate/energy resilience strategy.

  Resilience strategy as one critical part of building a stronger and healthier Bay Area.
JPC Regional Economic Development and Resilience Strategy (cont.)

1. Near-Term Green Jobs+ Project
   ◦ Residential and commercial building retrofits
   ◦ Local Decentralized Renewable Power
   ◦ Bay Area Electric Vehicle/Infrastructure Strategy

2. Bay Area Economic Strategy Framework
   ◦ Map businesses and industry
   ◦ Analyze regional economic drivers
   ◦ ID opportunities for competitiveness

3. Climate and Energy Resilience Strategy
   ◦ Summarize climate change threats
   ◦ Map current climate efforts and opportunities for collaboration
   ◦ Making the case for Bay Area-wide climate/energy planning
   ◦ Leader briefings and public event
   ◦ Commitment to action
JPC Resilience Strategy (cont.)

- **Seeking Leaders:**
  - Joint Policy Committee & agency Executive Directors
  - Foundation leaders
  - University leaders
  - High profile businesses
  - Business organization leaders
  - Community-based organization leaders
  - Scientific community
  - Environmental and resource conservation organization leaders
  - County public health directors
  - City Managers
  - Insurance industry
JPC Resilience Strategy (cont.)

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  - County public health directors
  - City Managers
  - Insurance industry
  - YOU
I do not believe we can look for leadership beyond ourselves.

Terry Tempest Williams (2010)
Thank you!

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