Climate Change
The Health Connection

Linda Rudolph, Sandi Galvez, Michael Kent
“Climate change threatens our fragile existence on this planet.”

Jim Kim, World Bank

“Climate change is affecting agriculture, water resources, human health, and ecosystems on land and in the oceans. It poses sweeping risks for economic stability and the security of nations. We can avert these risks if we take bold, decisive action now.”

Ban Ki-Moon

“Climate change is the biggest global health threat of the 21st century.”

LRudolph May 2014
Climate Change is a Health Emergency

• Climate change has direct impacts on health & well-being
• Climate change is a threat multiplier
  – Climate change exacerbates existing health challenges
• Climate change disproportionately impacts vulnerable populations and disadvantaged communities
• Climate change effects the systems on which human life depends – air, water, food, shelter, security.
Global Billion-Dollar Weather-Related Disasters since 1990

Temperature Change (°F)

Sea-Level Rise for the Coasts of California, Oregon, and Washington:
Past, Present, and Future

6” by 2030, 12” by 2050, 36” by 2100
Higher Temperatures Worsen Air Pollution

Ozone versus Temperature

Riverside, 2003-2005

Fresno, 2003-2005

L Rudolph November 2013

Photo: Tudor Van Hampton / ENR
Climate Change & Health

• Systems that contribute most to climate change and causes of poor population health are the same
  – food/agriculture, transportation, energy, economic, etc.

• Social determinants of health (living conditions) and health status are key to climate change vulnerability & resilience

• Many climate actions have huge health co-benefits
  – Active transportation, clean energy production, urban greening, reduced meat consumption
The Climate Gap
Health Sector has a Key Role

- Public places high value on health
- Health professionals are credible and trusted
- Health professionals touch everyone
- Our language – prevention, protection, health - resonates
- Health frame engenders interest in climate action
- Climate actions & health actions aligned
- Co-benefits provide hope and immediacy and better health
- Failure to act now will mean we have far less to offer later
Bay Area Health Departments & Climate Change

• Regional Efforts:
  – Engaged in Plan Bay Area development
  – Building Health Department capacity

• Locally:
  – Involved in climate action planning
  – Develop key partnerships
  – Share health data
  – Engage local communities around climate change health co-benefits
What Does the Health Department Do in Your Community?

• Monitor the health of the population
• Protect people from health threats
• Educate about health issues
• Assure the provision of health services
• Develop, apply and enforce policies to improve health and ensure safety
• Mobilize partnerships and action for community health
MISSION STATEMENT

To transform public health practice for the purpose of eliminating health inequities using a broad spectrum of approaches that create healthy communities.
Impacts of Disparity on Life Expectancy

Life Expectancy in Contra Costa by Income, 2000

- Less than 10% of census tract < 2xFPL
- 10-19.9% of census tract < 2xFPL
- 20-29.9% of census tract < 2xFPL
- 30% or more of census tract < 2xFPL

- Life Expectancy: 81.4
- Life Expectancy: 79.8
- Life Expectancy: 77.7
- Life Expectancy: 74.9
San Mateo Health System:

- Dedicated staff to work on local implementation of Plan Bay Area
- Presentations to elected officials
- Integration of health equity and climate change into Complete Streets, affordable housing, General Plans, etc.
- Integrating climate change into health programs
San Francisco Public Health Department

• Awarded federal funding to participate in the *Climate-Ready States and Cities Initiative*:  
  – Convened and coordinated Disaster Response Plan with multiple departments  
  – Protect people from extreme heat events and associated air quality impacts  
  – Creating climate, health, and resilience indicators

• Incorporating public health and climate change considerations into work of other departments
SFDPH heat vulnerability index:
Santa Clara County Public Health

• SCC Climate Action Team and Transportation Committee (completed 2009)
• Presentation at Planning for Climate Change Workshop (2008)
• Included in PHD 2012-2015 Strategic Plan
  - Goal 3: “Establish a Departmental focus on environmental health issues related to climate change and sustainability.”
Contra Costa County Health Department

• Prepared a co-health benefits evaluation for the County’s Climate Action Plan with recommendations to start addressing adaptation
  – Shows immediate benefits of mitigation measures
  – Demonstrates ability of non-health department-led efforts to reduce health disparities (HiAP approach)
  – Identified mitigation measures that are also adaptation measures
  – Provides basis for political support
  – Public receptive to health concerns
## CAP Co-health Benefits (Continued)

<table>
<thead>
<tr>
<th>Health Indicator</th>
<th>Healthy Food</th>
<th>Physical Activity, Walkability, Bikeability</th>
<th>Outdoor Air Quality</th>
<th>Indoor Air Quality</th>
<th>Improved Access</th>
<th>Green Space</th>
<th>Job Creation</th>
<th>Climate Risk Reduction</th>
<th>Health Equity</th>
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<td>EE 5.1 LUT 1.1 LUT 1.2 LUT 1.3 LUT 1.4 LUT 1.5 LUT 1.6 LUT 1.7 LUT 1.8 LUT 1.10 LUT 2.1 LUT 2.2 LUT 2.3 LUT 2.4 LUT 5.5 LUT 6.1 LUT 6.2</td>
<td>ALL</td>
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Climate Change Impacts: Geographically Uneven
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Vulnerability

Percent of Individuals Living Below 2 Times the Federal Poverty Level by Census Tract, 2006-2010 (5-Year Estimates)
Contra Costa County, California

% Below 2x Federal Poverty Level
1 (0.0% - 8.2%)
2 (8.2% - 12.9%)
3 (12.9% - 21.6%)
4 (21.6% - 33.3%)
5 (33.3% - 64.5%)

Note: Each category represents one-fifth of the census tracts.

Source: U.S. Census Bureau, 2006-10 American Community Survey
Resources:

- Bay Area Regional Health Inequities Initiative (BARHII):  http://www.barhii.org

- California EPA Climate Action Team Public Health Working Group:  http://www.arb.ca.gov/cc/ab32publichealth/ab32publichealth.htm

- Public Health Institute Center for Climate Change and Health:  http://www.phi.org/focus-areas/?program=center-for-public-health-and-climate-change

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