

TESTIMONY OF

Jonathan Fielding, MD, MPH, MBA

Los Angeles County Health Department

Update on the Latest Climate Change Science and Local Adaptation Measures

Senate Environment and Public Works Committee

August 1, 2012

Chairwoman Boxer, Ranking Member Inhofe and members of the Committee, thank you for the opportunity to speak to you today. I am Dr. Jonathan Fielding, Director and Health Officer of the Los Angeles County Health Department. I am also here today representing the National Association of County and City Health Officials, a membership organization comprised of the nation's local health departments. These city, county, metropolitan, district, and tribal departments work every day to ensure the safety of the water we drink, the food we eat, and the air we breathe, and to protect every resident from all health threats.

Senator Boxer, NACCHO and local health departments across the country recognize and appreciate your leadership on the issue of climate change and its impacts on the public's health.

Why is climate change a health issue?

Climate change has serious and far-reaching health implications for present and future generations. For example, climate change is already changing the distribution of some infectious disease vectors and according to the Intergovernmental Panel on Climate Change, threatens to "increase the number of people suffering from death, disease and injury from heatwaves, floods, storms, fires and droughts." Climate change may also cause social disruption, economic decline, and displacement of populations, all of which may impact health substantially. Climate change will disproportionately burden some—the very young and the elderly, the physically and mentally disabled, the poor and economically disadvantaged, and other marginalized groups.

The past decade has been the warmest on record, marked by unprecedented flash storms and flooding and the worst drought in Texas' history.¹ The year 2011 saw the lower 48 states set temperature records for the warmest spring, largest seasonal departure from average, warmest year-to-date, and warmest 12-month period, all new marks since records began in 1895.² Continuing this trend, the first five months of 2012 were the warmest on record for many locations across the United States and we are currently witnessing the effects of severe drought, wildfires, and other extreme weather events.³ In



addition to record temperatures, sea levels and temperatures are rising, agricultural zones are shifting, vector-borne diseases are migrating to previously uninhabitable areas, precipitation patterns are becoming more extreme and unpredictable, and extreme weather events are becoming increasingly devastating. All of these issues have ramifications for the health of the communities they affect, including death, injury or trauma, transmission of vector-borne diseases, increased respiratory diseases, contamination of water, and exacerbation of mental health issues.

Changes in the frequency, intensity, or distribution of extreme weather events have posed and will continue to pose a considerable threat to the health of communities across the country. It has been estimated that the health costs of just six climate change-related events from 2002 to 2009 totaled more than \$14 billion.⁴ As significant as that figure is, these costs do not even fully capture the burden on communities and local health departments as many of the health effects related to extreme weather are often experienced well after the disaster has passed. For example, survivors of Hurricane Katrina continue to experience health issues years after the precipitating event.

The effects of a changing climate are already being felt in many places. Attempting to mitigate emissions to avoid long-term consequences is no longer sufficient to protect human health. The effects of climate change will oftentimes strike hardest where people can least afford to adapt and protect themselves. The Federal government, states, and local health departments all need to adapt to new and growing risks to critical infrastructure, precious resources, the natural environment, and human health.

What is the extent to which local health departments are addressing climate change?

Local health departments are uniquely positioned to prepare for and respond to the health effects of climate change. Communities look to public health for leadership on these issues. Local health departments have the responsibility to anticipate the health burden of extreme weather and climate change, communicate these realities to policymakers and the public, contribute to climate adaptation plans, and create and sustain an all-hazards preparedness capacity.

Some local health departments have begun to increase their capacity to assess and address the health effects of climate change. They are conducting internal needs assessments and vulnerability assessments, training staff, involving diverse strategic partners and community members to incorporate health considerations into comprehensive climate adaptation plans. Additionally, a growing number of local health departments have integrated climate change considerations into emergency preparedness programs in order to increase their effectiveness and maintain capacity. However, since 2008, 50,000 jobs have been cut at health departments and approximately half of local health departments experienced a reduction in workforce capacity during the second half of 2011 alone. Therefore, many local health departments have had to severely cut back on emergency preparedness planning activities due to personnel cuts.

Over the past year, the nation has seen devastating effects from winter storms, tornadoes, floods, and most recently Colorado forest fires. The response to and recovery from these types of tragic events is predicated on having a strong and robust preparedness infrastructure at the local level. Current capacity must be bolstered to adequately protect the public from the impacts of all natural and manmade

disasters, including changing climate, and prevent further health disparities related to their differential impacts.

Budget cuts have compromised the ability of public health departments to build and sustain key partnerships essential to an adequate timely response. In response to these cuts, consolidated planning for all emergencies, including those related to climate change, can help to overcome some of these challenges through the development of strengthened partnerships and more efficient use of limited resources.

What are some examples of what health departments are doing to address climate change?

The Los Angeles County (CA) Department of Public Health is concentrating its climate change response on adaptation strategies. Internally, the Department conducts needs assessments to enhance existing programs' capacities to respond to climate changes, and identifies environmental indicators that allow for increased monitoring and surveillance of changes in the climate. Another component of our efforts is emergency preparedness planning, where we have integrated climate change considerations in order to enhance emergency response. Within our countywide risk, hazard and vulnerability assessment, climate change - particularly adverse heat events - has been highlighted as a focal risk factor. The department conducts vulnerability assessments to geographically identify those most vulnerable to increased heat events (e.g. elderly, disabled, etc) so that we may provide them with information about extreme weather hazards and link them to emergency support resources. Externally, the Department influences local planning and land use decisions in an effort to incorporate climate change into comprehensive plans. We also inform the public of heat events and their impacts through health alerts and advisories.

Beyond the Department of Public Health, the County of Los Angeles has a green purchasing policy that requires County Departments to purchase environmentally preferable products. The County also launched a Reduce, Reuse, Recycle campaign to reduce energy usage, as well as a Ride Share Program to encourage carpooling among its 100,000+ employees. The City of Los Angeles is focusing on mitigation strategies by implementing a Green LA campaign within the city. The action plan calls for a reduction in the city's greenhouse gas emissions to 35% below its 1990 levels by the year 2030.

Other local health departments across the country are also responding to climate change.

- Multnomah County (Portland, OR) has completed a vulnerability assessment related to respiratory disease, vector-borne disease and heat-related illness and is developing an adaptation plan to address these issues. They are working with the Oregon Health Authority to develop a heat vulnerability index and will be testing a heat warning and event risk communication plan targeted to vulnerable populations located in "hot spots" (areas with high urban heat island effect) in an effort to help communities adapt to hotter summers.
- Tulsa (OK) County/City Health Department is conducting focus groups after its hottest summer on record in 2011 to help identify vulnerable populations related to respiratory disease, vector-borne disease and heat-related illness and modify its Metropolitan Area Health Improvement Plan
- Clark County (WA) Public Health is conducting a risk assessment to allow it to focus resources in areas of greatest risk. Through partnership with researchers at the University of Washington, it

was concluded that in Clark County there is a nearly 20% greater risk of death from respiratory causes on extreme heat days.

- Clark County (WA) Public Health and Thurston County (WA) Public Health and Social Services provided contributions to their local comprehensive city plans that included climate change and health considerations.
- Mercer County (IL) Health Department took the lead on building a coalition with a diverse group of local stakeholders and developing a local climate adaptation plan.
- Orange County (FL) Health Department has trained staff on the health effects of climate change specific to their jurisdiction, including the potential emergence of diseases they do not currently see.
- Mercer County (IL) Health Department and Orange County (Orlando, FL) Health Department have produced educational materials to educate the public on the health risks of climate change and extreme weather. Information has been displayed at County fairs and the Orange County Convention Centers and aired on local television stations.
- Austin/Travis County (TX) Health and Human Services Department conducted a vulnerability mapping exercise that identified several neighborhoods in the City of Austin that were particularly vulnerable to extreme heat or flooding events. Representatives from these neighborhoods participated in a stakeholder committee process.
- Columbus (OH) Public Health, together with Franklin County (OH) Public Health, has developed an extreme heat plan to guide their responses when an extreme heat event occurs.
- New York City Department of Health and Mental Hygiene has implemented a series of programs to address extreme heat events through the development of adaptive capacity in vulnerable areas.

The time for inaction has passed. The intensity of the threat challenges all of our basic survival mechanisms -- food, water, shelter, and health. Local public health departments must play a vital role in addressing climate change. These departments already utilize a multi-level prevention approach that can be applied in responding to climate change.

The climate change bill championed by Chairwoman Boxer addresses the public health role in climate change and the need for an action plan at all levels of government to address the health impacts of climate change. Congress must take action without delay to address this critical issue. The Centers for Disease Control and Prevention, representing the only federal investment in preparing our nation for the health effects of climate change, has provided a small amount of funding over the past few years to quantify the expected health impacts of climate change and support public health department efforts in this area. To assure an adequate response, this investment should be continued and strengthened, not reduced as proposed.

Chairwoman Boxer and Ranking Member Inhofe, thank you for your attention to this important issue. I look forward to continuing to work with you to address this issue with far reaching implications for the future health and quality of life in our nation.

1. Lubber, M. (2012, June 05). Extreme weather is the new reality. Retrieved from http://www.huffingtonpost.com/mindy-s-lubber/climate-changebusiness_b_1567988.html
2. Freedman, A. (2012, June 07). Four major heat records fall in stunning NOAA report. Retrieved from <http://www.climatecentral.org/news/warmest-spring-year-and-12-month-period-in-us/>
3. National Oceanic and Atmospheric Administration National Climatic Data Center. (2012, June 06). May 2012 national overview supplemental material. Retrieved from <http://www.ncdc.noaa.gov/sotc/national/2012/5/supplemental/page-3/>
4. Knowlton, K., Rotkin-Ellman, M., Geballe, L., Max, W., & Solomon, G. (2011). Six climate change-related events in the United States accounted for about \$14 billion in lost lives and health costs. *Health Affairs*, 30(11), 2,167–2,176. doi: 10.1377