Understanding the local health impacts of climate change in Multnomah County

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Our climate work story

• Led by Environmental Health Services
  - Policy Analyst at .5 FTE
  - Analytical support from Health Assessment & Evaluation

• Collaborations with County Sustainability Office, Emergency Management and community-based organizations

• Grantee of Oregon Public Health Division's Climate and Health Program, funded through Centers for Disease Control and Prevention's Climate Ready States and Cities Initiative (CRSCI)
Our climate work story

Education and outreach:
- Informational meetings with CAP Steering Committee
- Invite CDC for presentation to colleagues
- Co-host a Climate Justice summit

Policy advocacy:
- Get a seat at the table
- Get language around health equity, PH impacts in our local Climate Action Plan
Our climate work story

Some results:

- A Climate Action Plan, passed into Resolution in October 2009
- Political support
- An adaptation mandate from the County Commissioners
- Stakeholder buy-in to the planning process
Eight Goal Action Areas

1. Buildings and Energy
2. Urban Form and Mobility
3. Consumption and Solid Waste
4. Urban Forestry and Natural Systems
5. Food and Agriculture
6. Community Engagement
7. Climate Change Preparation
8. Local Government Operations
Health highlights – Emphasizing Co-Benefits

Increase Portland’s tree canopy by 1/3
Co-benefit data collection

- % of food service ingredients at hospitals, schools that are locally sourced
- # of Safe Routes to Schools programs implemented
- # of businesses that adopt bike parking and bike-to-work policies
- # of mosquito species monitored
- # of Food and Vegetable vouchers used at Farmer's Markets by WIC clients*
Assess climate-related vulnerabilities

Develop an adaptation plan

Integrate adaptive interventions in Portland Comp Plan and CAP Revisions 2013

Monitor and evaluate
Assessment project outcomes

• Determine the local impacts to the public’s health, especially for vulnerable populations

• Determine current and needed interventions to prevent further exacerbation of these impacts

• Empower impacted persons and agencies with a findings to continue current interventions and to develop a pathway to implement new interventions
Step 1: Forecasted Impacts and Vulnerability Assessment: (January 31, 2012)

Step 2: Health Risk Assessment: (In Process)

Step 3: Intervention Assessment: (In Process)

Step 4: Health Adaptation Planning and Implementation: (September 2012)

Step 5: Evaluation: (December 2012)
BRACE...the nutshell version

- Get your local climate projections, slim them down
  (+/- 5-8 degrees increase in annual summer temps = hotter summer days)
- Brainstorm health outcomes
- Collect data on health indicators
- Project climate-related morbidity and mortality
- List health interventions
- Assess capacity to deliver intervention
- Brainstorm new ideas, needed resources to help adapt to changes / identify current initiatives
- Develop a plan and monitor
Climate projections

- Overall warming trend, with an increase of 5-10°F in summer;
- Wetter winters and drier summers, more rain in a shorter period of time;
- Snowpack loss in the Cascades of about 80% compared to current conditions and;
- Decreased urban air quality (high concentrations of ground-level ozone)
## Climate and health impacts – Step One

<table>
<thead>
<tr>
<th>Climate variable</th>
<th>Seasonal pattern of projected change, expected trend</th>
<th>Confidence</th>
<th>Health impact</th>
<th>Vulnerable population</th>
<th>Vulnerable region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Annual Temps</td>
<td>Warming in summer months, increasing</td>
<td>Moderate to High</td>
<td>Heat-Related illness</td>
<td>Older persons, persons with existing cardio conditions, persons who are obese, outdoor workers, homeless persons, etc.</td>
<td>Areas with high impervious surface and heat island effect, lower tree canopy coverage, near highways, industrial areas such as near I-5/I-205,</td>
</tr>
</tbody>
</table>
Data measures – Step Two

- Climate variables (e.g. temperature)
- Potential health impacts (asthma, heat-related illness)
- Potential data indicators (e.g., emergency room visits related to heat and respiratory illness)
- Social groups at high risk of these health outcomes (e.g., children, elders, people of color)
- Environmental features that contribute to the health outcomes identified above (e.g., urban heat island effect and air pollution)
Sample data maps
What’s next?

• Gather, analyze data for current state of heat-related illness, respiratory illness/disease, and vector-borne disease
• Project impacts out 30 years
• Brainstorm policy, programmatic and capacity building interventions (home-visit asthma care, asthma syndromic surveillance, heat response system?)
• Focus groups with disproportionately impacted community members, vul pops
Thank you to Oregon Health Authority and the CDC!

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