Climate Change and the Public Health Challenge in Idaho

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Likely Environmental Impacts from Climate Change in Idaho

- Increase in wildfires
- Increase in ground-level ozone
- Increase in precipitation
- Heat events
Increase in Wildfires

- Milder winters will mean that bark beetle infestation will spread to other areas of state
- Bark beetles not native to colder regions like Idaho mountains will spread into state
- Large stands of dead trees
- More wildfires are likely
Wildfires and air quality

Increased air pollution

Increase of 50 µg/m³ in PM10 associated* with
- 33% increase in acute stroke health care encounters
- 13% increase in acute lower respiratory health care encounters
- 10% increase in acute upper respiratory health care encounters
- 27% increase in chronic cardiac care encounters

*within a 24-hr period. Study did not include Medicare data
## Heat Events

<table>
<thead>
<tr>
<th>Boise Temperature</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Annual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg. Temperature</td>
<td>29.0</td>
<td>35.9</td>
<td>42.4</td>
<td>49.1</td>
<td>57.5</td>
<td>66.5</td>
<td>74.0</td>
<td>72.5</td>
<td>62.6</td>
<td>51.8</td>
<td>39.9</td>
<td>30.1</td>
<td>50.9</td>
</tr>
<tr>
<td>Avg. Max Temperature</td>
<td>36.4</td>
<td>44.2</td>
<td>52.9</td>
<td>61.4</td>
<td>71.0</td>
<td>80.9</td>
<td>90.2</td>
<td>88.1</td>
<td>77.0</td>
<td>64.6</td>
<td>48.7</td>
<td>37.7</td>
<td>62.8</td>
</tr>
<tr>
<td>Avg. Min Temperature</td>
<td>21.6</td>
<td>27.5</td>
<td>31.9</td>
<td>36.7</td>
<td>43.9</td>
<td>52.1</td>
<td>57.7</td>
<td>56.8</td>
<td>48.2</td>
<td>39.0</td>
<td>31.1</td>
<td>22.5</td>
<td>39.1</td>
</tr>
<tr>
<td>Days Max Temp of 90 F or Higher</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>&lt; 0.5</td>
<td>1.0</td>
<td>5.0</td>
<td>19</td>
<td>16</td>
<td>3.0</td>
<td>&lt; 0.5</td>
<td>0.0</td>
<td>0.0</td>
<td>44</td>
</tr>
<tr>
<td>Days Min Temp Below Freezing</td>
<td>26.0</td>
<td>21.0</td>
<td>17.0</td>
<td>8.0</td>
<td>2.0</td>
<td>&lt; 0.5</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>6.0</td>
<td>18.0</td>
<td>25.0</td>
<td>123</td>
</tr>
</tbody>
</table>
Increase in Ground-Level Ozone

- Health problems associated with ground-level ozone
  - chest pain
  - coughing
  - throat irritation
  - congestion
  - reduced lung function
  - worsens bronchitis, emphysema and asthma
  - repeated exposure may permanently scar lung tissue
Increase in Precipitation

It is modeled that more precipitation will fall as rain rather than snow in lower elevations.

Wetter times may increase

- Flood events
- Landslides
- Mosquitos
Increase in Precipitation

Flood events
Increase in Precipitation

Landslides
Increase in Precipitation

Mosquitos

In 2006 Idaho led the nation in cases of West Nile Virus (N=996).
Challenges

- Funding
- Denial
- Connecting the “dots”; the science
- Lack of leadership
- State laws limiting local authority over water and development
- Short-term cost/benefit analysis vs. long term analysis
SFY 2013: Public Health is 3.8% of DHW Request

Total Funds: $2.4 B
2013 Public Health Request by Fund Source

- Federal Funds: $58.9 M (63.7%)
- Receipts: $14.8 M (16.0%)
- Dedicated Funds: $13.1 M (14.2%)
- General Funds: $5.7 M (6.1%)

Total Funds: $92.4 M
Initiatives – University of Idaho

Interdisciplinary Climate Change Spring 2012 Seminar Series - UI - TLC Bldg, Rm 31

Monday, January 30, 2012 - Monday, April 30, 2012

Interdisciplinary Climate Change Spring 2012 Seminar Series
The Colleges of Natural Sources, Science, and the Regional Approaches to Climate Change in Pacific Northwest Agriculture (REACCH PNA) are sponsoring the Spring 2012 Interdisciplinary Climate Change Seminar Series. Seminars are free and open to the University of Idaho community and the public. They will be held Mondays from Jan. 30 to April 30 at 3:30-4:20 p.m. in the University of Idaho Teaching and Learning Center (TLC building), Room 31.

Read More
Initiatives - Boise

- A number of other Boise building are heated by geothermal water.

- Methane that is produced as a by-product of the wastewater treatment process is used to operate boilers.

- About 50 of the City's fleet and service vehicles are gas-electric hybrids or gas-E85. About 33% of the city's diesel fleet uses a B20 biodiesel mix.

- Green Building Initiative
Public Health Prioritization

Cancer
Heart Disease
Lower Respiratory Disease
Unintentional Injury
Stroke
Diabetes
Alzheimer’s
Suicide
Health Belief Model

Individual Perceptions
- Perceived susceptibility to disease
- Perceived seriousness of disease

Modifying Factors
- Demographic variables (age, race, SES)
- Psychological variables
- Structural variables (knowledge of disease, prior contact with disease)

Likelihood of Action
- Perception of behavior
- Perceived benefits of preventive action
- Perceived barriers to preventive action
- Likelihood of taking recommended prevention health action

Perception of the disease
- Perceived threat

Cues to Action
- Reminder from MD, friend
- Advice from others
Opportunities

Federal support
- Funding for reducing energy consumption, renewable energy projects, sustainable communities grants
- Future federal policies

Power in partnering
- Creating Regional Partnerships (e.g.s. Grants, projects, plans)
- Jurisdictions coordinating and supporting growth, transportation, energy use and economic planning and policies