

Climate Change and the Public Health Challenge in Idaho

Jim Vannoy

Program Manager

Environmental Health Education and Assessment Program





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 $50 \mu\text{g}/\text{m}^3$ in PM_{10} 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

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

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



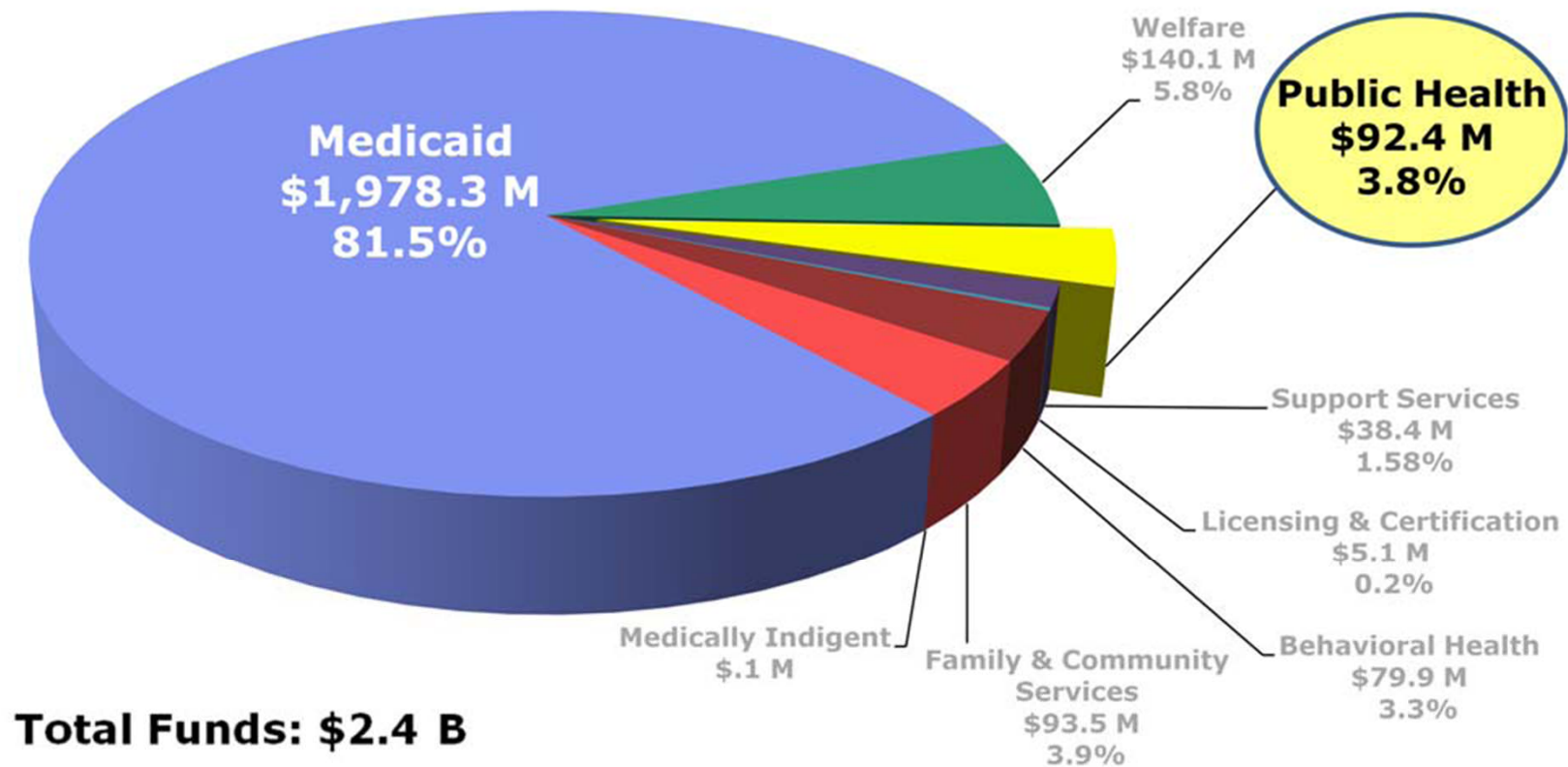
In 2006 Idaho led the nation in cases of West Nile Virus (N=996).

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

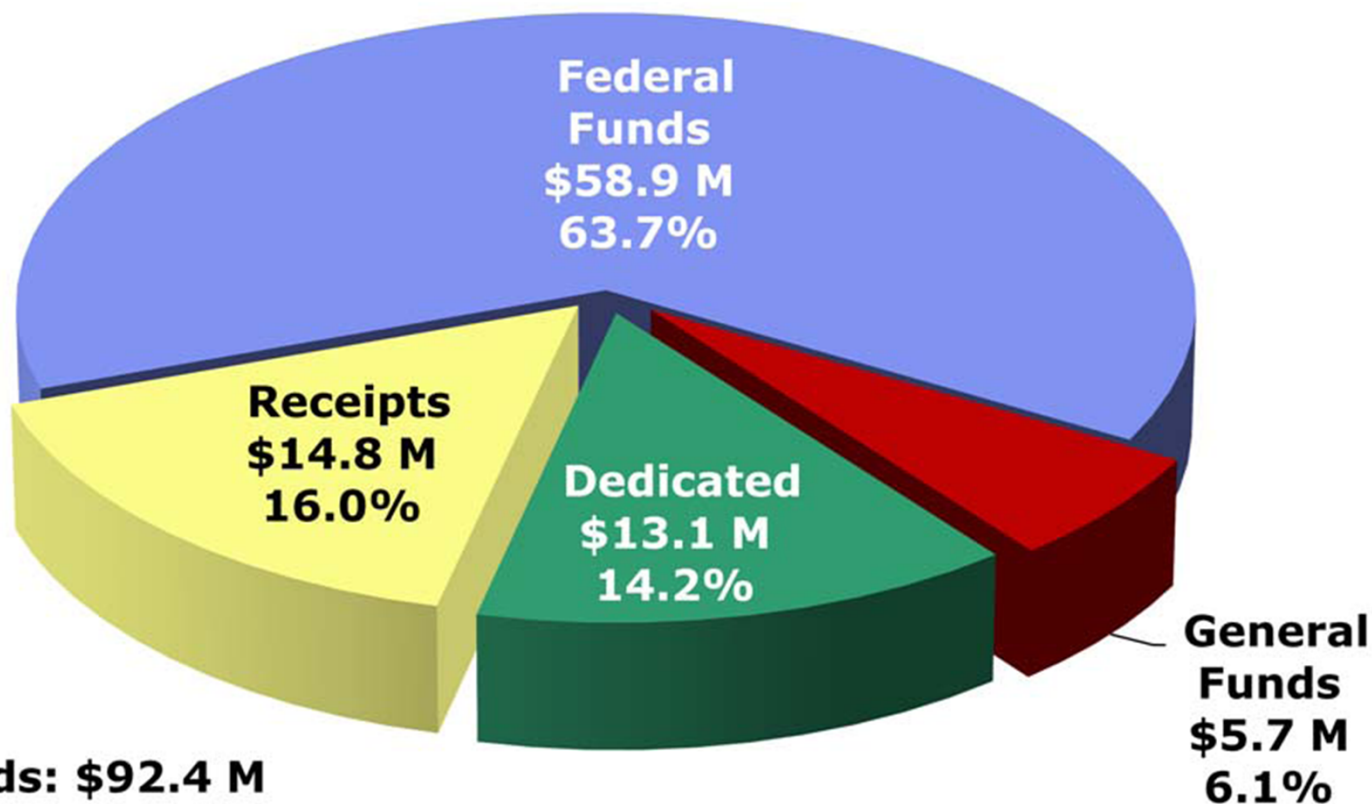




IDAHO

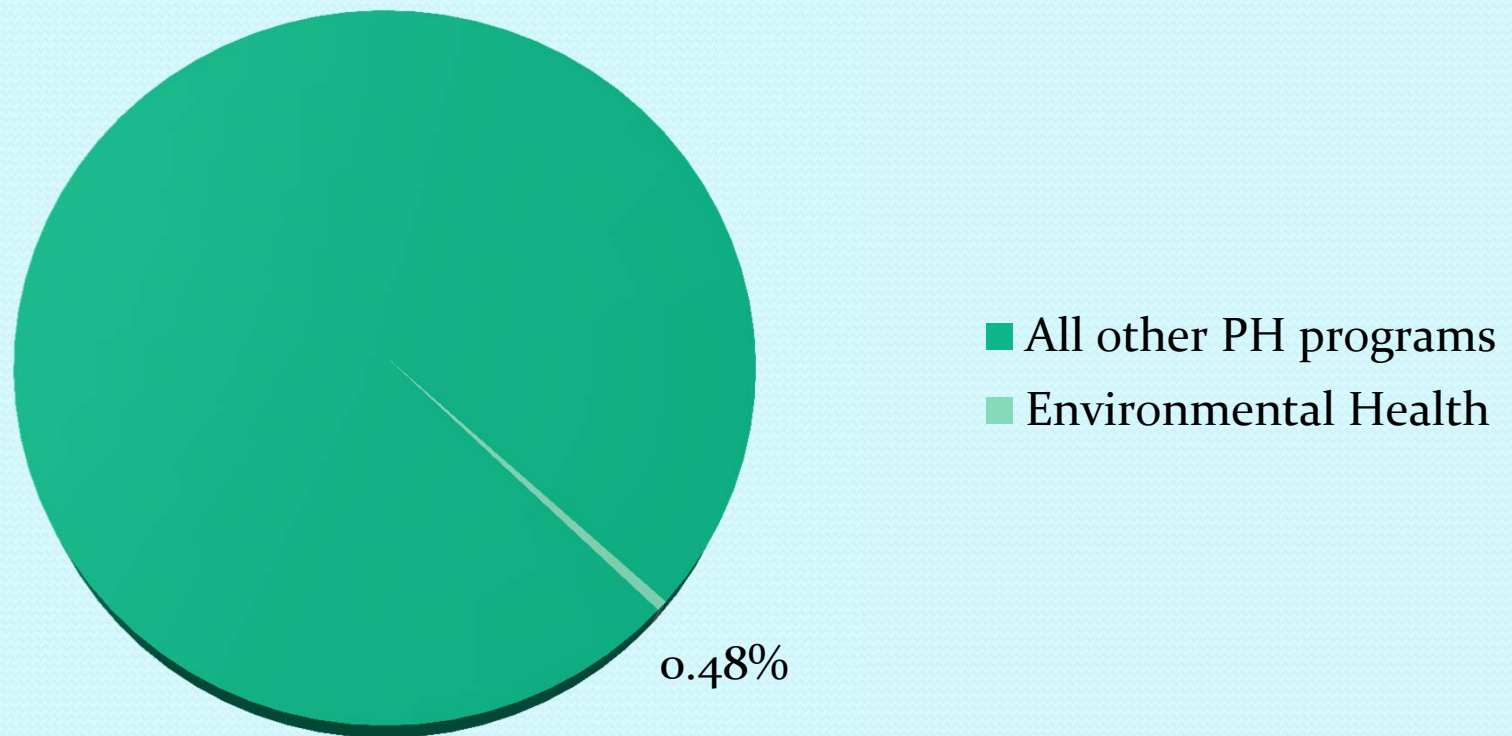
Department of
Health and Welfare

2013 Public Health Request by Fund Source



IDAHO DEPARTMENT OF
HEALTH & WELFARE

Environmental Public Health Budget



Initiatives – University of Idaho

Idaho NSF EPSCoR - Microsoft Internet Explorer provided by Department of Health and Welfare

http://www.idahoepscor.org/DrawCalendarEvents.aspx?Action=GetByType&CalendarEventTypeID=3&CalendarEventID=124

File Edit View Favorites Tools Help

boise city sustainability ... Bike City Sustainable Boise Idaho NSF EPSCoR

IDAHO EPSCoR

Experimental Program to Stimulate Competitive Research

HOME ABOUT EPSCoR CONTACTS RESEARCH OUTREACH & EDUCATION ANNOUNCEMENTS RESOURCES

Events

67th ACS Northwest Regional Meeting (NORM 2012)

Teaching Environmental Geology

4th Annual EPSCoR Western Consortium Tri-State Meeting

Interdisciplinary Climate Change Spring 2012 Seminar Series

Project Advisory Board Meeting Track 1 Year 3

47th Annual Water Resources Conference

22nd National NSF EPSCoR Conference

Proposal Development Workshop for Research based STEM Education

Panel Discussion: Underrepresented Minority Graduate Recruitment

Celebrating STEM

McCall Outdoor Science School

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](#)

https://sites.google.com/site/interdisciplinaryclimatechange/home

Internet 100%

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

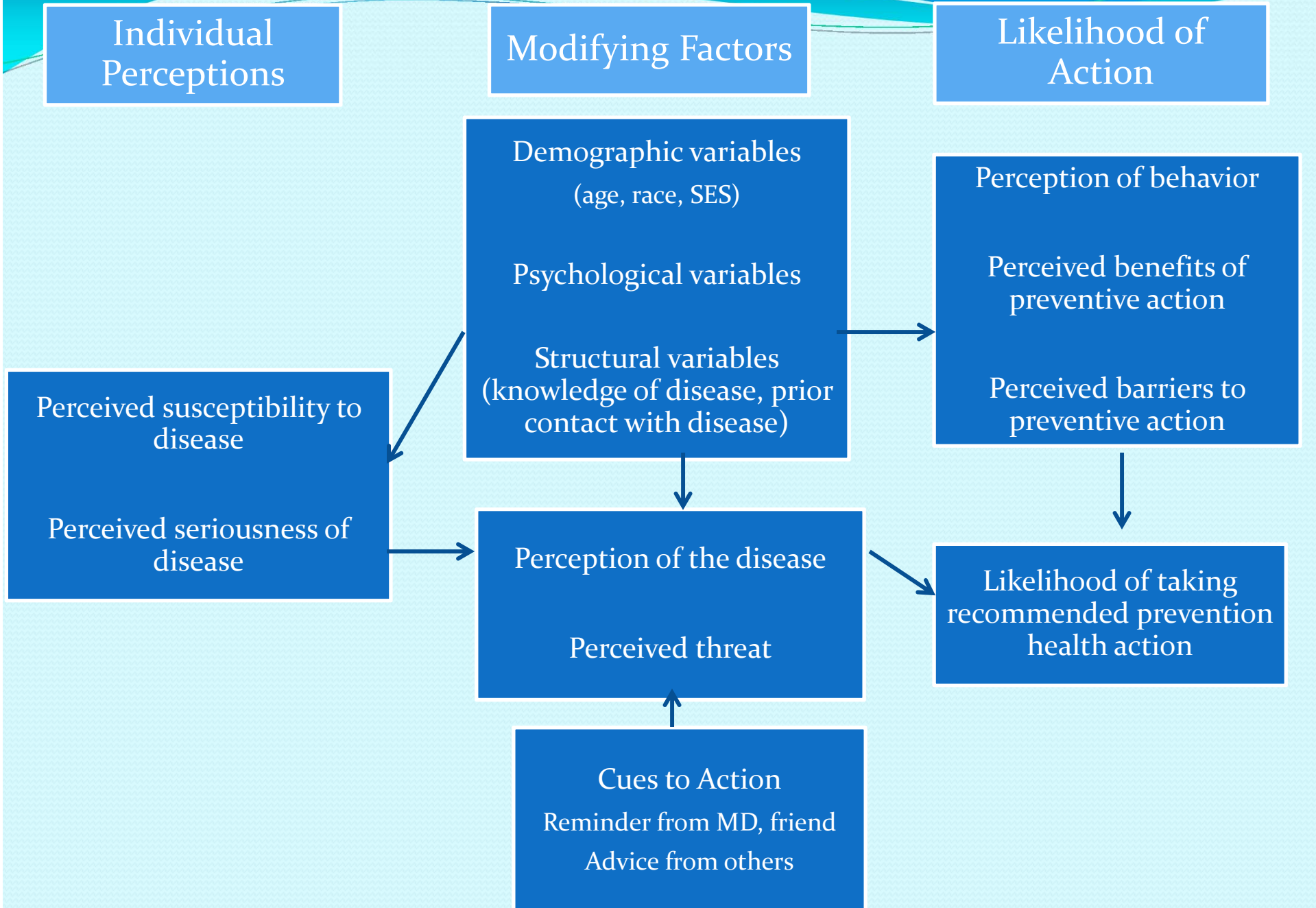
Stroke

Diabetes

Alzheimer's

Suicide

Health Belief Model



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