

Ready for Change: A Report on Climate Change Trainings for Public Health and Emergency Preparedness Sectors in Oregon

Spring 2011

Overview

In the fall of 2010, the Oregon Health Authority (OHA) was awarded a cooperative agreement through the National Center for Environmental Health at the Centers for Disease Control and Prevention to build climate change capacity at the state and local level. As part of the cooperative agreement, OHA partnered with The Resource Innovation Group's Climate Leadership Initiative (CLI) and Multnomah County Department of Public Health. One of the first deliverables outlined in the grant was to deliver a series of regional trainings to local health jurisdictions, both county and tribal, across the state. The trainings were designed to provide an overview of climate change impacts, resulting consequences for public health, and introduce potential tools and resources that build capacity to prepare for change.

In the spring of 2011, OHA, in partnership with CLI, delivered four trainings around Oregon. The total number of individuals participating in the trainings were 68, representing 92% of Oregon's population through county participation, as well as three cities, three tribes and three additional organizations. The trainings lasted from six to seven hours, incorporating a series of presentations, group discussions, table discussions, and table-top activities. Overall, participants reported that the trainings were valuable in introducing potential climate impacts in their community and to their sector, that they felt more knowledgeable about tools or resources that could be applied to their work, that they were able to identify new opportunities for collaboration, and that they felt engaged throughout the sessions.

This document provides a summary of the process and results to enable other communities or states to replicate similar trainings as an introduction to climate change for public health and emergency management. For more information about the project or to obtain access to relevant documents, please Lauren Karam: lauren.karam@state.or.us.

Objectives and Audience

The trainings had two overarching objectives: 1) to provide a state-wide introduction to local health jurisdictions of climate change impacts and the role of public health and preparedness sectors; and 2) to provide background training for local health jurisdictions and tribes interested in applying to participate in OHA's Mini-grantee Program *Building Capacity to Address the Public Health Impacts of Climate Change at the Local Level*.

The learning objectives included developing:

- Shared understanding of climate change and potential local health and emergency management impacts;
- Knowledge of local and national resources and tools - how to access and apply them;
- Initial understanding of the role of public health/emergency management in climate change mitigation and adaptation
- Identification of three action items that will be taken to integrate climate change activities (internally or in collaboration with other departments);
- Communication strategies and climate resiliency assessment (through a take home exercise); and
- A means for staying engaged/networking with other health departments working on climate change in Oregon.

The trainings were tailored towards the following sectors or organizations: 1) local health jurisdictions (anyone interested/willing to come but specifically targeted to preparedness coordinator, environmental health, communicable/chronic disease, director-level positions); 2) county emergency management; 3) tribal public health; 4) regional emergency preparedness liaisons; 5) county or public health communications officer; and 6) public health emergency preparedness leadership at OHA. Counties or tribal governments interested in applying to the RFP were required to send a representative to one of the trainings.

Four workshop locations around the state were selected to attract the largest number of health jurisdictions. Locations included the northwest (Hillsboro), coast (Newport), central (Bend), and south (Grants Pass).

About the Climate Change Mini-grantee Program

As part of the federal grant that OHA received, funds were allocated for five county and tribal governments to engage in developing and implementing climate change and public health capacity building tools. The grantees (to be selected in the summer of 2011) will work collaboratively with OHA and CLI to develop, test and refine climate preparedness tools that can be used and customized by other local health departments and communities. Grantees receive \$35,000 over two and a half years for their involvement in this project. A requirement for application was attending one of the four trainings around the state.

Pre-Workshop Process

The planning team for the trainings, which included representatives from OHA, CLI and Multnomah County, met in-person two times over a three-month period and held weekly calls to prepare for the trainings. Materials were developed collectively, with all members of the team providing feedback on structure and content.

A “Save the Date” flyer was distributed approximately six to eight weeks prior to the trainings. A sample flyer is available in Appendix A. The flyer contained an overview of the trainings, learning objectives, the four dates and cities where workshops would be held, and contact information. The flyers were distributed via numerous

state and regional health and emergency management listservs, as well as through tribal and foundation liaisons.

The meeting venues were selected by contacting the local health jurisdiction in the region. If a room was not available with the health department, recommendations were solicited for nearby venues that would accommodate twenty-five or more people (e.g. library, recreation center, ambulance dispatch center, etc). All venues were secured at no cost with supplemental fees paid for use of audio-visual equipment. Caterers were selected based on sustainability practices, healthy options, and cost.

Continuing education credits were requested and received by authorized Oregon representatives. For these workshops, only Environmental Health CE were given: other disciplines (e.g. nursing) required a fee and the review process was extensive.

Invitations were distributed approximately four weeks prior to the trainings via the same distribution lists as the save the dates were distributed. Participants were asked to register ten days in advance of the workshop they were interested in attending.

Registered participants received an email one week to ten days prior to the event with additional details about the event. The pre-workshop materials that were distributed included venue directions, an updated agenda, lodging information, and a pre-workshop survey (Appendix C). The survey (through Survey Monkey) was used to assess the current thinking and state of climate-related initiatives in participants' communities. The survey asked questions around: how they believe their work currently prepares their community for climate change; what actions they are currently taking to reduce greenhouse gases; how they are thinking about climate change as it relates to their position and the role of their department; priorities identified in their hazard vulnerability assessments; familiarity with health impact assessments; and expectations for the training. See Appendix C for sample survey questions. The survey results were reviewed and distributed to presenters and facilitators two to three days prior to each training to make necessary adjustments to sessions/presentations to better meet the needs of participants.

Packets were prepared for participants. While the attempt was made to reduce materials for this process, it was recognized that to effectively engage the participants, providing them with a series of handouts to work on or refer to throughout the day would be worthwhile. Handouts were prepared using half-sheets, double sided, and folders were made with 100% recycled materials. Handouts corresponded to presentations and activities that took place throughout the day. Sample handouts are available in Appendix E.

A guide was also developed for facilitators (Appendix D). The guide walked the facilitator through a series of questions and/or exercises for them to lead at their

tables, with a detailed description of each of the sessions, corresponding handouts, and objectives for each of the sections.

Presentations were outlined collectively, but developed independently by each of the elected presenters. Presentations were shared with the planning team prior to the workshop to ensure knowledge of other’s content, coordination of formatting, and to identify opportunities for cross-learning between presentations.

Workshop Content

When participants arrived, they were asked to sign in and collect their nametag and folder. The sign-in was important for our trainings, not only for reporting reasons but because the training was a pre-requisite for submitting a proposal for the OHA mini-grants.

The size of the trainings ranged from 13 to 36 participants, depending on the location, with fewer participants at the more rural locations. Participants were pre-assigned tables based on the county or tribe they represented. Because participants were asked to identify activities, collaborations, and think creatively about integrating climate change into existing projects, we assigned people from the same counties or regions to sit together. In some cases (typically the smaller workshops) people knew each other and had current collaborations. In other cases (the larger workshop with widespread representation), people from the same health department often had not met prior to this training. Each table consisted of six to eight people and was assigned a facilitator to stimulate the discussion and capture high-level comments on a flipchart.

Participants

The participants represented a variety of sectors, including: administrative support, emergency or preparedness, health division, communications/outreach specialist, communicable disease, policy analyst, and chronic disease. Participants held a variety of positions, including coordinator, manager, division director, supervisor, officer, liaison, and volunteer. Sixty-eight individuals participated in the four workshops, with three from cities, fifty from counties, seven from the state, three from tribes, and five “other” (e.g. nonprofits such as Red Cross). With the county participation, over 92% of Oregon’s population was represented. Participants traveled up to five hours to attend a training.

Agenda and Sessions

The agendas for the four trainings were adjusted slightly during and following each training depending on engagement on certain discussions, interest in topics, and speed the groups moved through the exercises. In general, the agenda followed the format below. Sample presentations are available at:

<http://www.theresourceinnovationgroup.org/public-health-materials/>.

Sample Agenda

Time	Item	Description
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8:30	Registration	Packets and nametags handed out, tables assigned, coffee provided
9:00	Welcome	Introduction and purpose of workshop provided by leadership from OHA; participants and organizers introduce themselves
9:20	Presentation on climate change: causes, effects and consequences for public health	Joint presentation by climate adaptation specialist (CLI) and public health preparedness specialist (OHA). Started with climate change 101, then moved into related health risks and direct impacts to public health. Questions were posed to the audience throughout the presentation. Pre-workshop survey results were also reviewed.
10:00	Table discussion on current concerns and actions	Participants were asked by their table facilitator to describe concerns they have in their community around climate impacts, and actions they are taking to reduce risk. The session intent was to get people comfortable sharing, and also help them realize the work they currently undertake relates to climate change so it doesn't feel overwhelming.
<i>Break</i>		
10:45	Presentation on resources	OHA/County representative provided an overview of select resources and tools available at the regional and national level (e.g. webinars or guidebooks through APHA, NACCHO, CDC, etc). The individual was knowledgeable about different resources and tools that could be applied locally. Oregon Health Authority liaisons did a demonstration of a tool available to local health departments called Oregon Incident Response Information System. An introduction to the subgrants that would be awarded to four counties was also provided.
11:45	Table top exercise on scenario	Groups were presented with a scenario by their facilitator (e.g. extreme weather, heat, flood; see Appendix D) and asked to identify how they would react given current resources and how they could build capacity (internal or with external partners) to better adapt to the situation in the future. If time, each group shared their discussion with the larger group.
<i>Lunch</i>		
1:00	Presentation on Communications	CLI presented current research on public opinion of climate change and strategies for public health to frame the issue with clients. This presentation would ideally be provided by a communications specialist, but also could be delivered by someone familiar with current research and applicability to climate change and public health. Most important for this session was facilitating a conversation that

		sparked ideas and shared challenges. Depending on number of participants, there was either an open discussion or table discussion on challenges and opportunities for public health to integrate communications around climate change.
2:00	Presentation on Hazard Vulnerability Assessments and Health Impact Assessments	Because HVAs and HIAs are a component of the CDC climate change grant, an OHA representative with expertise in HVAs and HIAs provided an overview of both of these tools, how climate change can be integrated, how they can be used to assess climate decision making, and participants shared work they are doing on HVAs and HIAs. Examples/case studies were drawn from participants.
3:00	Table exercise to identify actions	Each participant was asked to identify at least three take-away actions from the training, such as hosting a webinar for colleagues, talking with their emergency manager, or identifying opportunities to collaborate on adaptation with a local church. Participants were asked to share their activities in their group.
3:30	Wrap up	After a summary of the day, participants were informed of a means for staying engaged with the other participants through a professional networking site, Yammer. OHA leadership provided closing remarks.

Throughout the presentations, presenters continually asked audience members for their reactions or to share their experiences in working on a particular project. These examples were identified during early sessions or interactions with participants during breaks, table discussions or through the survey.

Follow Up

Within a few days following each training, participants were sent a link to an online survey through Survey Monkey to evaluate the training (see Appendix F for questions). Within two weeks of completion of the final training, all presentations and related materials were posted online to enable access for participants. A professional networking site was also established through Yammer, and participants were invited to engage in discussions; post materials such as grant opportunities, webinar announcements, and resources; and share best practices and challenges they face while implementing programs. The site will also be used to connect the training participants with the four counties that are awarded the migrant.

Conclusions and Recommendations

Overall, feedback from participants was very positive, and many took away new ideas, actions and a better understanding of how they can integrate climate

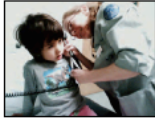
adaptation into their work. Recommendations for future trainings based on participant and facilitator observations include:

- Keep the workshops small. While breakout groups were used to ensure greater participant engagement at the larger workshop, the interactions and relationships that can be formed amongst all participants are improved when total participants is capped at 20 people. If there is greater interest, consider holding multiple trainings in the same location.
- Continually draw from participant experiences. The facilitators (and participants) learned a great deal based on work that is ongoing in the counties. Through sharing of experiences, participants were able to see that this work is feasible (as other counties are doing it) and were also able to learn how their existing initiatives align with climate planning.
- Continually engage the audience. To keep up the energy and interest throughout the day, ask the audience questions during presentations and table discussions. Make the audience feel included so the presentations are participatory.
- Mix it up. The agenda should include a variety of activities, including presentations, table-top discussions, plenary discussions, and group exercises. Try to avoid presentations that are longer than thirty minutes if they do not engage the audience. For longer presentations, include a break in the middle during which the participants respond to questions posed by the presenter. This variation will also reduce the likelihood of the training feeling too academic.
- Be prepared for skeptics and downers. Have a strategy to mix up the tables if a participant is drawing the group towards increased skepticism (either about climate change or the value of the training).
- Apply for continuing education credits and charge a workshop fee if they are available. By charging a fee, participants that have registered may be more likely to attend after registering and more eager to learn and engage. Start the process early, as many CEU credits require extensive review of agendas and facilitators, and require that someone from their discipline is actively engaged in development of the training. The cost for applying for CEU credits can vary considerably, so check with the various accreditation institutions whose disciplines you are interested in attracting.
- Be flexible and adaptable. Be prepared to make adjustments to the agenda throughout the day as issues and interests arise, or based on the energy of the room.

For OHA and CLI, this training was a first step in a three-year local health jurisdiction engagement program. As we continue to work with a number of counties around the state over the next year, we anticipate approaching many of the questions and challenges that were raised in the trainings in more detail.

Appendices

Appendix A. Sample Save the Date and Invitation



**** Save the Date ****

The Oregon Health Authority, Oregon Coalition of Local Health Officials, and Climate Leadership Initiative invite you to attend

Ready for Change: Preparing Oregon's Public Health and Emergency Preparedness Sectors for Climate Change

Workshops will be held in four different locations on the following dates:

- Wednesday, April 20, 2011 – Hillsboro
- Thursday, April 21, 2011 – Newport
- Thursday, April 28, 2011 – Bend
- Wednesday, May 4, 2011 – Grants Pass

9am to 5pm

All workshops will cover the same materials, are free of charge, and coffee and lunch is provided. Agenda and venue details to be distributed shortly.

For questions, lodging information or to RSVP, please contact:
Stacy Vynne (stacy@trig-cl.org) or Lauren Karam (lauren.karam@state.or.us)

Who should attend?

- Staff from local health jurisdictions, particularly preparedness coordinators, environmental health, communicable or chronic diseases, and directors
- County emergency managers
- Tribal public health departments
- Regional emergency preparedness liaisons
- County or public health communications officers
- Local health jurisdictions or tribal communities applying for "Building Capacity to Address the Public Health Impacts of Climate Change at the Local Level" RFA are required to have representation at one workshop

Participants will leave with:

- Shared understanding of climate change and potential local health and emergency management impacts;
- Knowledge of local and national resources and tools - how to access and apply them;
- Initial understanding of the role of public health/emergency management in climate change mitigation and adaptation and identification of three action items that will be taken to integrate climate change activities (internally or in collaboration with other departments);
- A take home exercise to develop a communication strategy and climate resiliency assessment; and
- A means for staying engaged/networking with other health departments in Oregon working on climate change.

Funding for this workshop was made possible by the cooperative agreement award 1U41EB000747 from the Centers for Disease Control and Prevention & Northwest Health Foundation. The views expressed in written workshop materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.

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Ready for Change: Preparing Oregon's Public Health and Emergency Preparedness Sectors for Climate Change

Workshops will be held in four different locations on the following dates:

- Wednesday, April 20, 2011 – Hillsboro Main Library
- Thursday, April 21, 2011 – Newport (Pacific West Ambulance)
- Thursday, April 28, 2011 – Bend (Riverbend Community Room)
- Wednesday, May 4, 2011 – Josephine County Public Health Department

9 a.m. to 5 p.m.

All workshops will cover the same materials and are free of charge. Coffee and lunch will be provided. Additional materials and directions will be sent prior to trainings.

RSVP by April 10, 2011, for any workshop.

For questions, lodging information or to RSVP, please contact
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Appendix B. Sample Project Timeline

Action	Who	Deadline	Notes
Develop and review agenda		Week 1	Circulate to all staff for review/comments prior to retreat, final agreement on general agenda items
Identify planning team		Week 1	Who will identify participants, locations, dates, develop materials
Identify participants		Week 3	
Develop invitation for all four workshops		Week 3	
Book venue/caterers for all workshops		Week 4	
Identify/Develop materials for workshops		Weeks 4-6	
Distribute first invitation (save the date) for all four workshops		Week 6	
Final invitations		Week 8	
Finalize agenda		Week 9	
Develop pre-workshop survey and evaluation		Week 9	
Track RSVPs		Weeks 6-12	
RSVP deadline		Week 12	Revise agenda as needed based on registration Set firm deadline, but accept RSVPs up until catering deadline
Distribute survey to registered participants		Week 12	
Finalize presentations, materials for workshops		Week 13	
Hold workshops		Weeks 14-16	
Distribute evaluations, post materials		Week 17	Electronically (preferred), or distribute paper evaluation at workshop

Appendix C. Sample Survey Questions

For a full list of questions and responses, please contact Lauren Karam.

1. Please identify your field(s) of expertise. Select all that apply.
2. Name of organization you work for (optional)
3. Generally speaking, how do you rate your knowledge of the causes and impacts of climate change?
4. Is addressing climate change (reducing emissions or preparing for impacts) either part of your job description or a priority for your department? Check all that apply.
5. What are your concerns regarding impacts for public health and emergency management in your community? Please choose from the following list of natural disasters that may be linked to climate change. Please rank each one on a scale of 0-5, with 0 for no concern, and 5 for significant concern.
6. What are your concerns regarding human health impacts in your community that may result from changes in the climate, such as extreme heat events? Please rank on a scale of 0-5 for each one, with 0 for no concern, and 5 for significant concern.
7. What programs/initiatives does your department currently have in place that you believe prepares your community for public health and emergency related climate change impacts? For all questions, please indicate if it is in place, in development, no action has been taken, or you are unsure.
8. What programs or actions has your department taken to reduce internal greenhouse gas emissions or energy waste? For all questions, please indicate if it is in place, in development, no action has been taken, or you are unsure.
9. Does your department consider the health consequences when putting in place or advocating for a policy or implementing a plan (e.g. use Health Impact Assessments)? If yes, please identify in the comment box how they were developed and how they are being used.
10. Does your department use, or has it been involved in developing, Hazard Vulnerability Assessments? (*check with your local public health preparedness coordinator) If yes, identify in the comment box how they were developed and how they are being used.
11. What are your expectations for this training? (e.g. Do you want general climate information? Do you have specific communication needs -internal or with the public?)

Appendix D. Sample Facilitator Guide

9:35-10:30: Climate Change 101 and Impacts to PH and EM (30 mins, depending on length of ppt) Working in your small groups, have participants identify: 1) speaking generally, identify whether they have thought of how their communities will shift with climate change- discuss abrupt changes, gradual changes, repeated smaller events, single large events; 2) identify likely specific impacts to public health and emergency preparedness in their community ; and 3) direct action they are already taking within public health and at the county level (e.g. for heat theme, have they established cooling center?). Capture high level comments on a flipchart.

10:45-11:30: Resources (20 mins, depending on length of ppt) Based on what you saw, what jumped out at you that made sense, might be used as a useful resource? How might you apply it?

Brainstorm which of those resources shared in the presentation would be useful to them and how they can/will use them. What are some of the lessons learned or tools from the case studies that they can apply in their own community. Use **Handout B: Useful Resources**

11:30-12:15: Role of Public Health and Emergency Management (40 mins, depending on length of introduction) The presenter will provide an extreme scenario for the groups to address- discuss how PH and Emer Mngt departments would react to this scenarios, what their current role is to address it, what they envision their role could be in the future, how they already collaborate with community organizations or other departments, how they could collaborate better. *Ask for someone to be a reporter for your group. Present the following scenario to your group. Pose the questions below. Capture high level comments on a flipchart if you want. At about 12:05 we will have brief report outs from each group.*

Scenario One: Extreme Heat Event

Slow and silent, a heat wave does not descend upon a city with the fury of a tornado, hurricane, or a winter storm. It moves over an area as a large, deep air mass with descending air, retarding the development of any significant precipitation that would provide relief to the ground surface's rising temperatures. As this air mass moves slowly or just sits over one area for days or even weeks, its rising surface temperatures begin to take their toll on the people who are trapped in it.

It is July 2030. Your community is facing its fourth day of 103 degree weather, with nighttime temperatures remaining around 80 degrees. Due to a low snowpack, streamflow is also below normal.

Scenario Two: Flooding

It is early March 2020. Snowfall has been extremely heavy the last few weeks of February [a warmer planet leads to increased moisture in the atmosphere and therefore increased precipitation]. However, with spring arriving earlier, temperatures have rapidly increased in the mountain leading to rapid snowmelt, while rainfall is also heavy. The rivers and streams slowly begin to rise, and have started to breach their banks. Your community is facing its third 100-year flood event in five years.

Scenario Three: Extreme Precipitation/ Weather Event

It is April 2025. The rainfall in the last 12 hours has exceeded 20 inches. Heavy hail is falling, causing damage to vehicles and buildings, and the wind is blowing steadily, with gusts reaching up to 80 miles per hour.

Questions for Group:

1. What impacts do you see happening in your community that would impact your job (*prompt*: air and water quality, health risks-e.g. mental illness, loss of power, impacts to food, impacts to transportation, impacts to infrastructure, greater need for emergency/social services, interruption to emergency/social services e.g. because of bridge blowouts, etc)
2. Which populations in your community are at greatest risk under this scenario. (*prompt*: how will the elderly, rural, poor, youth, homeless and those with autoimmune deficiencies be impacted? Are there certain communities in your region that will be harder hit [e.g. areas with less trees, in floodplains, etc])
3. How would public health and emergency management respond to this scenario if it took place today? Who do they currently collaborate with? How successful are they in mitigating health or hazards risks associated with this event?
4. How would they envision their role changing in the future to improve response?
 - a. Who could they better collaborate with (*prompt*: other city/county/state departments, community/faith based orgs, private sectors, etc)
 - b. How could they improve outreach/education of the public [*prompt*: are there groups they could collaborate with e.g. church groups, neighborhood assoc]
 - c. Who could they turn to in advance for assistance to reduce risk to the public? [*prompt*: how build up resiliency or at least more efficient response/management of the issue?]

2:00-2:45 Communication Strategies (40 mins, or possibly a bit longer if the 1-2pm session is shorter- no break scheduled, have them take as needed or end discussion early for a brief break)

How do they currently communicate internally and externally? Do they even talk about climate change internally or with the public? Do they want to or need to talk about it in their community to achieve their preparedness goals?

How might they reframe their messaging of existing work to include climate change (or if not discussing cc openly, to increase focus on climate change's impacts to public health)?

Review their communication materials if they brought them and identify how climate change messaging could be integrating to reach the appropriate audience. Have them work on the handout individually, then share with the person next to them for feedback. They can work collectively on an elevator speech, in pairs or on their own. Share their speech with the table. Facilitator can pick 1 person from each table to share with the larger group. Use **Handout C: Communication Strategies**

2:45-3:15 Tool Needs/Open Plenary Discussion Plenary discussion- think about all the examples we've discuss. What might be real here? Where would be collaborate? How could climate change initiatives be integrated into your departments?

3:45- 4:30 Project Planning (40-45 minutes followed by brief presentations) Elect a notetaker and a reporter to report back to the larger group at the end of the discussion. Refer back to handout they have developed throughout day: what three actions will they take? What resources / tools apply? What departments / orgs will they engage? How integrate communication strategies? Who will these communication strategies work for? What grant opportunities could they explore? Have others tried these actions? What barriers did they encounter/ What barriers can they expect to encounter? Successes? Refer back to **Handout A: Activity and Resource Tracking**

Appendix E. Sample Materials for Packet

Handout B: Useful Resources & Definitions

Resources

National Association of County and City Health Officials (resources, demonstration sites):

<http://www.naccho.org/topics/environmental/climatechange/index.cfm>

Centers for Disease Control and Prevention (resources, webinars):

<http://www.cdc.gov/climatechange/>

Association of State and Territorial Health Officials (June 2010 webinar):

http://practice.sph.umich.edu/micphp/files/GrandRounds/ClimateChange/Marinucci_Slides.pdf

American Public Health Association (website, resources): <http://www.apha-environment.org/>

Health Impact Assessments (overview, resources, case studies):

<http://www.cdc.gov/healthyplaces/hia.htm>

<http://www.healthimpactproject.org/>

Human Impact Partners (FAQs, Resources, Policy): <http://www.humanimpact.org/resources>

Hazard Vulnerability Assessments

Oregon Partnership for Disaster Resilience <http://csc.uoregon.edu/opdr/>

George Mason University (reports, Six Americas publications, communication strategies):

http://www.climatechangecommunication.org/resources_reports.cfm

Oregon Health Authority - Public Health Division (resources, trainings):

<http://public.health.oregon.gov>

Oregon Climate Change Research Institute:

Access to Oregon Climate Assessment Report <http://occri.net/>

Department of Land Conservation and Development: State Agency Adaptation Framework (Dec

2010): http://www.lcd.state.or.us/LCD/docs/ClimateChange/Framework_Final.pdf

The Resource Innovation Group's Climate Leadership Initiative (reports, resources on adaptation in general and for public health):

<http://www.theresourceinnovationgroup.org/publichealth/>

The Resource Innovation Group's Social Capital Project (communication resources):

www.thesocialcapitalproject.org

Health & Climate Change Webinars

<http://www.sophe.org/ClimateChangeSeries.cfm>

<http://www.cdc.gov/climatechange/workforce.htm#webinar>

Definitions:

Climate adaptation refers to the ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damage, to take advantage of opportunities, or to cope with the consequences. The Intergovernmental Panel on Climate Change defines adaptation as the adjustment in natural or human systems to a new or changing environment. Adaptation to climate change refers to adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities. Various types of adaptation can be distinguished, including anticipatory and reactive adaptation, private and public adaptation, and autonomous and planned adaptation.

Climate mitigation is any action taken to permanently eliminate or reduce the long-term risk and hazards of climate change to human life, property. The Intergovernmental Panel on Climate Change (IPCC) defines mitigation as: "An anthropogenic intervention to reduce the sources or enhance the sinks of greenhouse gases."

Climate preparedness: Similar to climate adaptation, in which human systems proactively make adjustments to reduce vulnerability to climate change in anticipation of impacts.

Climate resilience: When referring to natural systems, the amount of change a system can undergo without changing state. When referring to human systems, the term "resilience" can be considered as a synonym of adaptive capacity (i.e., UN/ISDR 2004 defines it as the capacity of a system, community or society potentially exposed to hazards to adapt by resisting or changing in order to reach and maintain an acceptable level of functioning and structure. This is determined by the degree to which the social system is capable of organizing itself to increase its capacity for learning from past disasters for better future protection and to improve risk reduction measures).

Climate variability: Denotes deviations of climate statistics over a given period of time, such as a specific month, season or year, from the long-term climate statistics relating to the corresponding calendar period. In this sense, climate variability is measured by those deviations, which are usually termed "anomalies" (NSIDC Arctic Climatology and Meteorology). As a result of climate change, climate variability is expected to increase in most locations.

Hazard Vulnerability Assessment (HVA): Many disaster management practitioners use what they call risk analysis methods to draw up mitigation plans and make operational decisions. Technically speaking, risk analysis is different from the HVA, focusing on how often specified incidents may occur and the magnitude of their consequences. The HVA will employ a mixture of quantitative and qualitative hazard analysis along with a quantitative measure of vulnerability according to risks associated with demographics, socio-economics, critical infrastructure, and preparedness values.

Health Impact Assessment: Health Impact Assessment (HIA) is a means of assessing the health impacts of policies, plans and projects in diverse economic sectors using quantitative, qualitative and participatory techniques. HIA helps decision-makers make choices about alternatives and improvements to prevent disease/injury and to actively promote health.

Regional Climate Models: While global climate models (GCMs) simulate the entire Earth with a relatively coarse spatial resolution (e.g., they can capture features with scales of a few hundred km or larger), regional climate models (RCMs) downscaled from GCMs have a much higher resolution (simulating features with scales as small as a few km). Downscaling can be

accomplished through one of two techniques: 'dynamical' or 'statistical' downscaling. 'Dynamical' downscaling refers to the process of nesting high resolution RCMs within a global model, while 'statistical' downscaling relies on using statistical relationships between large-scale atmospheric variables and regional climate to generate projections of future regional climatic conditions (Padgham 2009).

Handout A: Activity and Resource Tracking

Please complete this handout throughout the day, building on the presentations and activities.

Identify three actions that you will take on climate adaptation or mitigation within your department and the timeframe for implementation. Sample activities include: deliver a brown-bag presentation on why our department should integrate climate adaptation across planning efforts [July 2011]; review OHA’s HIA webinar series [June 2011], etc.

Proposed Action	Audience	Resources	People/Depts to Engage	Timeline

Notes:

Appendix F. Sample Evaluation

For a full list of questions and response options, please contact Lauren Karam.

1. How did you hear or learn about the "Ready for Change" workshop? (please check all that apply)
2. On a scale of 1 to 5 (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree), rate your level of agreement with the following statements regarding whether certain presentations met your expectations.
3. How relevant to your line of work were the topics that were discussed?
4. On a scale of 0-5 (0 being not useful, 5 being very useful), how useful did you find the following presentations?
5. On a scale of 0-5 (0 being low, 5 being high), how useful did you find the following table activities?
6. Are there presentations or activities that you would have liked to have seen?
7. Are there webinars or additional trainings on specific topics related to climate change that you would like OHA or CLI to provide? If so, please describe.
8. Have you shared, or do you plan to share, any information from this workshop with your colleagues?
9. Please provide any additional comments you have to help improve the trainings.