



Oregon  
Health  
Authority

PUBLIC HEALTH DIVISION  
Climate and Health Program

## How to best view this report

The digital version of the Oregon Climate and Health Resilience Plan works on any device and in any modern web browser.

This publication contains interactive elements and videos that are best viewed in the enhanced digital version.

NOTE: Printed copies and PDF versions of the Oregon Climate and Health Resilience Plan will not include these additional features. If you have a printed or PDF version of this publication and would like to view the digital version go to [healthoregon.org/climate](https://healthoregon.org/climate)

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# Welcome

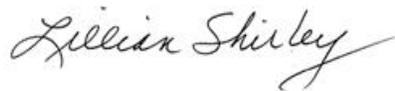
As the climate changes, our work in public health must change too. [The 2014 Oregon Climate and Health Profile Report](#) described the ways Oregon's changing climate threatens our access to clean air, clean water and healthy food.

This plan builds off of the findings in the profile report, outlining a set of recommendations for our state's public health system that includes the Oregon Health Authority's Public Health Division, local health departments, and our many diverse partners working to improve quality of life in Oregon.

Oregon's public health system is [modernizing](#) to equip our workforce with the skills and capacity to adapt to climate change and related health risks, recognizing the growing evidence that our physical and social environments are as important to health outcomes as medical interventions.

Improving environmental and social conditions — such as strengthening our local food systems and creating more walkable communities — are public health interventions. They also happen to be climate solutions. Working with our partners to prevent and prepare for climate change will further enable us to address some of the root causes of health inequities and preventable diseases in Oregon.

Together, with our partners, we are transforming our work to meet some of the greatest health challenges of our time.



Lillian Shirley, BSN, MPH, MPA  
Oregon Public Health Division Director



Charlie Fautin, RN, MPH  
Conference of Local Health Officials Chair

# Executive summary

## Since releasing the Oregon Climate and Health Profile Report in 2014, Oregon:

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- Recorded its warmest year (2015)
- Saw the lowest snowpack on record (2015)
- Had one of the most severe fire seasons in modern history (2015)
- Declared drought emergencies in 24 counties (2015)
- Was declared a major national disaster area for damage caused by extreme storms, floods and landslides (2016)

## These changes in our climate threaten our access to:

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### *clean air*

- Air pollution from increased ground-level ozone and wildfire smoke will likely worsen respiratory and cardiovascular illnesses.
- Increased CO2 concentrations and higher temperatures will prolong allergy seasons, complicating respiratory conditions.
- Wildfire smoke and drought are a problem in many Oregon communities, threatening family incomes and quality of life.

### *clean water,*

- Water quality could be compromised by both drought and increased water temperatures, leading to conditions that give rise to harmful algal blooms and waterborne diseases.
- Drinking water sources can become contaminated from flooding.
- Drought conditions affect agricultural production which could lead to an increased use of chemicals, threatening Oregon waterways.

*and healthy food*

- Drought conditions in Oregon and elsewhere, could increase the cost of food resulting in food insecurity, especially among vulnerable populations.
- Certain food crops will decrease in nutritional value (zinc, iron and protein content) due to the increase in CO2 concentrations, potentially exacerbating malnutrition.
- American Indians risk further loss of First Foods, including the loss of native roots, berries, fish and game.

## **We are all in this together**

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*... yet some of us are better positioned to weather the storm.*

- Communities of color and low-income households already bear a disproportionate burden of disease and have less access to opportunities and resources to cope with emerging challenges.
- Children will likely experience more cumulative health effects as more extreme weather events and climate-related disruptions continue to unfold over the next decades

## **Oregon is not yet ready**

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*... for the environmental health challenges that lie ahead.*

- A recent assessment of Oregon's public health system found we are not currently equipped to handle the complex and emerging environmental risks that climate change will exacerbate in Oregon.
- 98% of health departments report having only partial to minimal ability to identify and prevent environmental health hazards.
- Environmental health programs are not universally implemented across the state. More than a quarter report not having the basic capacity to conduct mandated inspections.

## We now have a plan.

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*It starts with building our workforce capacity to promote long-term changes in:*

- The plan includes case studies and videos that highlight how our public health workforce is already taking action to build community resilience.
- Our Climate and Health Program is leading a collaborative of local health departments across the state who are implementing resilience strategies.
- Climate and health strategies in the new Resilience Plan include:

*policies,*

- Actively engaging with our diverse community partners and elevating the voices of our most vulnerable populations to inform policy priorities.
- Informing policies that affect air quality and reduce air pollution.
- Promoting policies that strengthen our local food systems.

*systems,*

- Conducting regular monitoring of climate and health indicators, and monitoring the progress made on our resilience strategies.
- Equipping our health care partners with the information they need to protect patients from climate-related health risks.
- Supporting community-driven climate adaptations that contribute to building an evidence base for effective climate and health interventions.

*and environments.*

- Promoting community improvements that encourage walking, biking and the use of public transit.
- Helping to ensure access to safe places for communities to gather, build community and take refuge.
- Prioritizing public health interventions that address the root causes of health inequities and preventable diseases in Oregon.

*Find out more about what YOU can do to build climate resilience:*

[www.oregonhealth.org/climatechange](http://www.oregonhealth.org/climatechange)

# We live in a time of accelerating change

The increased pace of change can cause stress in our bodies and in the systems that support and sustain us. We have more data and technological tools than ever before, yet we also face more and more uncertainties. We are challenged to continuously learn, adapt and improve the way we live and the way we do our work.

Now well into the 21st century, there is no question that **historical, racial and economic injustices have led to health disparities in Oregon**. Certain populations, including communities of color, have been forced to shoulder an unfair share of stressors, while having less access to the resources and opportunities to cope and adapt. These disparities are symptoms of social and environmental conditions that ultimately affect us all, no matter who we are or where we live. They inhibit our ability to reach our public health goals and build resilient communities.

**Today, disruptions are occurring in Oregon's climate** that have the potential to exacerbate these existing disparities. Disruptions are already threatening our access to clean air, clean water, healthy food, and stable jobs. New records and trends are setting 'new normals' for what to expect in the years to come. [The 2014 Oregon Climate and Health Profile Report](#) outlines these changes and describes populations most at risk. In 2015, Oregon's Climate and Health program produced a [Social Vulnerability Assessment](#) that includes a set of maps that can be layered with environmental data to further describe climate risks in Oregon.

While taking a closer look at our vulnerabilities, community partners emphasized the importance of examining the inherent strengths and wisdom within communities that enable them to be resilient and adaptive in sustainable ways. This involves shifting away from conventional deficit-based models that focus on risks, needs, problems, and vulnerabilities into a more strengths-based approach that identifies and uses existing community assets, resources, networks and supports

# How does climate change affect air quality?

[Click to watch full length video on youtube](#)

**Did you know...**

# **This plan is for everyone**

who works within our local, tribal, and state public health departments and for our partners who are instrumental in reaching our collective goals.



The recommendations within this plan represent the findings and collaboration of local, state and national partners. Recommendations were developed through a review of plans in Oregon from diverse geographic areas, demographic and cultural groups, and government agencies. They are also based on findings in the latest research and feedback from robust stakeholder engagement. For a full list of contributors and supporting resources, please see the [acknowledgements](#).

The planning project shifted from an initial hazard-specific approach to an “all-hazards” approach. Instead of prioritizing hazards and recommending interventions for specific climate risks, we identified actions that will build resilience to multiple climate hazards and stressors.

STATE



LOCAL

# ACTIONS

# Each of the following sections focuses on one of the seven foundational public health capabilities:

- 1 Health Equity and Cultural Responsiveness (INVOLVE)
- 2 Community Partnership Development (PARTNER)
- 3 Assessment and Epidemiology (ASSESS)
- 4 Policy and Planning (PLAN)
- 5 Emergency Preparedness and Response (PREPARE)
- 6 Communications (COMMUNICATE)
- 7 Leadership and Organizational Competencies (LEAD)

These seven sections serve as a framework for a set of 16 carefully chosen priorities and recommendations that are actionable within a five-year period (2016-2021). A Resilience Plan update, aligned with two key public health planning documents, the [State Health Improvement Plan](#) and the [Public Health Division's Strategic Plan](#), is tentatively scheduled for 2020.

With continued funding, the Oregon Climate and Health Program will provide a 2 year progress update. Specific progress measures will be integrated into a public health preparedness capabilities assessment. For more information on implementation and evaluation join the Oregon Climate and Health Network.

A black and white photograph of a two-lane road winding through a dense forest of evergreen trees. The road is shrouded in thick fog, obscuring the distant landscape. A car is driving away from the viewer in the center of the road. On the right side of the road, there is a rectangular sign that reads "DO NOT PASS" with a smaller sign below it. The sky is overcast and filled with soft, diffused light.

Take Action

# INVOLVE

Inclusive communication with diverse stakeholders and meaningful opportunities to participate in program development and community health planning processes.

## STRATEGY 1

# Standardize the use of an equity framework

## STATE

- A** Establish an ongoing division-wide Health Equity Committee.
- B** Adopt a comprehensive health equity conceptual framework.
- C** Consult and collaborate with the Office of Equity and Inclusion (OEI) and regional health equity coalitions.
- D** Partner with OEI to provide training for state and local partners on environmental justice.



## LOCAL

- A** Work across programs to adopt and use an equity lens or framework.
- B** Consult and collaborate with the regional health equity coalition.
- C** Participate in and promote environmental justice trainings.

# Why is climate change a health equity issue?

[Click to watch full length video on youtube](#)

**Did you know...**

# Listen to new voices and empower new leaders

## STATE

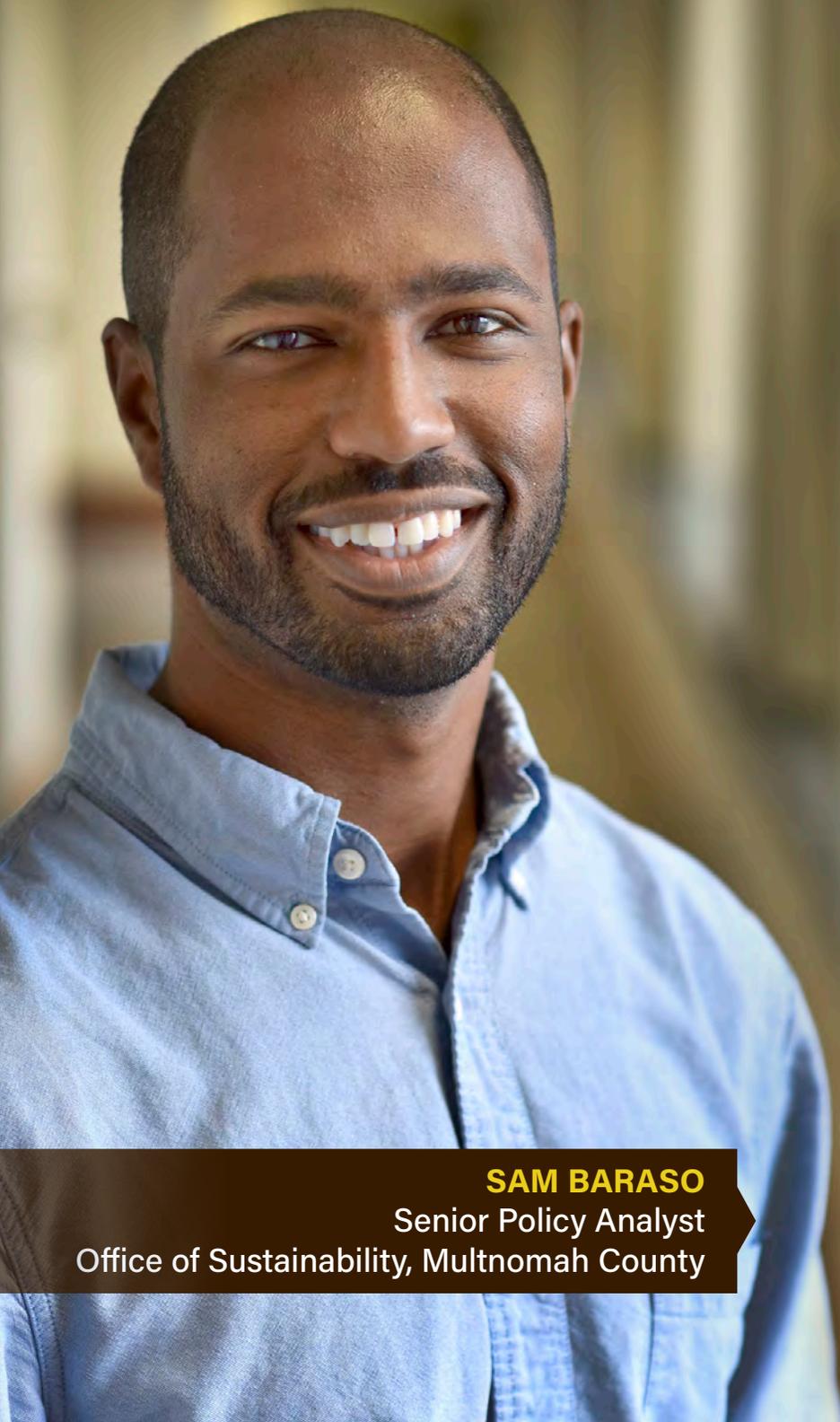
- A** Increase institutional resilience using OEI's priority actions. These include best practices in hiring and retaining a diverse workforce and fostering authentic, community partnerships based on strengths.
- B** Increase the flexibility of public health programming for more culturally responsive approaches, promising practices and community pilot projects.
- C** Assist with the integration of climate and health information into academic curriculums and community educational forums to equip prospective public health workers and partners with the tools and knowledge they need to lead.



## LOCAL

- A** Increase institutional resilience through equity and inclusion improvements, including best practices in hiring and retaining a diverse workforce, and fostering authentic, community partnerships based on strengths.
- B** Increase the flexibility of public health programming for more culturally responsive approaches, promising practices and community pilot projects.
- C** Investigate creative staffing for climate-related work, such as the AmeriCorps VISTA program or internships with local community colleges and universities.

What happens when we  
listen to diverse voices?



**SAM BARASO**  
Senior Policy Analyst  
Office of Sustainability, Multnomah County

*“Climate change is a symptom of the same systems and institutions that have created deep inequities. As we bring about transformations to address climate change, it is simply not enough to reduce pollution across our communities. Communities of color, low income communities and others must have equal roles in the solution. Resilience functions best in the absence of vulnerability — economic, social or otherwise.”*



***“To support community change we have to be grounded in what the community needs, not just what we perceive they need. Engaging the community and partnering with traditional health workers, such as Peer Wellness Specialists and Community Health Workers, is key.”***

**CHARMAINE KINNEY, MPA-HA**

Sr. QM Coordinator, Multnomah County  
Mental Health and Addiction Services Division



*“There is much to learn from Community Health Workers who deeply know and understand the communities they serve”*

**CELIA HIGUERAS**  
Program Coordinator,  
(ORCHWA)

*“By listening to these voices, honoring the different ways of knowing and different ways of leading, we can become a stronger public health system.”*

**EDNA GLENA**  
Director, (ORCHWA)  
Oregon Community Health Workers Association

# PARTNER

Foster, leverage and maintain relationships with government agencies, private sector partners, academic partners, nonprofits and diverse community-based organizations.

## STRATEGY 3

# Ensure meaningful engagement in planning and action

## STATE

- A** Provide financial and technical support to local and tribal health jurisdictions to carry out community-led climate adaptations and interventions.
- B** Provide community engagement dollars to support community participation in local climate and health planning and action.
- C** Evaluate community adaptation projects that contribute to understanding and expanding the evidence base for interventions to build climate resilience.



## LOCAL

- A** Engage community partners and provide resources (e.g., honorariums, interpreter services, meals, transportation, child care, etc.) to support involvement.
- B** Pursue policy changes identified through partnerships with affected communities and stakeholders.

What does meaningful  
engagement look like?

A man with a shaved head, wearing a light blue patterned short-sleeved button-down shirt and a brown belt, stands in front of a corrugated metal wall. The wall has vertical ridges and some blue fasteners. The lighting is bright, suggesting an outdoor or well-lit indoor setting.

**TONY DEFALCO**  
Coordinator  
Living Cully

“Having community members involved is really important. We had a much richer outcome, because of their involvement. *There were things that were included that would not have been included without meaningful community participation.* It also built self-esteem and empowered community members to get more involved.”



**REBECCA WELLS-ALBERS**  
Brownfields Coordinator,  
DEQ Northwest Region

*“It’s about finding those community leaders and supporting them, financially and with other resources — translators, child care, food — it enables people to attend and participate. Finding ways to honor their contributions shows that we understand the investment they are making for the public good and that their contribution is really important to our publicly funded project.”*

## STRATEGY 4

# Acknowledge and support programmatic activities that strengthen social networks and social cohesion

## STATE

- A** Collaborate with community partners to conduct a social resilience study that evaluates public health's role and capacity to strengthen social networks and social cohesion in Oregon. This will identify existing activities that include social cohesion components and opportunities to increase these kinds of approaches in public health service delivery.
- B** Share findings with partners and community stakeholders and develop short-term priority actions.
- C** Implement priority actions that build social resilience components within public health programming.

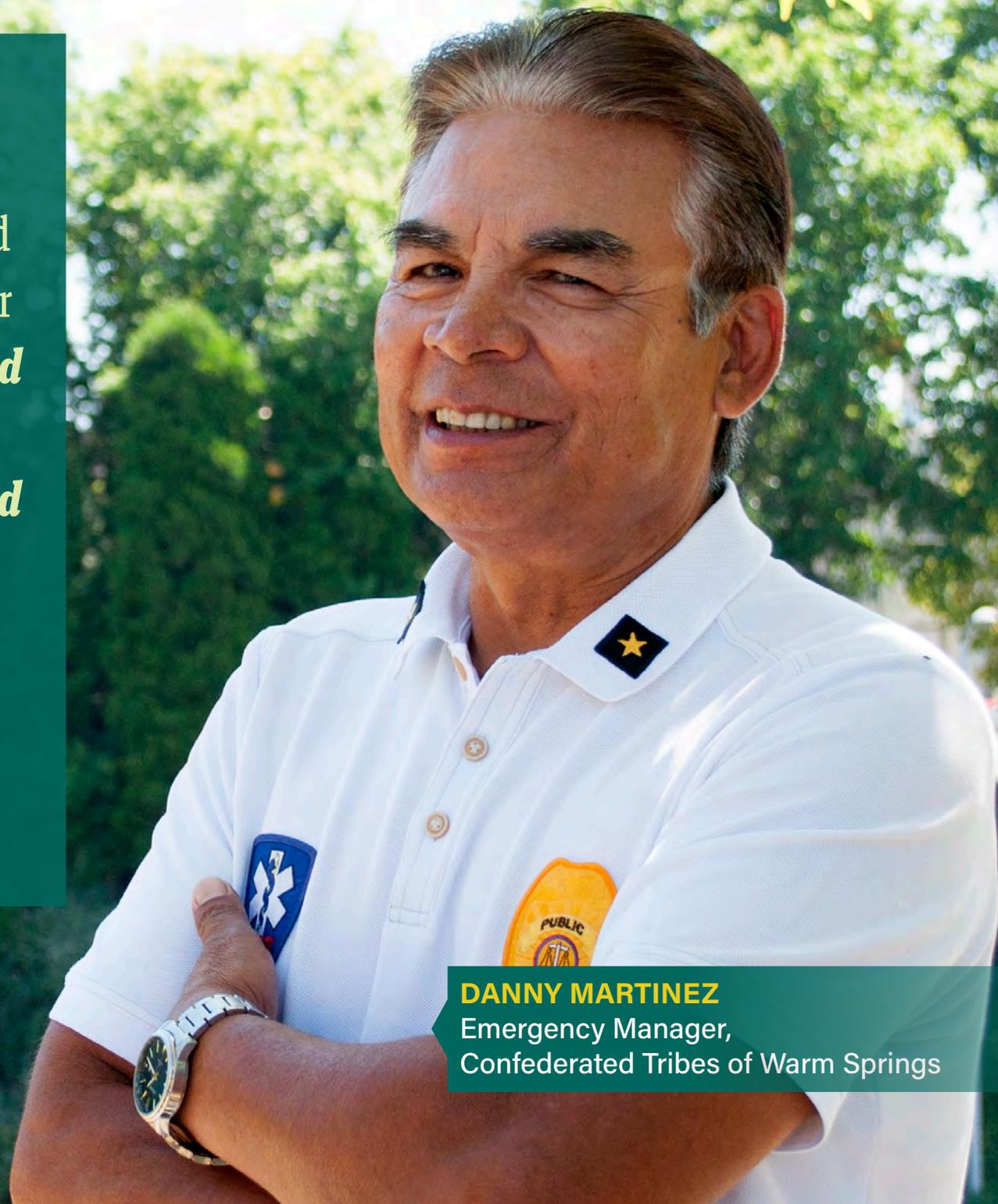


## LOCAL

- A** Participate in the Public Health Division's social resilience study by providing information about current local programming.
- B** Identify and implement priority actions that strengthen social networks and social cohesion within public health programming.

Why do social networks matter?

“Educating people on climate change and why we need to act must center on reconnecting and rebuilding respect, for each other and the earth. ***Feeling connected to other humans and the greater world is central to good mental health.*** Although no one knows exactly how to solve climate change, everyone holds a role in healing and protecting our communities.”



**DANNY MARTINEZ**  
Emergency Manager,  
Confederated Tribes of Warm Springs



“ Our community, in many ways, is very divided. Yet, in the face of the storm, *people who hadn’t talked to each other in years were working side-by-side.*”

**GEOFF WULLSCHLAGER**

City Manager,  
City of Wheeler

A photograph of Tom Engle, an older man with a white beard and glasses, wearing a blue and white striped button-down shirt and khaki pants. He is standing on a paved sidewalk outdoors, with a white railing and greenery in the background. The image is partially overlaid with a dark brown text box on the left and a black caption box at the bottom right.

***“Strengthening social networks***  
and social cohesion, building  
social resilience and supporting  
all public health efforts that  
build community are probably  
the most important long range  
strategies we have to avoid  
climate disaster.”

**TOM ENGLE**

Retired Health Department Director  
and Public Health Nurse

# ASSESS

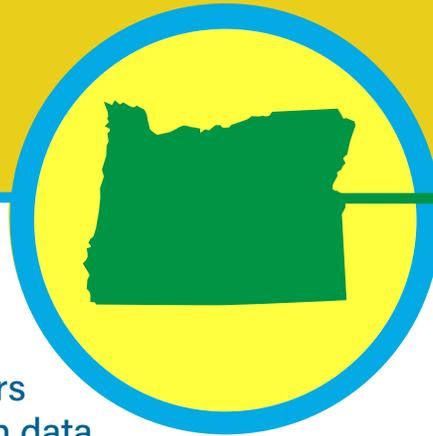
Gather, analyze and share data to produce a clear and usable understanding of health status, vulnerabilities, disparities and opportunities in Oregon.

## STRATEGY 5

# Prioritize, track, analyze and share key climate and health indicators in Oregon

## STATE

- A** Prioritize and track indicators of climate change.
- B** Provide trainings to community partners on how to use and communicate health data to inform specific public health interventions for climate change.
- C** Gather input from diverse stakeholders on what data products they find most useful.



## LOCAL

- A** Prioritize local climate risks and indicators.
- B** Monitor indicators and use Oregon's syndromic surveillance system (ESSENCE) to inform public health interventions for climate change.

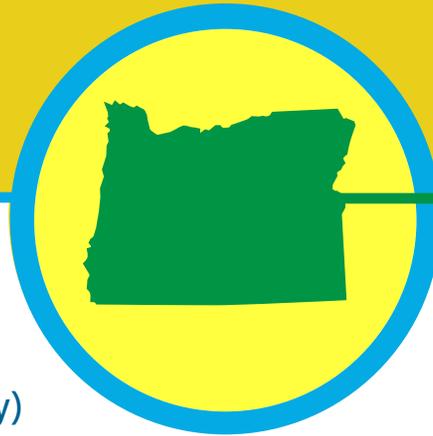
What's syndromic surveillance?



# Use mixed methods to assess resilience

## STATE

- A** Expand local Resilience Planning Toolkit to include guidance on assessing community resilience (assets, strengths and adaptive capacity) and gathering diverse narratives as part of climate and health assessments.
- B** Expand the climate-focused Social Vulnerability Assessment (SoVA) to include climate-related data and adaptive capacity measures.
- C** Engage diverse partners, including indigenous communities, in identifying and generating meaningful qualitative and quantitative data to inform local and culturally appropriate climate action.



## LOCAL

- A** Increase the number of jurisdictions with local resilience assessments and plans.
- B** Engage diverse partners, including indigenous communities, in identifying and generating meaningful quantitative and qualitative data to inform local and culturally appropriate climate action.

*“When we pair qualitative data with quantitative data, we get a much richer picture of what’s going on in a community. With the use of mixed methods, we can increase our understanding of an environmental health problem and expand our perspective to include more community-identified solutions.”*



**KARI CHRISTENSEN, MPH**

Brownfield Coordinator  
OHA-PHD Environmental Public Health

# PLAN

Identify, develop, implement and maintain plans and policies to protect and improve the public's health.

## STRATEGY 7

# Increase the number of policies and plans that include health and climate considerations

## STATE

- A** Incorporate climate considerations into agency-wide planning (Statewide Health Improvement Plan and the Public Health Division's Strategic Plan).
- B** Provide guidance to local health jurisdictions on how to incorporate climate considerations into assessment and planning.
- C** Conduct analyses of health impacts to assess and communicate the health burdens and benefits of proposed policies, including disparate impacts.



## LOCAL

- A** Integrate climate considerations into community health assessments, community health improvement plans (CHIPs) and other community and environmental health assessments.
- B** Provide climate and health perspective in local planning projects being led by other non-public health agencies in the city or county.

How do we get health  
in all policies?



**MARY KYLE MCCURDY, JD,**  
Policy Director and Staff Attorney,  
1000 Friends of Oregon

*“There is a great deal of health information available that should be incorporated into decision-making on land use, transportation and reduction of greenhouse gas emissions. I’ve learned that there needs to be more connections made between the agencies dealing with public health and with land use and transportation.”*



“Having the engagement of public health partners around the Climate Smart Communities project was really helpful. To show what’s possible, how health considerations can be integrated, and that ***there’s value in thinking more holistically about the cost and benefits of our choices.***”

**ERIC HESSE, MPP, MS,**  
Strategic Planning Coordinator,  
TriMet

# Promote and inform policies and planning that improve air quality

## STATE

- A** Use a climate and health equity lens to inform new policy to improve air quality in Oregon.
- B** Help to secure steady funding and prioritize active transportation infrastructure and public transit improvements to decrease air pollution.
- C** Support statewide efforts to reduce air pollution exposure from diesel particulate to protect all Oregon communities.



## LOCAL

- A** Develop tools and provide technical assistance to support local jurisdictions efforts to reduce exposure to air pollution.
- B** Help to inform new policies and plans to protect and improve air quality, including health impact assessment of proposed land use and transportation projects.
- C** Join partners to support land use and active transportation improvements to decrease air pollution.

# How are climate hazards interconnected?

[Click to watch full length video on youtube](#)



## STRATEGY 9

# Promote and inform policies and planning that improve the resilience of our local food systems

## STATE

- A** Assess our public health system's role and capacity to further support community food system strategies.
- B** Support local health jurisdictions with healthy food system planning, policies and strategies that strengthen community food systems.



## LOCAL

- A** Support community partners with developing and implementing healthy food system policies.
- B** Incorporate food system strategies into CHIPs.

# Who can we partner with to strengthen food systems?

[Click to watch full length video on youtube](#)



# PREPARE

Coordinate, exercise, improve, and maintain preparedness and response plans to protect the public, particularly vulnerable populations, during natural and manmade disasters and emergencies.

# Integrate climate and health information into coordinated emergency preparedness plans and activities

## STATE

- A** Provide guidance and tools for local preparedness planners to lead on incorporating climate and health considerations into their jurisdiction's emergency preparedness planning.
- B** Adapt programming and coordination in response to the results of the 2016 Public Health Hazard Vulnerability Assessment.
- C** Collaborate with partner state agencies to identify areas where emergency preparedness and adaptive management can be coordinated.



## LOCAL

- A** Review and use climate and health guidance and tools for local preparedness planners.
- B** Incorporate social vulnerability and climate resilience considerations into local vulnerability assessments and hazard mitigation planning.
- C** Inform and support changes in local land use and zoning code to improve the safety of future development.

How do we protect communities  
from climate hazards?



**MALIA LOSORDO,**  
OSU student and  
OWRD research assistant

“Climate change harms human-environmental systems as a whole. Adapting to climate change will require agencies responsible for narrow aspects of these systems — such as environmental quality, wildlife, human health, or our state highway system — ***to work together to develop strategies that address the interconnected impacts of climate change.***”



“Working with partners across sectors, we can develop new tools that will allow us to take *a more systems approach to hazard mitigation.*”

**STEVE LUCKER,**  
Natural Hazard Mapping Specialist,  
DLCD

# Support emergency planners in involving diverse populations in culturally responsive ways

## STATE

- A** Connect partners in emergency management with resources to maximize engagement of diverse populations.
- B** Learn from and collaborate with mental health partners to provide training on trauma-informed approaches, including best practices in mental health preparedness and mental health first aid.



## LOCAL

- A** Participate in training to incorporate trauma-informed and strengths-based approaches to preparedness planning and response.
- B** Strengthen relationships with community-based organizations that represent and serve diverse populations.
- C** Provide the health equity perspective in local cross-sector emergency planning and invite community-based organizations to the table.

# Who are our vulnerable populations?

[Click to watch full length video on youtube](#)



# COMMUNICATE

Engage in open and ongoing dialogue with the diverse members of the public as well as a wide variety of public and private sector stakeholders.

# Partner with health care providers to deliver climate and health messages

## STATE

- A** Work with partners to develop concise messages and culturally responsive actions that individuals can take to protect their families from climate-related hazards.
- B** Partner with health care providers and other direct service providers to develop continuing education opportunities and guidance on risk communication and public education.
- C** Partner with health care providers and other direct service providers to disseminate messages and/or materials to inform and educate the public on climate and health actions.



## LOCAL

- A** Partner with health care providers and other direct service providers to disseminate messages and/or materials.
- B** Host relevant guest speakers and invite direct service providers and those working in the health care sector to learn about climate and health actions.

How do we partner with  
health care providers on  
climate change?



“During emergencies, new protocols may need to be developed and tested. ***Participating in cross-sector drills would be a helpful way to interact and train with our partners ...*** to better understand everyone’s role and responsibilities”.

**MIMI HALEY**  
CCO director,  
CareOregon



“Through relevant and evolving educational opportunities, we can keep nurses informed about the impact of environmental factors on public health. ***Providing continuing education that builds the climate literacy of our workforce*** helps the nursing profession continue to provide quality care to our patients and our communities.”

**PK MARTIN**

Education and Research Specialist,  
Oregon Nurses Association

# Use storytelling methods, such as case studies and story maps, to engage and learn from stakeholders

## STATE

- A** Update local Resilience Planning Toolkit to include tools to conduct story projects, story maps and case studies.
- B** Develop and deliver training to local partners to conduct a community resilience story project.
- C** Lead or support story projects that lift the voices of specific populations including climate refugees, tribal elders and migrant farmworkers.
- D** Use social media tools to share stories and collecting feedback to inform climate and health programming.



## LOCAL

- A** Participate in story project training.
- B** Use case studies and story projects to engage with diverse stakeholders and advance climate and health work.

Why are we spending  
time telling stories?

*“It can be hard to engage people with just a table full of numbers. Using maps, charts and images makes it easier for people to see themselves in the story told by the data. It's a great way to reach a broad audience.”*

**BRENDON HAGGERTY**

MURP environmental health specialist,  
Multnomah County Health Dept.

*“Case studies can help us identify emerging priorities and new protocols for building resilience to extreme weather events. They can be valuable in starting conversations about climate and adaptation with partners and revealing opportunities to improve coordination.”*



**TALIA JACOBSON**

MURP long-range planner,  
ODOT

# LEAD

Provide and maintain strategic direction, performance improvement systems and an empowered workforce that reflects the community being served.

# Provide bold leadership on climate

## STATE

- A** Provide clear leadership on climate and health issues through formal statements and by signing on to joint declarations and resolutions that call for actions to address climate change.
- B** Establish or join a work group to coordinate and align climate action across state agencies.
- C** Seek opportunities to represent public health and health equity concerns on commissions, councils or other committees.



## LOCAL

- A** Provide clear leadership on climate and health issues through formal statements and by signing on to joint declarations and resolutions that call for climate action.
- B** Develop (or participate in) a cross-sector climate change work group at the local level.
- C** Seek opportunities to represent public health and health equity concerns on commissions, councils or other committees.

# Why should we take the lead on climate change?

[Click to watch full length video on youtube](#)



# Improve internal operations to lower carbon footprint

## STATE

- A** Support public health employee participation in an internal sustainability committee.
- B** Include the input of the sustainability committee into worksite wellness efforts and other decisions that affect worksite environments, practices and policies.
- C** Support the sustainability committee's participation in the Inter-Agency Sustainability Coordinators Network to align and collaborate with other state agency sustainability programs and projects.



## LOCAL

- A** Support public health employee participation in an internal and/or inter-agency sustainability committee.
- B** Include sustainability considerations in worksite wellness efforts and other decisions that affect worksite environments, practices and policies.

How do we walk the talk?



“Whatever the current project is: recycling improvements, composting, computer electricity reduction, a stair-walking campaign, etc. ... ***our colleagues just want concise, fun, explicit information on what they can do to be a part of the solution.***”

**PETE FARRELLY, PE**

Chair of PHD Sustainability Committee  
Oregon Drinking Water Program

# Train the public health workforce

## STATE

- A** Build climate and health literacy among public health practitioners and partners, including how to integrate climate considerations into public health practice.
- B** Host a statewide climate and health conference for local and tribal health jurisdictions and community partners. Coordinate with diverse partners to develop and deliver the conference programming.
- C** Provide trainings on adaptive management and continuous improvement throughout the public health system as a transferrable skillset. This will improve the ability to respond to climate-related disruptions among other systemic challenges that may or may not be directly related to climate.



## LOCAL

- A** Build climate and health literacy among public health practitioners and partners, including how to integrate climate considerations into public health practice.
- B** Participate in climate and health conference.
- C** Participate in trainings on adaptive management and continuous improvement best practices.

How do we build our  
capacity to take action?



“Promoting continuous improvement and embracing *adaptive management practices can help us develop a culture of readiness* that will increase our capacity to respond to emerging risks.”

**AKIKO SAITO**

Interim Director of Emergency Operations  
OHA-PHD Health Security



“Health equity. Social determinants of health. Climate change. Our public health workforce is being called to build competencies in all of these areas. ***It doesn't necessarily mean taking on more work, but doing our work differently*** and hopefully, in more meaningful ways.”

**JULIE BLACK**

Public Health Division,  
Workforce Development Coordinator

# What Can I Do?

[Click to watch full length video on youtube](#)



[Learn More](#)



# Resources

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## INVOLVE



Climate Action through Equity:  
A Case Study



Improving Population Health  
by Working with Communities:  
Action Guide



Short Video about Community  
Health Workers in Oregon



Health Equity and Inclusion  
Program Strategies

## PARTNER



Cully Park: Improving Health  
through Community Partnerships



Indigenous Health Indicators

## ASSESS



Tillamook Case Study



Oregon's Current Syndromic  
Hazard Report



Community-Based Participatory  
Research primer

# Resources

## PLAN



The 'Health in All Policies' approach in Oregon



Climate Health Impact Assessments in Oregon

## PREPARE



Georgetown Climate Center



Community Organizations Active in Disaster: A toolbox for prospective COADs



Resilience Builder Toolkit

## COMMUNICATE



Continuing Education for Nurses in Oregon: Preparing for the Health Effects of Climate Change



Diesel Particulate in Oregon — A Story Map



Climate and Health - A Story Project Guide

## LEAD



Resilience Planning Toolkit for Local Health Jurisdictions in Oregon



Short Video on Collaborative Change

# Climate and Health Terms

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**Resilience** is the capacity of individuals, communities and systems to survive, adapt and even thrive in the face of stress and disruption

**Health** is a state of physical, mental and social well-being, and not just the absence of disease

**Public Health System** is a network of organizations and agencies working to improve and advance the health of the population

**Oregon Public Health Division (PHD)** is the organization responsible at the state level for improving and advancing the health of people living in Oregon

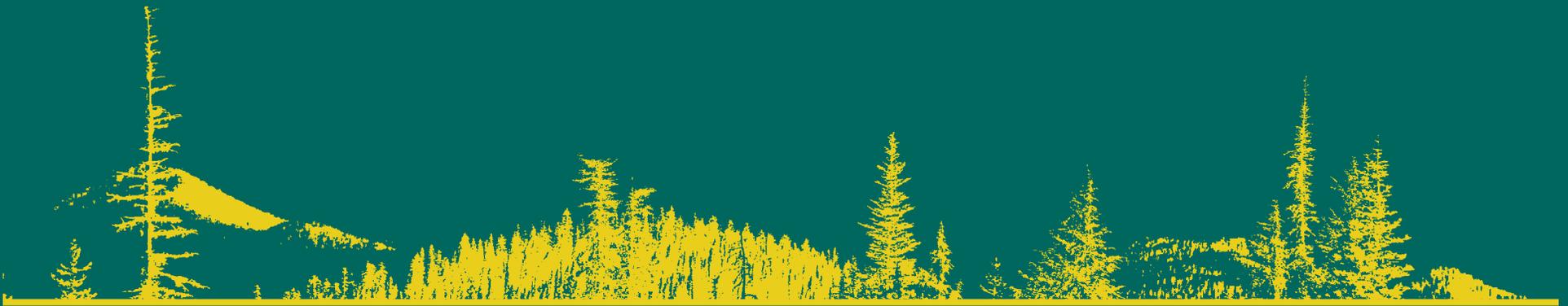
**Oregon Climate and Health Program** is a program within the Oregon Public Health Division's Environmental Health Section dedicated to building Oregon's collective capacity to adapt and thrive in a changing climate. The program is supported through a cooperative agreement with the U.S. Centers for Disease Control and Prevention (CDC).

**Local Health Jurisdictions (LHJs)** are health departments that serve members of the general public at the local level. Currently in Oregon, LHJs are county health departments with the exception of Wasco, Sherman, and Gilliam counties, which are served by a single, tri-county health district.

**Health Equity** is when each individual in a society has the ability to pursue and achieve their full health potential without being disadvantaged by variations in social, environmental and geographic circumstances.

**Health Inequities** are the avoidable differences in quality of health determined by a person's social, economic or environmental conditions; historically linked to trauma, discrimination or exclusion

**Health Disparities** are the measured differences in health status or health outcomes for people belonging to different social, economic or environmental categories; historically linked to trauma, discrimination or exclusion



**Health Determinants** are factors known to shape a person's or a population's health status. Environmental determinants include factors such as air quality, water quality, and proximity to healthy food, Social determinants include factors like poverty and historical trauma which influence an individual's cumulative exposures and ability to access resources that promote health.

**Social Vulnerability** is the tendency or predisposition to be adversely affected by health determinants in communities facing social, environmental or economic stressors.

**Communities of Color** are comprised of members of racial/ethnic minority groups including: Black/African American; Asian/Pacific Islander; Latino, Native American/Alaska Native, Slavic/Eastern European, immigrants, and refugees

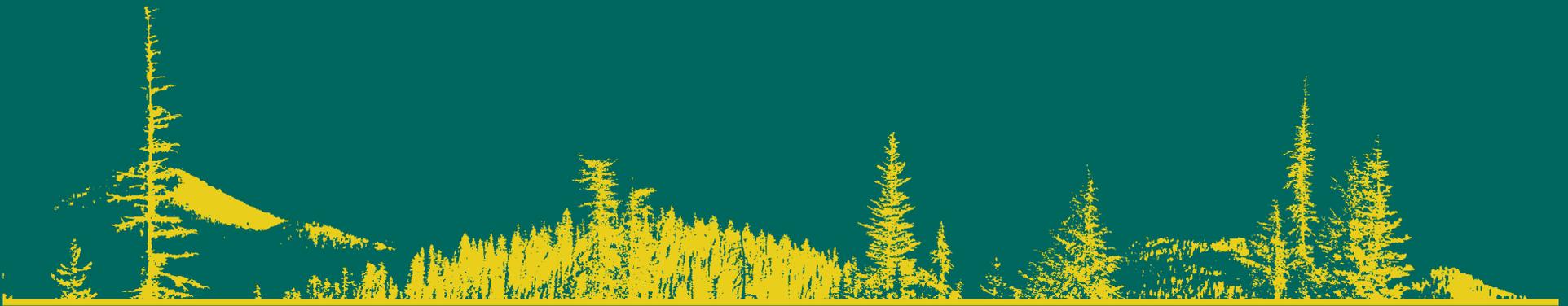
**Trauma-Informed Approach** means recognizing the widespread impact of trauma on a person or population's capacity to cope with external threats and stressors and integrating knowledge about trauma into policies and practices. Trauma refers to not just acute traumatic events, such as experiencing a house fire, but also chronic adversity such as institutional racism.

**Community Based Organizations (CBOs)** are groups run by community members and located within communities that work at a local level to address concerns or issues shared or experienced by the community

**Weather** refers to day-to-day variations in variables such as temperature, precipitation, and other aspects of the atmosphere around us. Weather patterns vary greatly from year to year and from region to region

**Climate** refers to long-term (30 years or more) average weather patterns for weather variables such as temperature, precipitation and wind. While the weather can change in minutes or hours, identifying a change in climate requires observations over a time period of decades to centuries or longer

**Climate Change** refers to changes in average weather patterns that persist over multiple decades or longer. Climate change encompasses changes in temperature and precipitation patterns, changing the risk of certain types of severe weather events.



**Drought** is a period of abnormally dry weather marked by little or no rain that lasts long enough to cause water shortage for people and natural systems

**Climate Adaptation** are action-based responses taken to lower the risk and impact of both current and projected consequences of changing climate conditions

**Adaptive Capacity** is the ability of a system, community or individual to successfully adjust to changes in the structures or systems in which they exist

**Adaptive Management** is an iterative process of robust decision-making in the face of uncertainty, characterized by active feedback loops, experimentation, and continuous improvement.

**Healthy Coping** is the ability to adapt to challenges or difficulties in a manner that is conducive to good physical, mental and emotional wellbeing

**Strengths-Based Approach** is the practice of placing a person's or population's strengths and assets in the center of problem-solving, emphasizing and utilizing existing resources and capabilities to build resilience.

**Climate Mitigation** are action-based responses that reduce factors that cause climate change, primarily actions that reduce greenhouse gas emissions.

**Co-Benefits** are additional positive outcomes that occur when taking action to address climate change.

**Collective Impact** is the result of a collaborative approach in problem solving, where partners come together across sectors and areas of expertise in order to advance a common goal

**Systems Approach** acknowledges the interactive nature and interdependence of external and internal factors, approaching complex problems with an ecological rather than a reductionist perspective.

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York E, Sifuentes J, Oregon Climate and Health Resilience Plan. Oregon Health Authority. November 2016: Portland, OR



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