Environmental Health Equity Panel

Public Health Week 2018

Health Equity
in environmental public health

Cleaner Air Oregon rulemaking

Susanna Wegner

Environmental public health tracking

Jara Popinga

Lead poisoning prevention

Ryan Barker

Brownfields

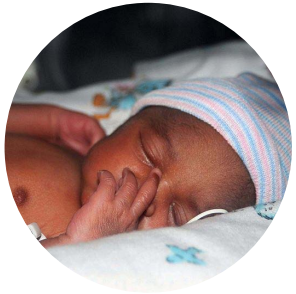
Kari Christensen

Why is environmental justice an essential lens for our public health work?

Some groups experience higher rates of disease

Asthma

More common among American Indian and African American people and people with low incomes than in other groups in Oregon



Premature birth

More common among Pacific Islander, African American and American Indian women In Oregon

Cardiovascular disease

More common among African American people and people with low incomes than in other groups in Oregon

Some people are exposed to more pollution

Home

Food & Water

Work

Consumer Products

School

Behavior

Some people are more susceptible to pollution

Psychosocial stress

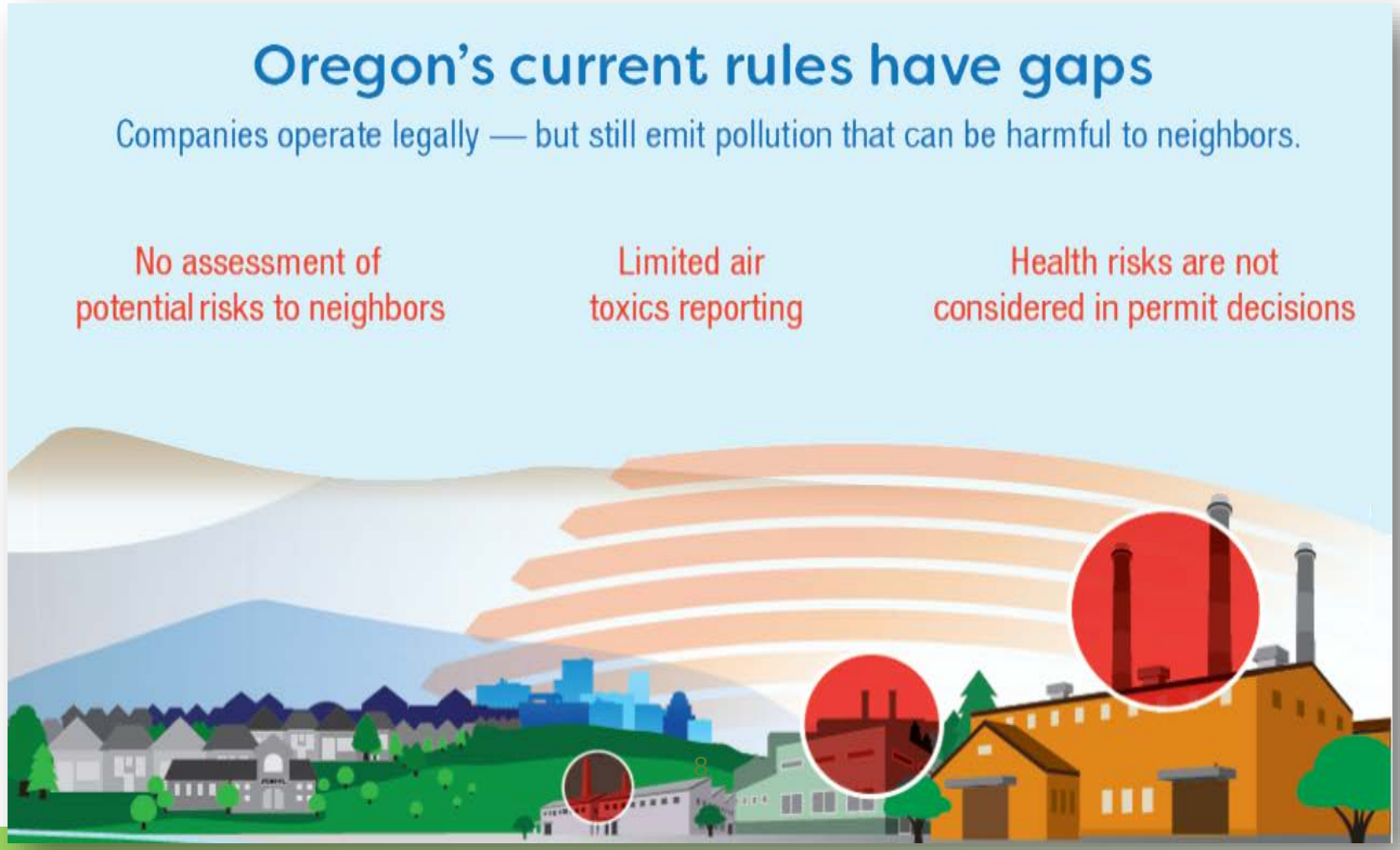
Nutrition

Pre-existing health conditions

Applying an environmental justice lens to the rulemaking process

PUBLIC HEALTH WEEK April 3, 2018

Why Cleaner Air Oregon?



How Would Cleaner Air Oregon Work?

Report air toxics

Companies to report use of 600 heavy metals and other pollutants to state regulators

Assess risk

Facilities would calculate potential health risks to people who live, work, and go to school nearby.

Regulate to reduce risk

Companies would have to act if the air toxics they emit exceed health Risk Action Levels.

Environmental justice best practices

- EPA EJ guidance
- Oregon's EJ Task Force
- Other state programs
- Feedback from advocates
- Rules Advisory Committee

Environmental justice best practices

- Provide opportunities for meaningful involvement in rule *development*
- Ensure opportunities for meaningful involvement in rule *implementation*
- Ensure fair treatment in rule *implementation*
- Protect the most impacted communities
- Consider cumulative impacts

EJ in the rule development *process*

- **Rules advisory committee**
  - Included representatives from EJ and other community advocacy groups
  - Opportunities for public comment at each meeting
- **EJ Task Force**
  - Provided feedback on early conceptual documents & draft rules
  - Hosted a CAO public hearing
- **3 community workshops**
  - Hosted by EPA in partnership with community groups
  - Provided training on how to give effective public comment
- **9+ public hearings**
  - Timing and locations selected based on input from communities
  - Available via remote access
  - Explainer videos and factsheets in multiple languages posted online

EJ in the draft rule *content*

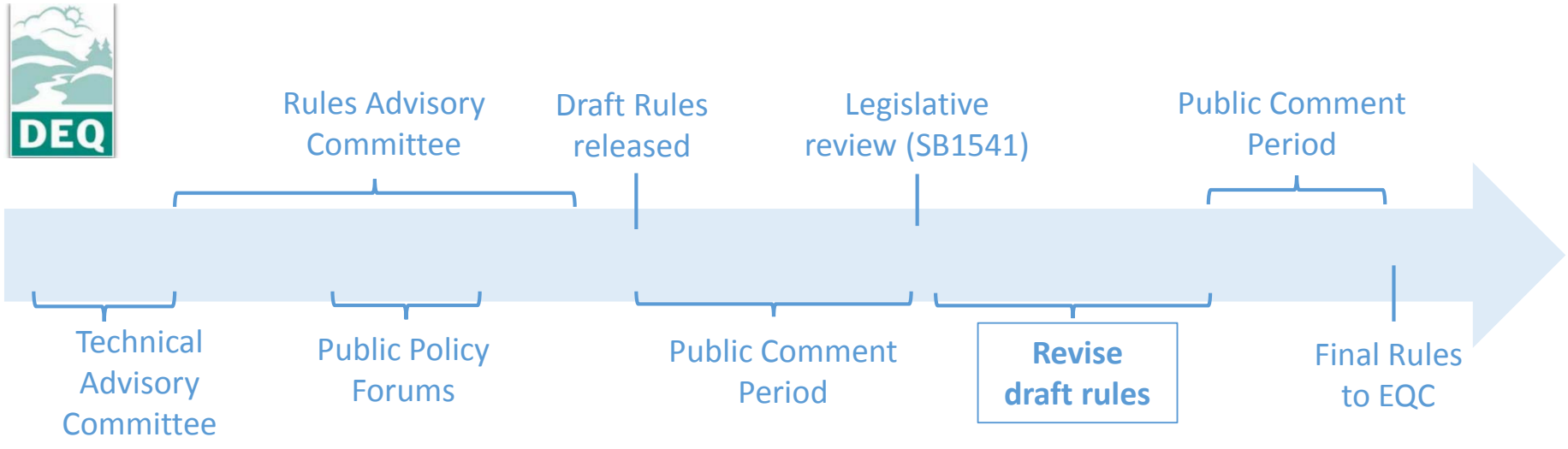
Protect the most vulnerable

- Prioritize facilities based on risk as well as community demographics
- Select health standards designed to protect the most sensitive populations
- Consider cumulative risks

Honor communities' right to know

- Make emissions information public
- Notify neighbors of risks
- Provide opportunities for meaningful involvement early in the permitting process

Next Steps…


Rules Advisory Committee
Draft Rules released
Legislative review (SB1541)
Public Comment Period
Technical Advisory Committee
Public Policy Forums
Public Comment Period
Revise draft rules
Final Rules to EQC

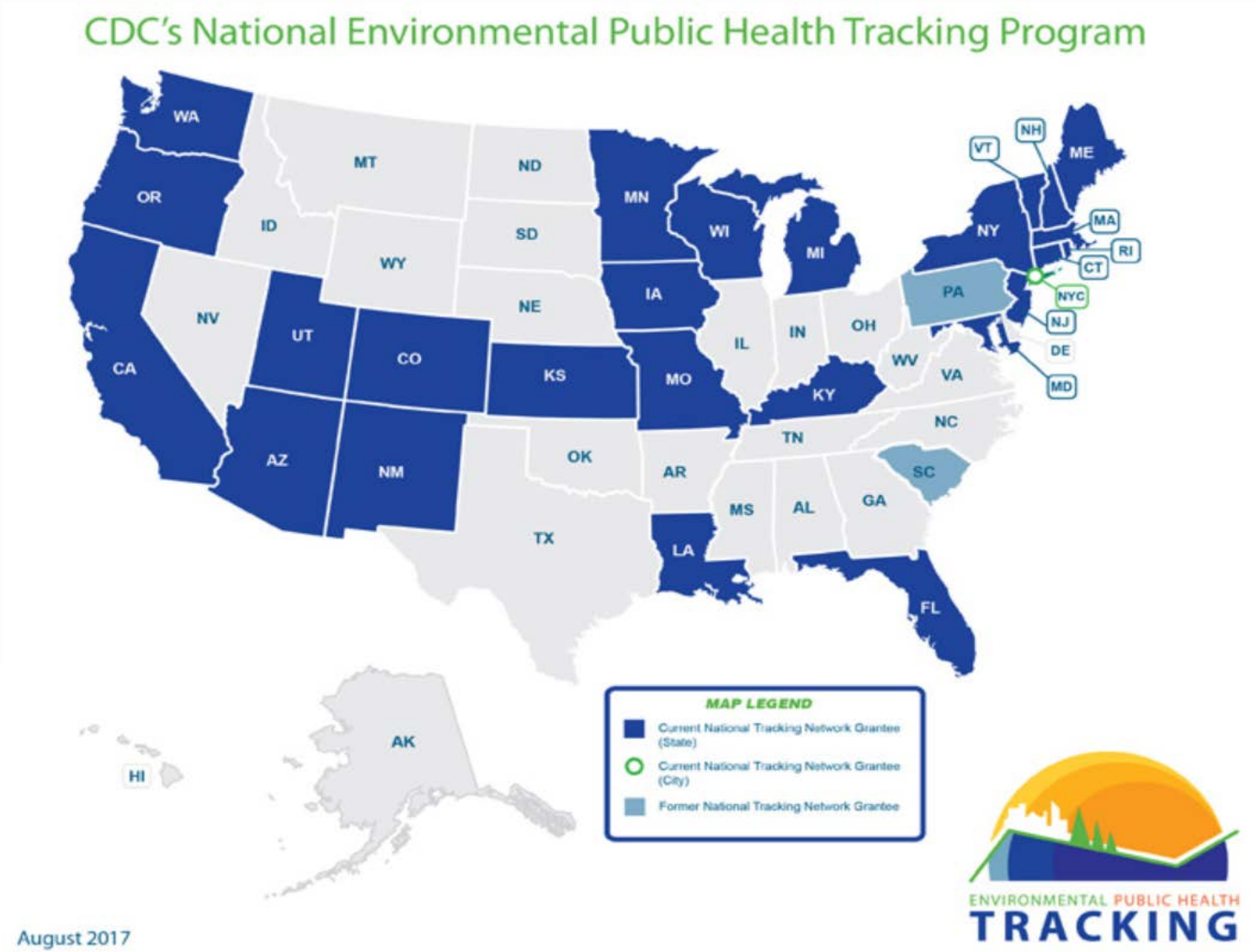
OREGON
ENVIRONMENTAL PUBLIC HEALTH
TRACKING

Health Equity

Oregon Tracking's past and current efforts

Oregon Health Authority

Environmental Public Health Tracking



OREGON
ENVIRONMENTAL PUBLIC HEALTH
TRACKING

Oregon Tracking Program

Oregon Health Authority

What is Oregon Tracking?

The ongoing collection, integration, analysis, and interpretation of data about :

(1) environmental hazards

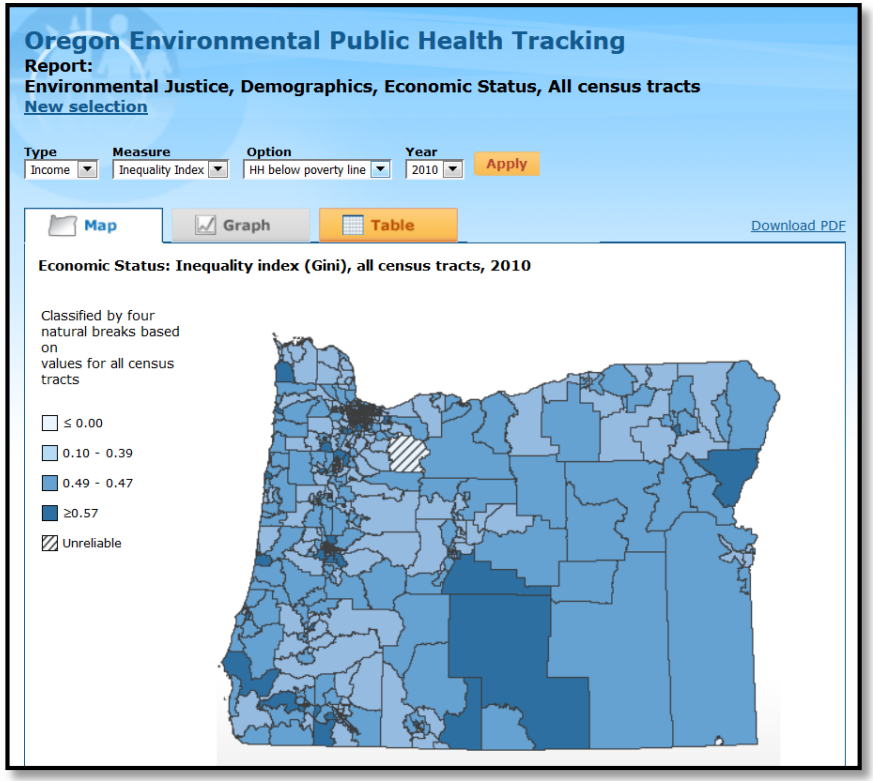
(2) exposure to environmental hazards

(3) health effects

…In OREGON

Oregon Health Authority

Oregon Tracking Portal



Demographic Indicators:

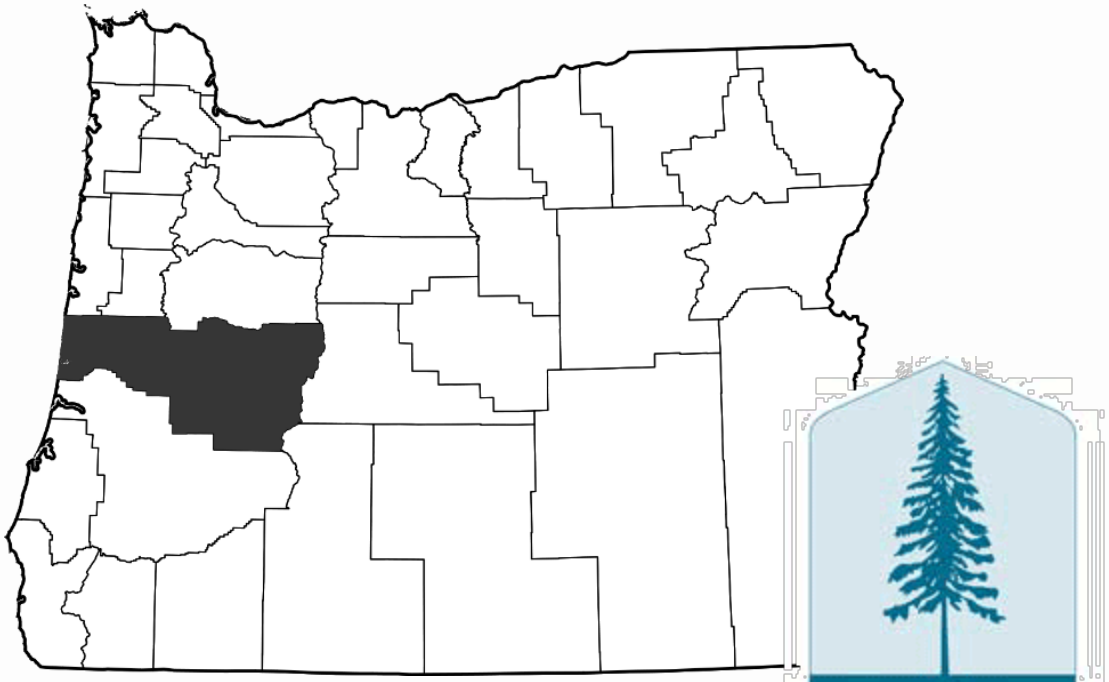
- Age, Sex, Race & Ethnicity
- Economic status (Income)
- Economic status (Housing)
- Educational Attainment
- Family Composition (% children<18, adults>=65)
- Language

Community Design Indicators:

- Alcohol, Food & Tobacco Availability
- Housing Affordability, Age, and Subsidization
- Transportation percent commuting, transit access, walkability

Public Health Action

Lane County: Identifying a rural community for focused attention by the local CCO



Oregon Health Authority

Cleaner Air Oregon

Equation 1:

$$Score = Risk^{0.75} \times \left(\frac{low\ income + minority + residents < 5 + population}{4}\right)^{0.25}$$

Where:

Risk means the percentile ranking of the risk score calculated in Equation 2

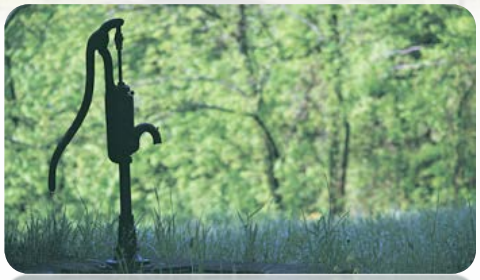
Low income means the percentile ranking of the percent of low income residents

Minority means the percentile ranking of the percent of minority residents

Residents < 5 means the percentile ranking of the percent of residents under 5 years old

Population means the percentile ranking of the total number of residents

Future Content (Oregon)



Environmental Justice

- **COMMUNITY DESIGN:** Parks & recreation; Bikability & Walkability
- **DEMOGRAPHICS:** Life expectancy; Years of Potential Life Lost

Environmental Quality

AIR: Indoor Radon Hazard; Modeled outdoor-PM2.5 & Ozone
WATER: Private water system contaminants
CLIMATE: Extreme heat events, Drought
LAND: Hazardous sites

Health Outcomes

ACUTE: Traffic Injuries
REPRODUCTIVE: Birth Anomalies
OCCUPATIONAL ILLNESSES

Oregon Health Authority

Oregon Childhood Lead Poisoning Prevention Program

Lead Vulnerability Analysis

PUBLIC HEALTH DIVISION
Environmental Public Health

Oregon Childhood Lead Poisoning Prevention Program

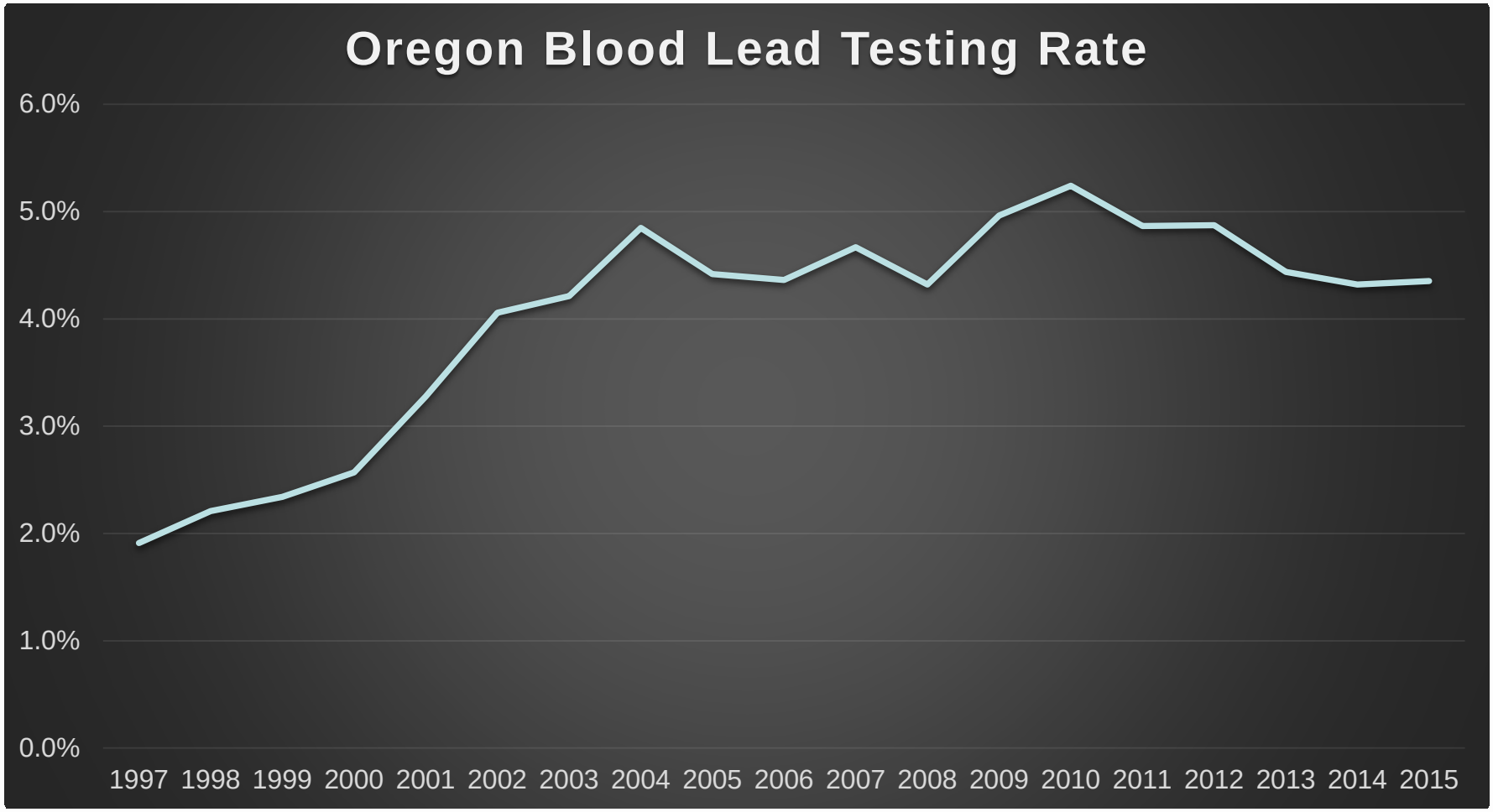
CDC/ Julia Whitney, Stephen Griffin

CDC/ Karnesha Slaughter

CDC/ CDC Connects

CDC/ Dr. Khushal Khan Kasi, Pakistan

Oregon Lead Testing Rates: < 72 months

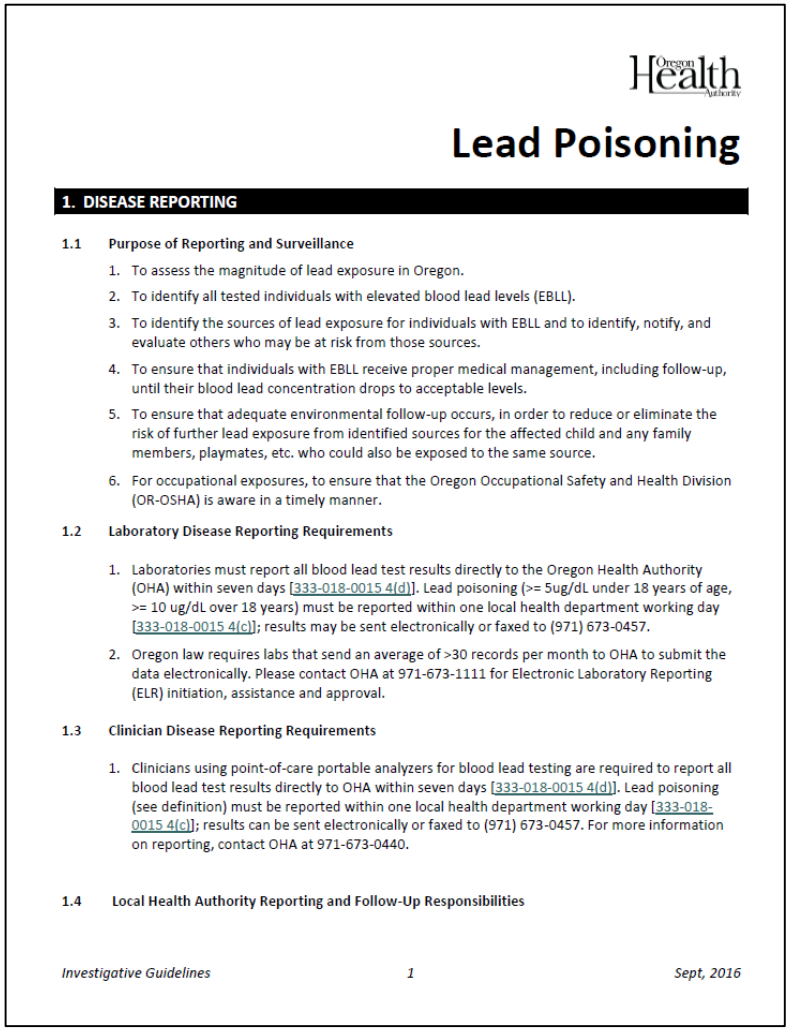


Comparable Lead Testing Rates: < 72 months

State	Year*	Testing Rate
Oregon	2015	4.4%
Washington	2012	3.3%
California	2011	18.6%
Nevada	2010	6.1%
New Mexico	2015	7.3%
US	2015	10%

**Last year data is available from CDC*

Childhood Blood Lead Levels: EBLL Case Definition



Oregon Health Authority

Lead Poisoning

1. DISEASE REPORTING

1.1 Purpose of Reporting and Surveillance

1. To assess the magnitude of lead exposure in Oregon.
2. To identify all tested individuals with elevated blood lead levels (EBLL).
3. To identify the sources of lead exposure for individuals with EBLL and to identify, notify, and evaluate others who may be at risk from those sources.
4. To ensure that individuals with EBLL receive proper medical management, including follow-up, until their blood lead concentration drops to acceptable levels.
5. To ensure that adequate environmental follow-up occurs, in order to reduce or eliminate the risk of further lead exposure from identified sources for the affected child and any family members, playmates, etc. who could also be exposed to the same source.
6. For occupational exposures, to ensure that the Oregon Occupational Safety and Health Division (OR-OSHA) is aware in a timely manner.

1.2 Laboratory Disease Reporting Requirements

1. Laboratories must report all blood lead test results directly to the Oregon Health Authority (OHA) within seven days [333-018-0015 4(d)]. Lead poisoning (>= 5ug/dL under 18 years of age, >= 10 ug/dL over 18 years) must be reported within one local health department working day [333-018-0015 4(c)]; results may be sent electronically or faxed to (971) 673-0457.
2. Oregon law requires labs that send an average of >30 records per month to OHA to submit the data electronically. Please contact OHA at 971-673-1111 for Electronic Laboratory Reporting (ELR) initiation, assistance and approval.

1.3 Clinician Disease Reporting Requirements

1. Clinicians using point-of-care portable analyzers for blood lead testing are required to report all blood lead test results directly to OHA within seven days [333-018-0015 4(d)]. Lead poisoning (see definition) must be reported within one local health department working day [333-018-0015 4(c)]; results can be sent electronically or faxed to (971) 673-0457. For more information on reporting, contact OHA at 971-673-0440.

1.4 Local Health Authority Reporting and Follow-Up Responsibilities

Investigative Guidelines 1 *Sept, 2016*

Federal

- 2012: CDC updates “level of concern” of 10 µg/dL to “reference level” of 5 µg/dL

Oregon

- CLPPP adopts CDC reference value in May 2016

Population	Surveillance	Reference Value/Case Definition
Children (< 18 years old)	All BLLs	≥ 5 µg/dL
Pregnant and Lactating Women	≥ 5 µg/dL	**≥ 5 µg/dL**
Adults (≥ 18 years old)	≥ 5 µg/dL	≥ 10 µg/dL*

Low-level Lead Studies

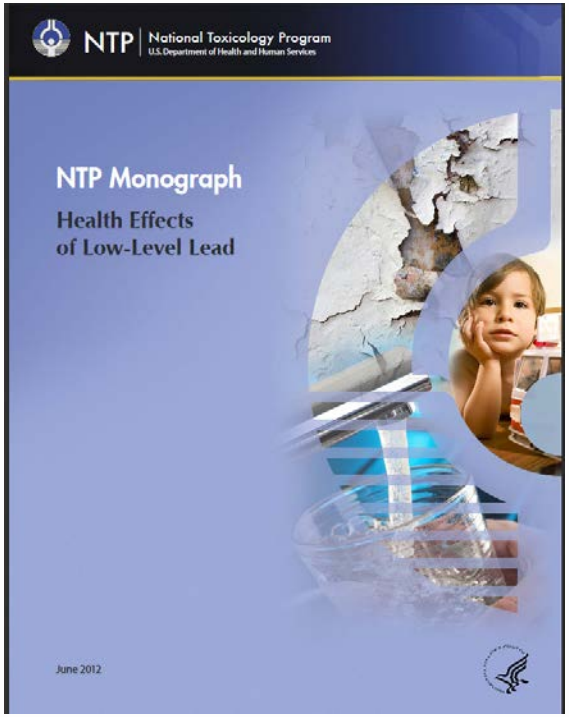


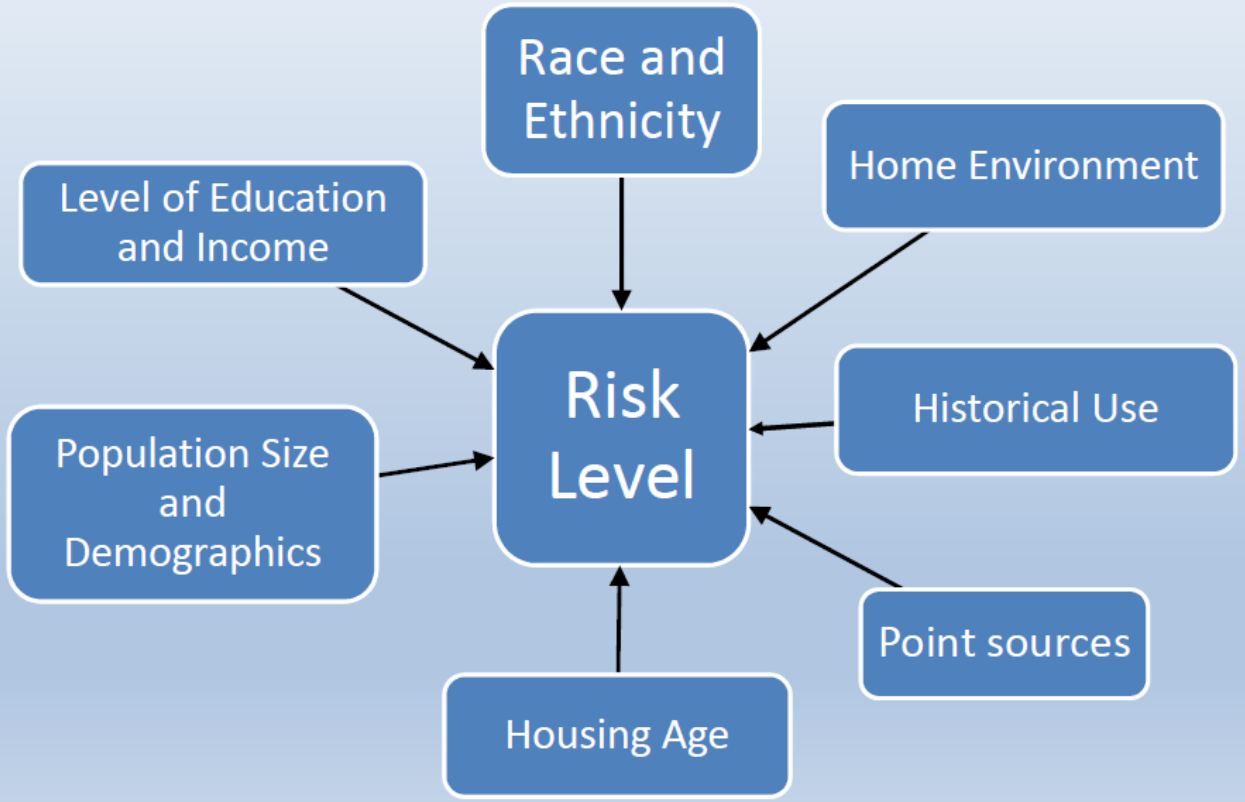
Table 1.1: NTP conclusions on health effects of low-level Pb by life stage

Life Stage	Blood Pb Level	NTP Conclusion	Principal Health Effects
Children	<5 µg/dL	*Sufficient*	Decreased academic achievement, IQ, and specific cognitive measures; increased incidence of attention-related behaviors and problem behaviors
		Limited	Delayed puberty and decreased kidney function in children ≥12 years of age
	<10 µg/dL	*Sufficient*	Delayed puberty, reduced postnatal growth, decreased IQ, and decreased hearing
		Limited	Increased hypersensitivity/allergy by skin prick test to allergens and increased IgE* (not a health outcome)
		Inadequate	*Any age* – asthma, eczema, nonallergy immune function, cardiovascular effects; *<12 years of age* – renal function
Adults	<5 µg/dL	*Sufficient*	Decreased glomerular filtration rate; maternal blood Pb

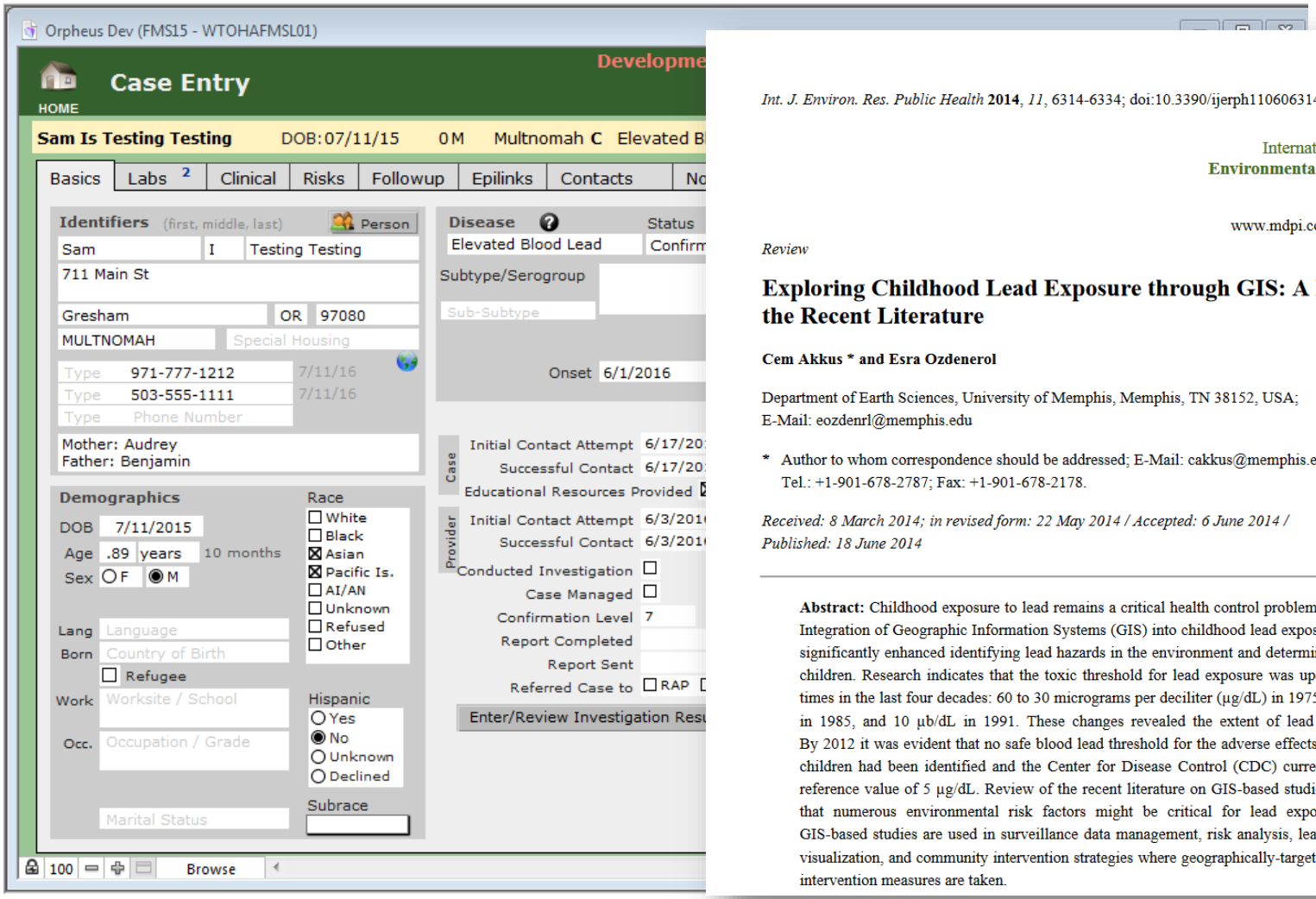
Overall, the NTP concludes that there is sufficient evidence that blood Pb levels < 10 µg/dL and < 5 µg/dL are associated with adverse health effects in children.

Lead Vulnerability Analysis for Oregon

What influences the risk of childhood lead poisoning?



State Surveillance Data and Literature Searches



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Review

Exploring Childhood Lead Exposure through GIS: A Review of the Recent Literature

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Received: 8 March 2014; in revised form: 22 May 2014 / Accepted: 6 June 2014 /
Published: 18 June 2014

Abstract: Childhood exposure to lead remains a critical health control problem in the US. Integration of Geographic Information Systems (GIS) into childhood lead exposure studies significantly enhanced identifying lead hazards in the environment and determining at risk children. Research indicates that the toxic threshold for lead exposure was updated three times in the last four decades: 60 to 30 micrograms per deciliter (µg/dL) in 1975, 25 µg/dL in 1985, and 10 µb/dL in 1991. These changes revealed the extent of lead poisoning. By 2012 it was evident that no safe blood lead threshold for the adverse effects of lead on children had been identified and the Center for Disease Control (CDC) currently uses a reference value of 5 µg/dL. Review of the recent literature on GIS-based studies suggests that numerous environmental risk factors might be critical for lead exposure. New GIS-based studies are used in surveillance data management, risk analysis, lead exposure visualization, and community intervention strategies where geographically-targeted, specific intervention measures are taken.

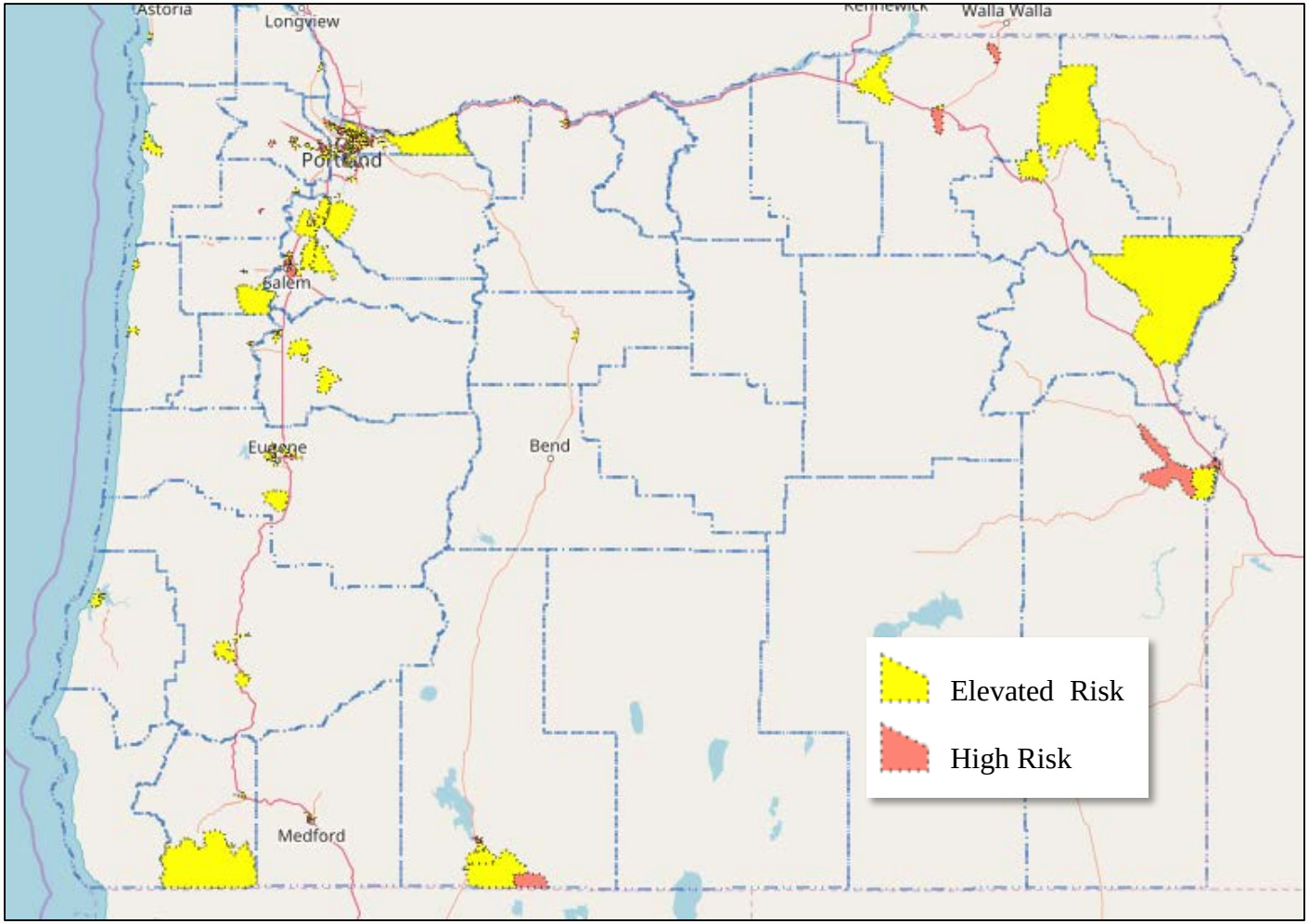
Lead Hazard Vulnerability Factors

Oregon CLPP Risk Model

- Housing Age
  - Percent of housing built prior to 1980
- Poverty
  - Percent of households below the FPL
- Young children
  - Percent of children 0-5 years old
- Foreign-born population
  - Percent of population that is foreign born

Lead Hazard Vulnerability Map

Identify census tracts across the state that are at high risk for lead poisoning



Lead Hazard Vulnerability Map

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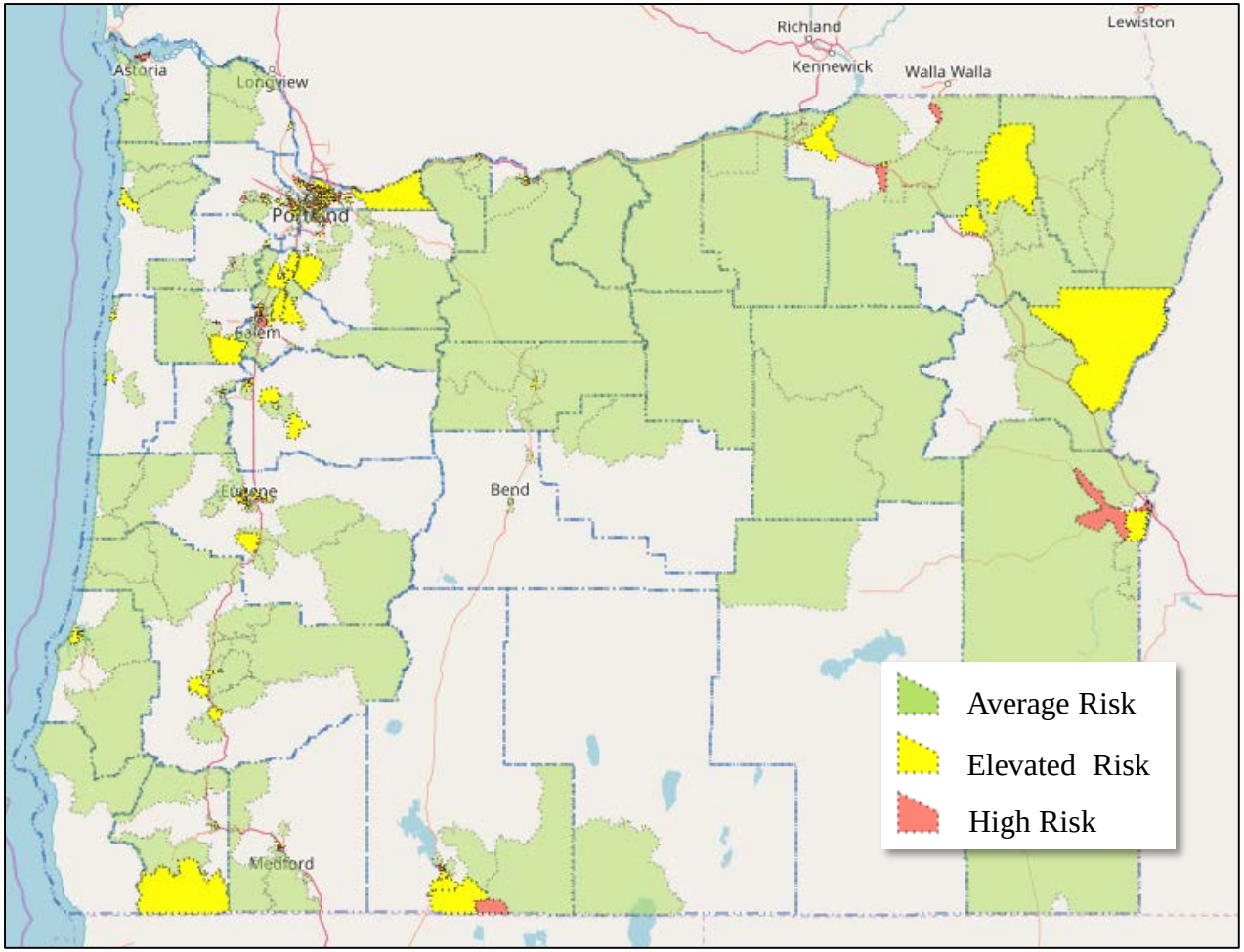
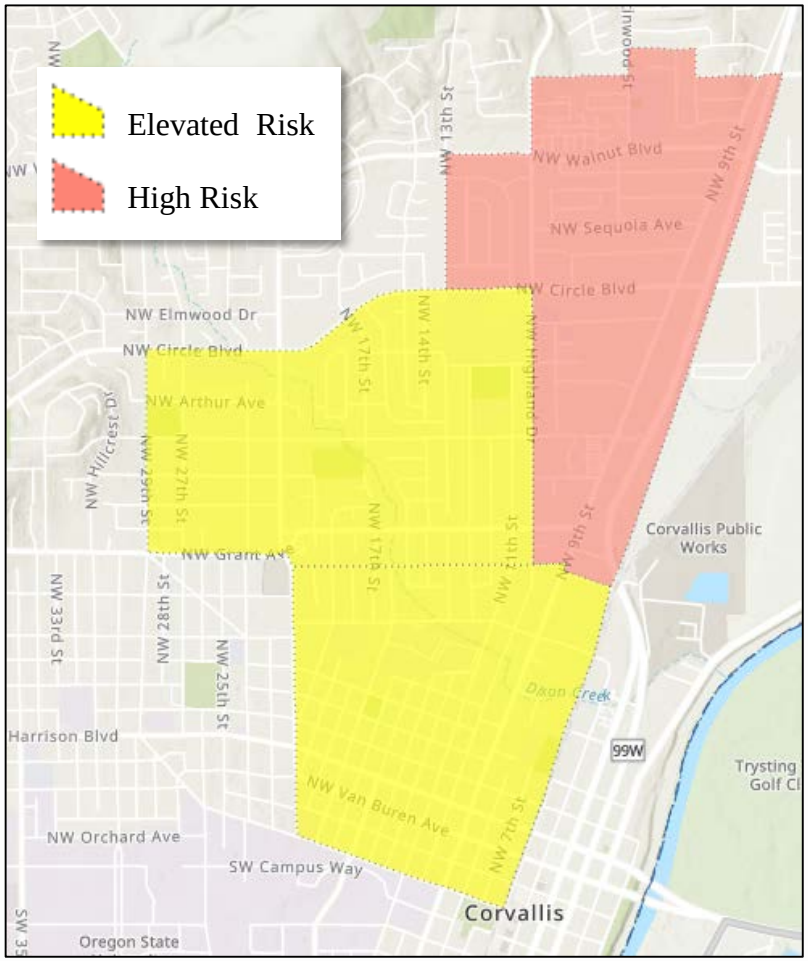
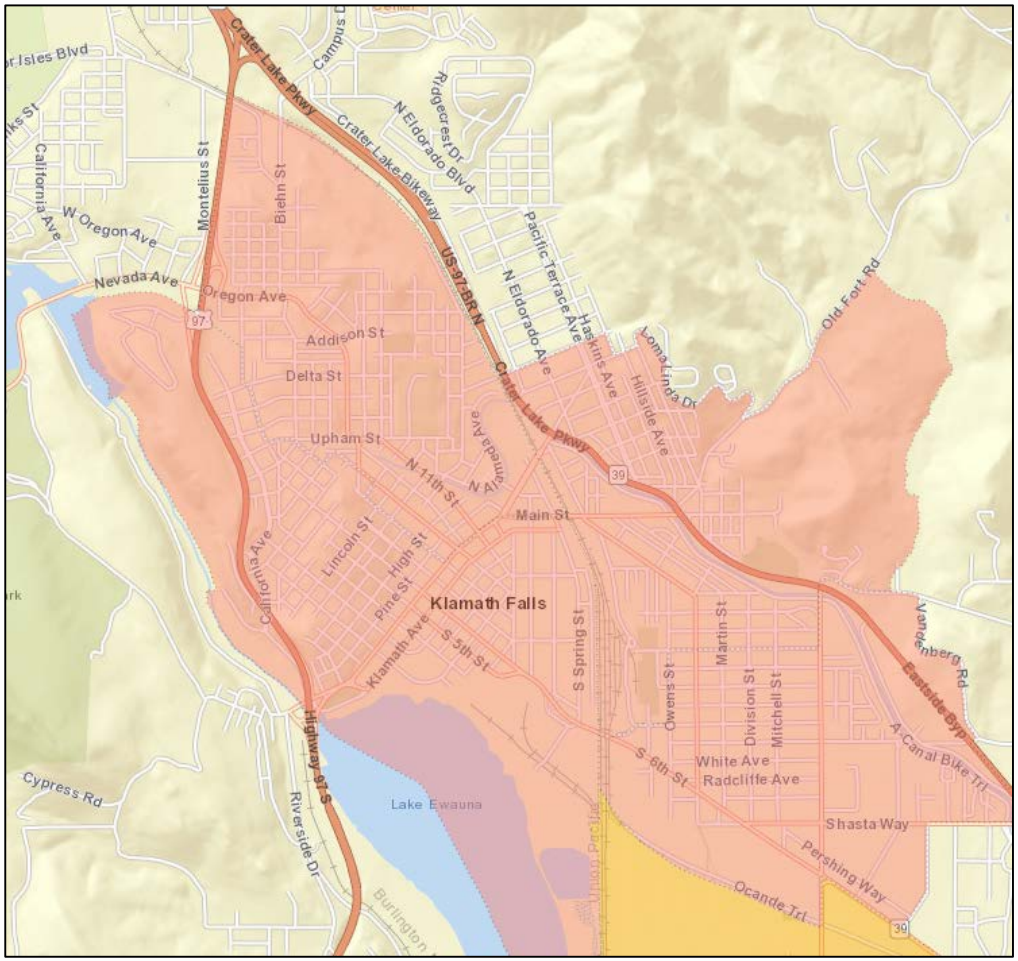


Lead Hazard Vulnerability Map: Can be zoomed in to streets

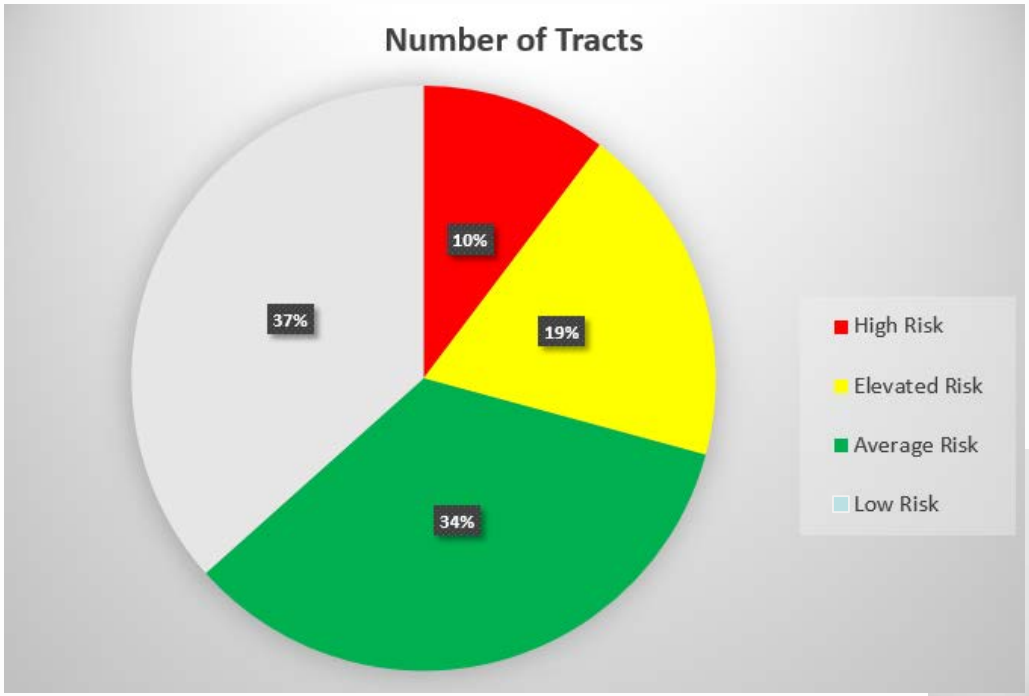


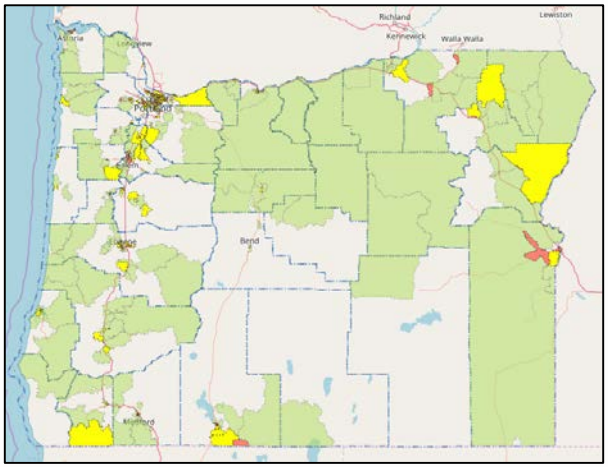
Corvallis

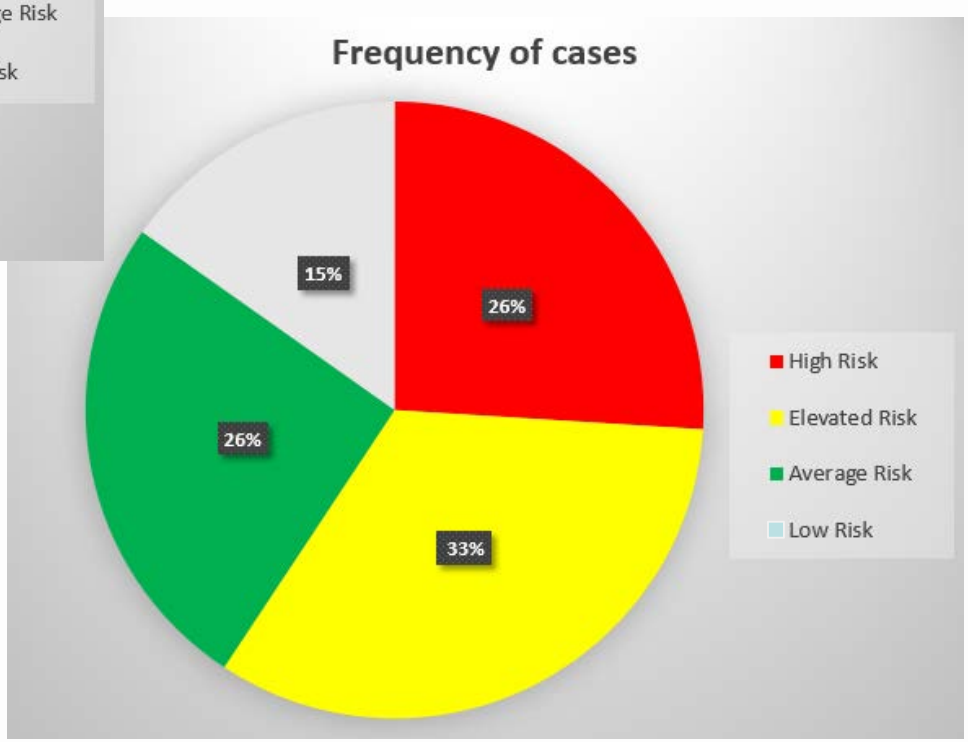


Klamath Falls

Lead Hazard Vulnerability Map and EBLL Association







Lead Hazard Vulnerability Map and EBLL Association

Vulnerability Category	Number of Tracts	Estimated Population of Children Less than 5 years old		Number of Confirmed EBLLs	Confirmed EBLLs per 1000 Children Less than 5 years old
High (> Mean + 1.5 SD)	85	29,027		256	8.8
Elevated (Mean + (0.5 SD thru 1.5 SD)	156	50,289		315	6.3
Average (Mean +/- 0.5 SD)	282	74,276		228	3.1
Low (< Mean – 0.5 SD)	302	80,026		165	2.1

Options for Using the Vulnerability Analysis

Increase Outreach on Oregon Lead Screening Questionnaire

Childhood Lead Poisoning Prevention Program
Health Care Provider Lead Screening Questionnaire

Name of patient: _____ Date: _____ Age of child: _____

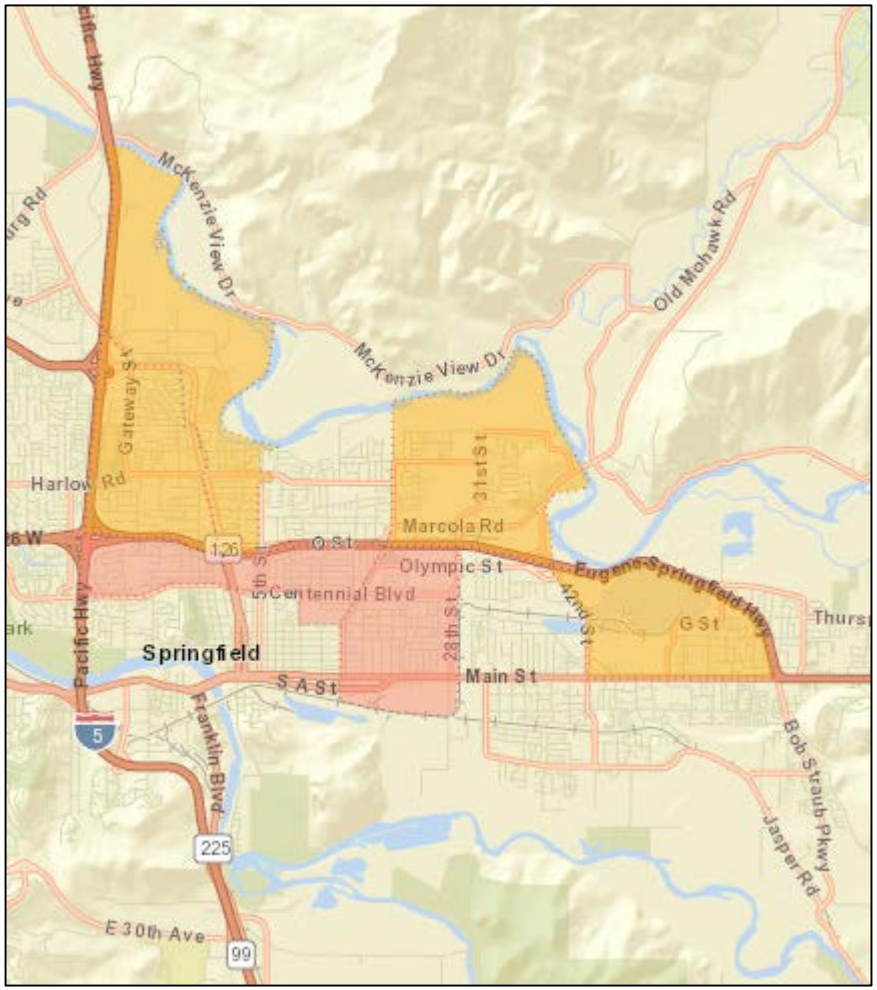
Anticipatory guidance regarding lead hazard identification and risk reduction measures should be a routine part of an ongoing educational approach for pregnant women, children and their families. The goal of lead screening is to identify children who may have been exposed to lead, provide interventions and reduce the risk of exposure. All children should be assessed for risk of lead poisoning by administration of the following questionnaire. **This questionnaire should be administrated at 1 and 2 years of age or between 3 and 5 years of age if not previously screened.** If the answer to any of these questions is "Yes" or "Don't know" a blood lead test should be performed. Follow up questions may be needed to clarify responses.

Please circle the answers to the following questions:

Has your child lived in or regularly visited a home, child care or other building built before 1950?	**Yes** **Don't Know**	**No**
Has your child lived in or regularly visited a home, child care or other building built before 1978 with recent or ongoing painting, repair and/or remodeling?	**Yes** **Don't Know**	**No**
Is your child enrolled in or attending a Head Start program?	**Yes** **Don't Know**	**No**
Does your child have a brother, sister, other relative, housemate or playmate with lead poisoning?	**Yes** **Don't Know**	**No**
Does your child spend time with anyone that has a job or hobby where they may work with lead? ***Examples:*** *painting, remodeling, auto radiators, batteries, auto repair, soldering, making sinkers, bullets,* stained glass, pottery, going to shooting ranges, hunting or fishing.	**Yes** **Don't Know**	**No**
Do you have pottery or ceramics made in other countries or lead crystal or pewter that are used for cooking, storing or serving food or drink?	**Yes** **Don't Know**	**No**
Has your child ever taken any traditional home remedies or used imported cosmetics? ***Examples****: Azarcon, Alarcon, Greta, Rueda, Pay-loo-ah, or Kohl*	**Yes** **Don't Know**	**No**
Has your child been adopted from, lived in or visited another country?	**Yes** **Don't Know**	**No**
Do you have concerns about your child's development? **Concern(s):** _____	**Yes**	**No**

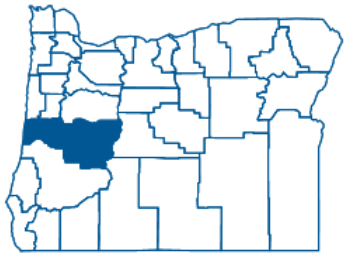
Blood lead testing should also be considered as part of a diagnostic work-up of any child regardless of age with the following symptoms:

- **Behavioral problems:** aggression, hyperactivity, attention deficit, school problems, learning disabilities, excessive mouthing or pica behavior and other behavior disorders.
- **Developmental problems:** growth, speech and language delays and/or hearing loss.
- **Symptoms or signs consistent with lead poisoning:** irritability, headaches, vomiting, seizures or other



PUBLIC HEALTH DIVISION
Environmental Public Health

Increase Outreach on Capillary Lead Screening

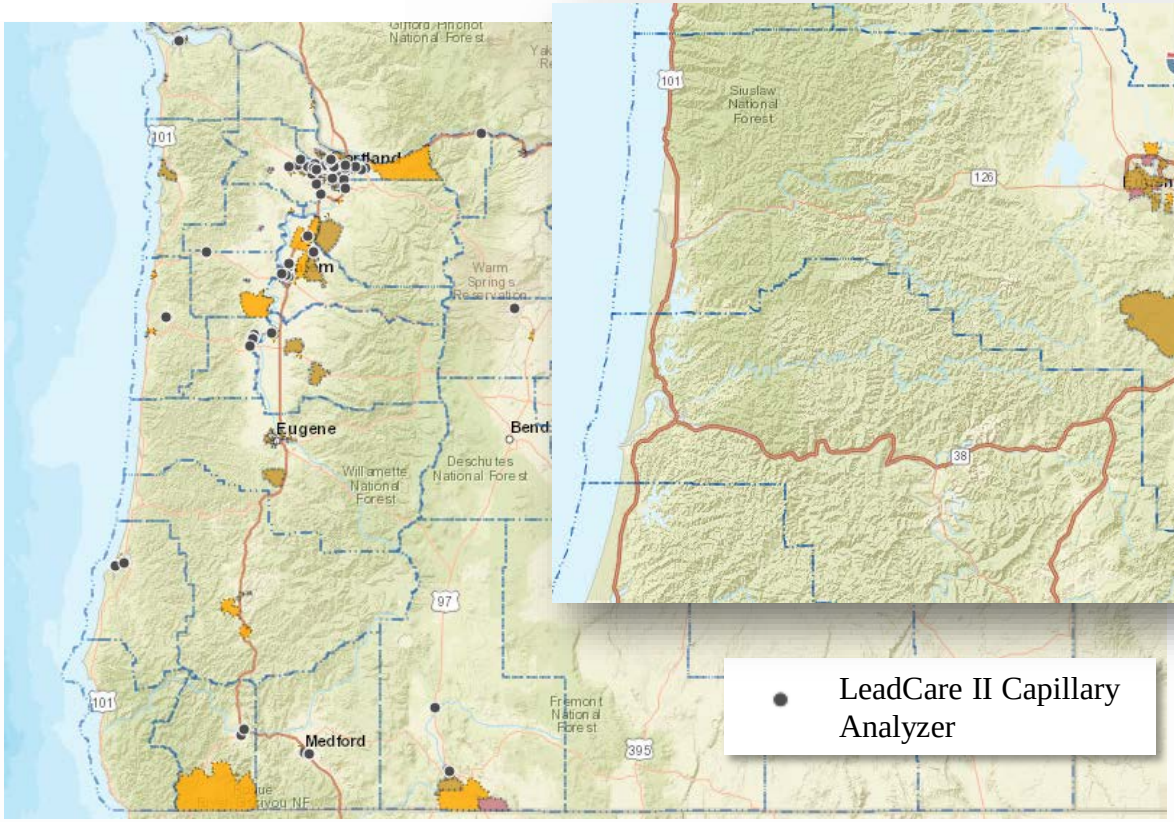


Lane County

2017 STATUS OF OREGON CHILDREN AND FAMILIES

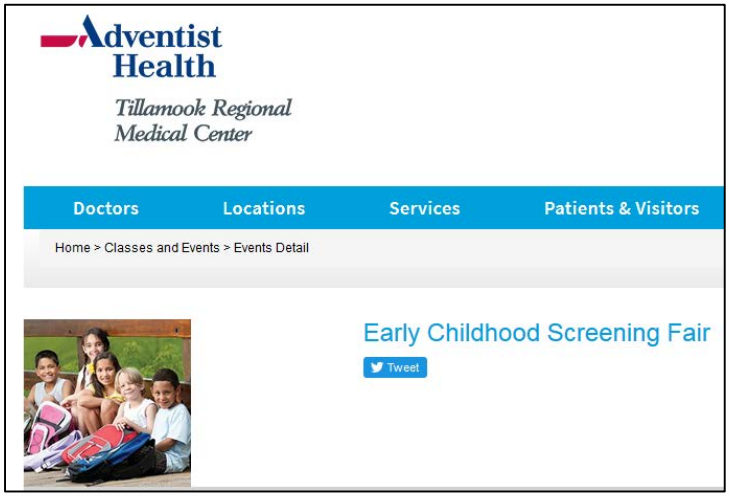
23.1% CHILDHOOD POVERTY RATE

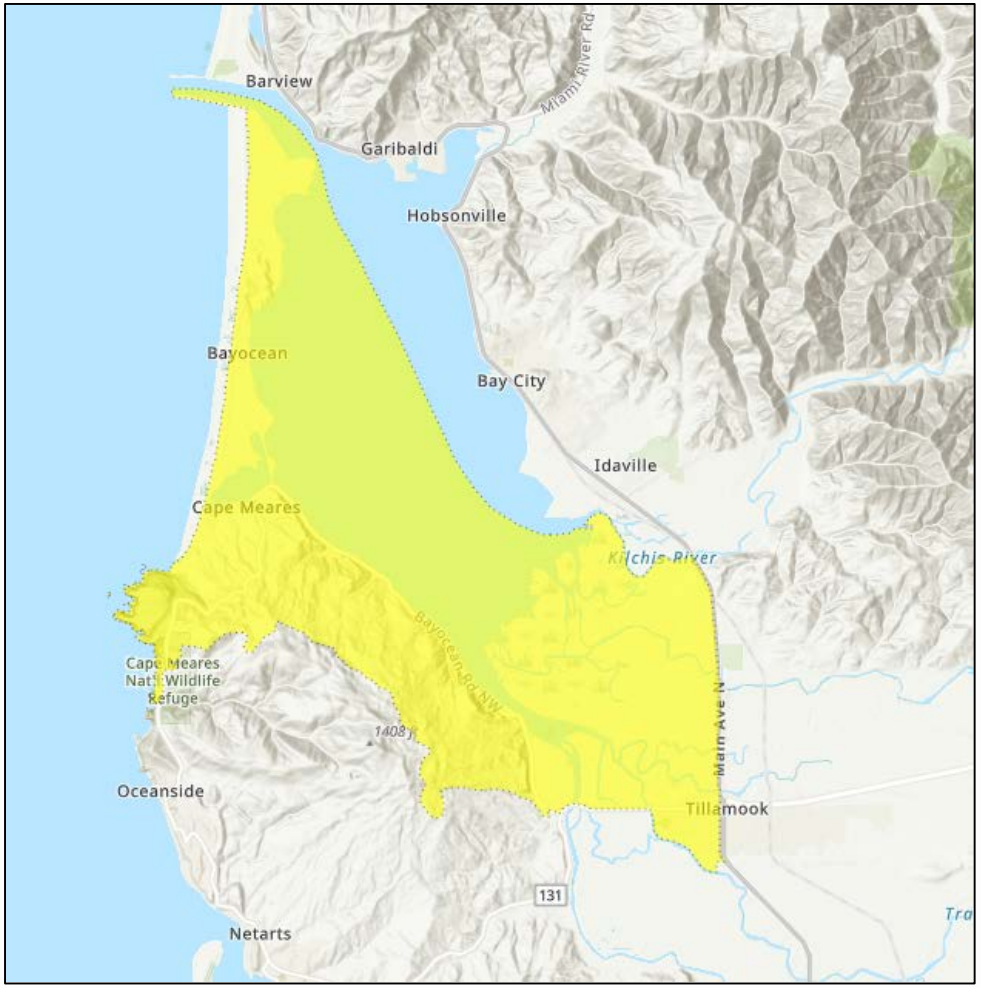
CHILDREN AGES 0-5: 18,832 POPULATION



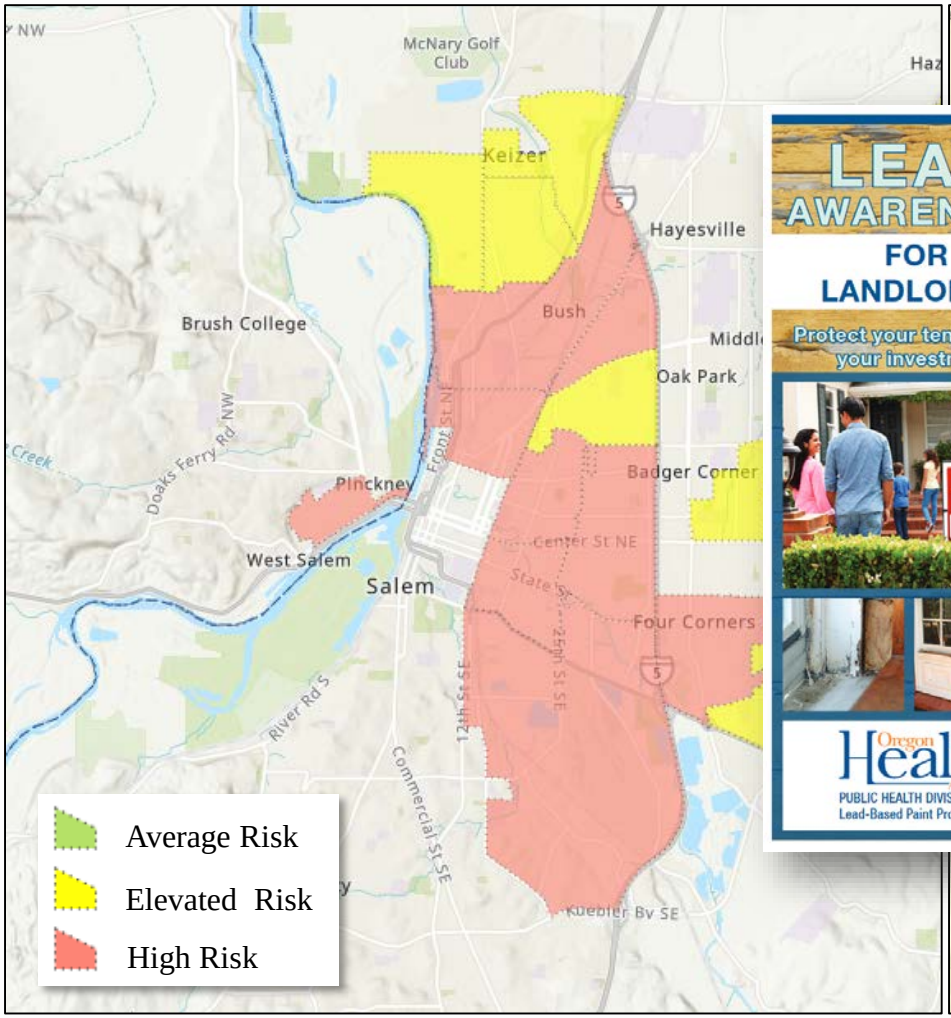
LeadCare II Capillary Analyzer

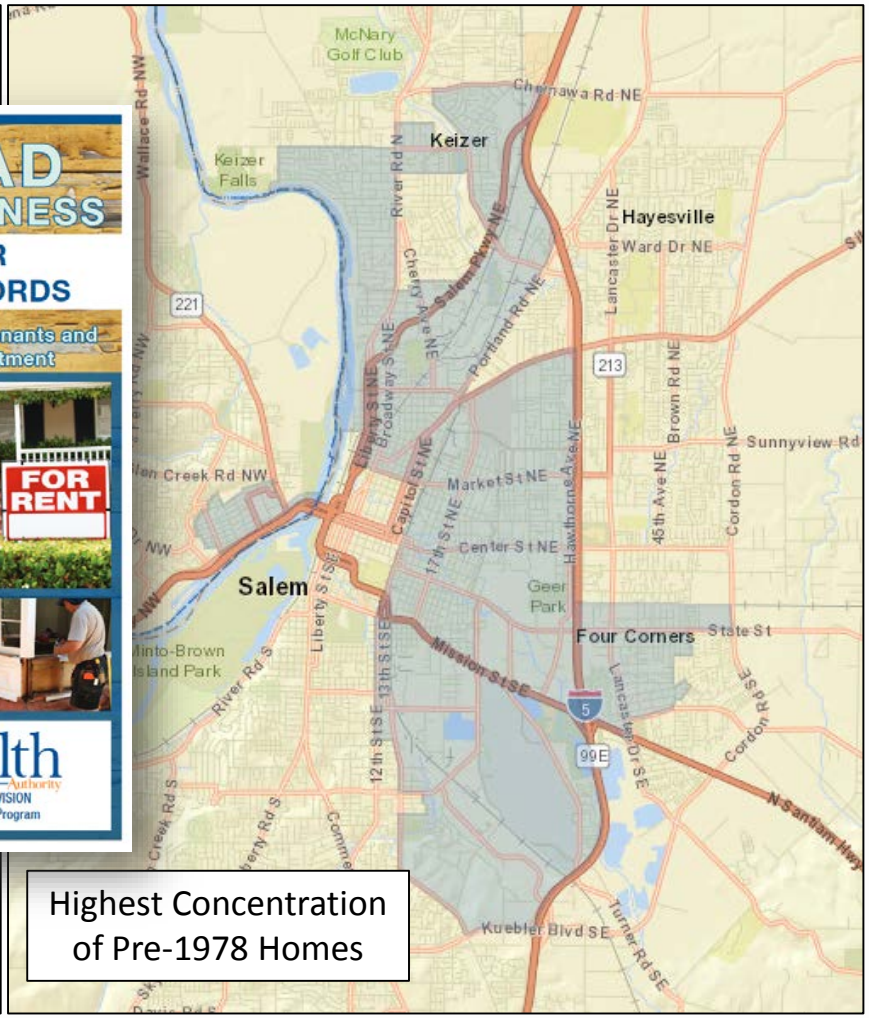
Loaning Capillary Testing Analyzers



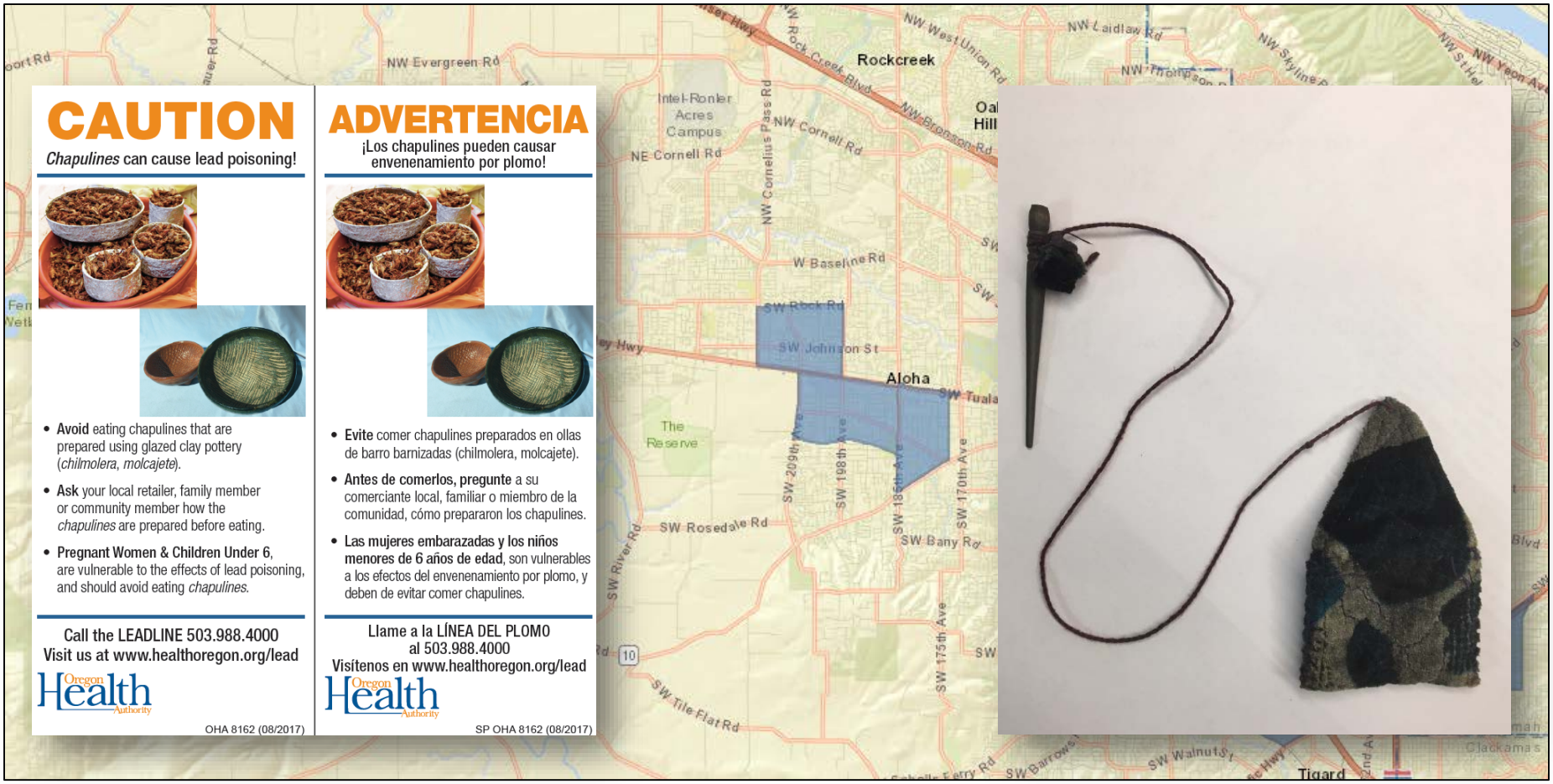


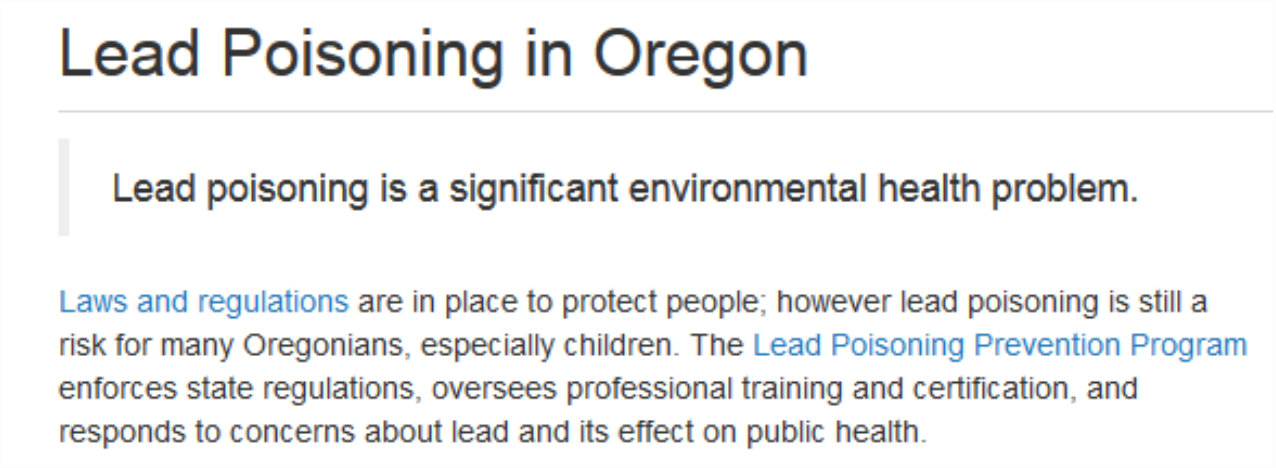
Guide Inspections: EPA's Toxic Substances Control Act Compliance Monitoring Strategy





Outreach on Specific Cultural Lead Exposure Sources





Ryan Barker
Lead Program Coordinator
OREGON HEALTH AUTHORITY
Public Health Division
Environmental Public Health
Desk: 971-673-0429
healthoregon.org/lead

Environmental Public Health

Brownfield Initiative

Kari Christensen, MPH
Program Coordinator
Public Health Division

Oregon Health Authority

Brownfields

before

Properties with perceived or known risk of contamination based on previous use of the land

Oregon Health Authority

Brownfields

after

Promoting land uses that address that
address health needs and improve health

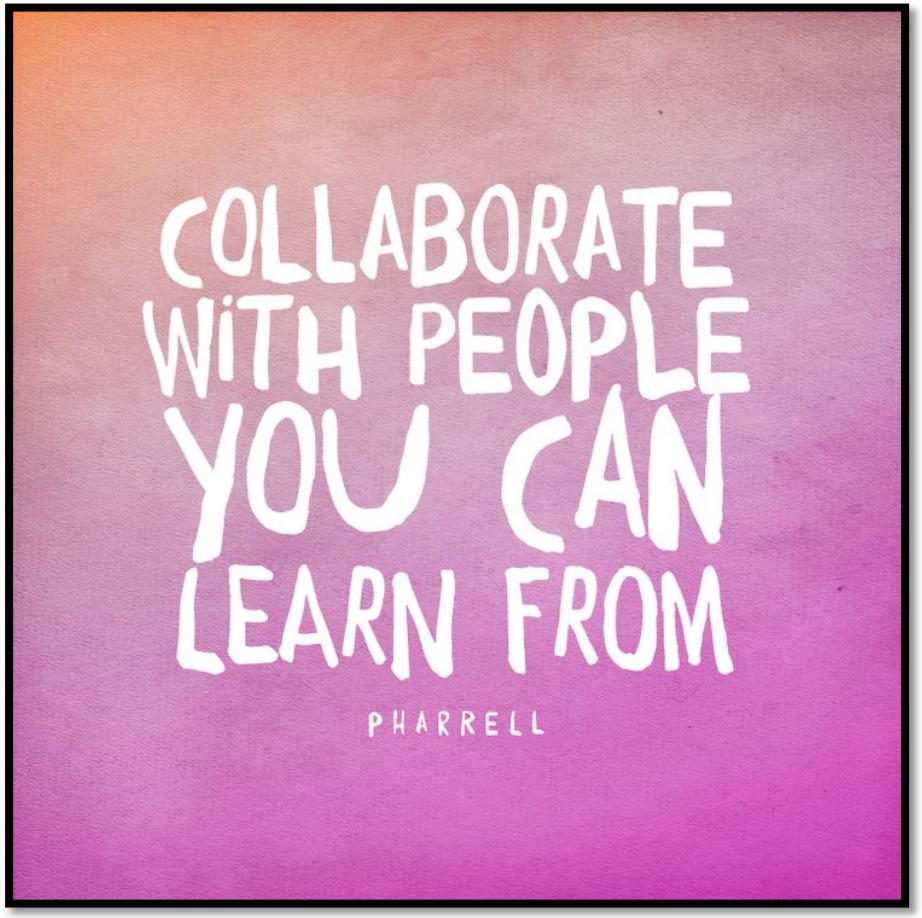
Oregon Health Authority

Brownfield Program Equity Strategies

- Partnerships
- Funding
- Capacity building
- Adaptability
- Evaluation
- Future

Oregon Health Authority

PARTNERSHIPS



Oregon Health Authority

Oregon Brownfield Coalition
Current priority

Every brownfield is different, which makes it critical to have a range of tools to solve Oregon's brownfield challenge.

The Oregon Brownfield Coalition is a group of more than 50 public, private and nonprofit organizations dedicated to finding solutions to the statewide problem of brownfield contamination. The coalition has approached the creation of new tools through legislative proposals to advance brownfield remediation and cleanup across Oregon. Formed in 2014, the coalition has successfully advocated for bills in the Oregon Legislature and supported other successful bills introduced by outside parties.

2017: Coalition to explore new policy tools to incentivize cleanups

A brownfield tax credit would allow property owners and developers to reduce state income taxes by a percentage of the documented qualifying costs of brownfield cleanup. This incentive can help offset risks and

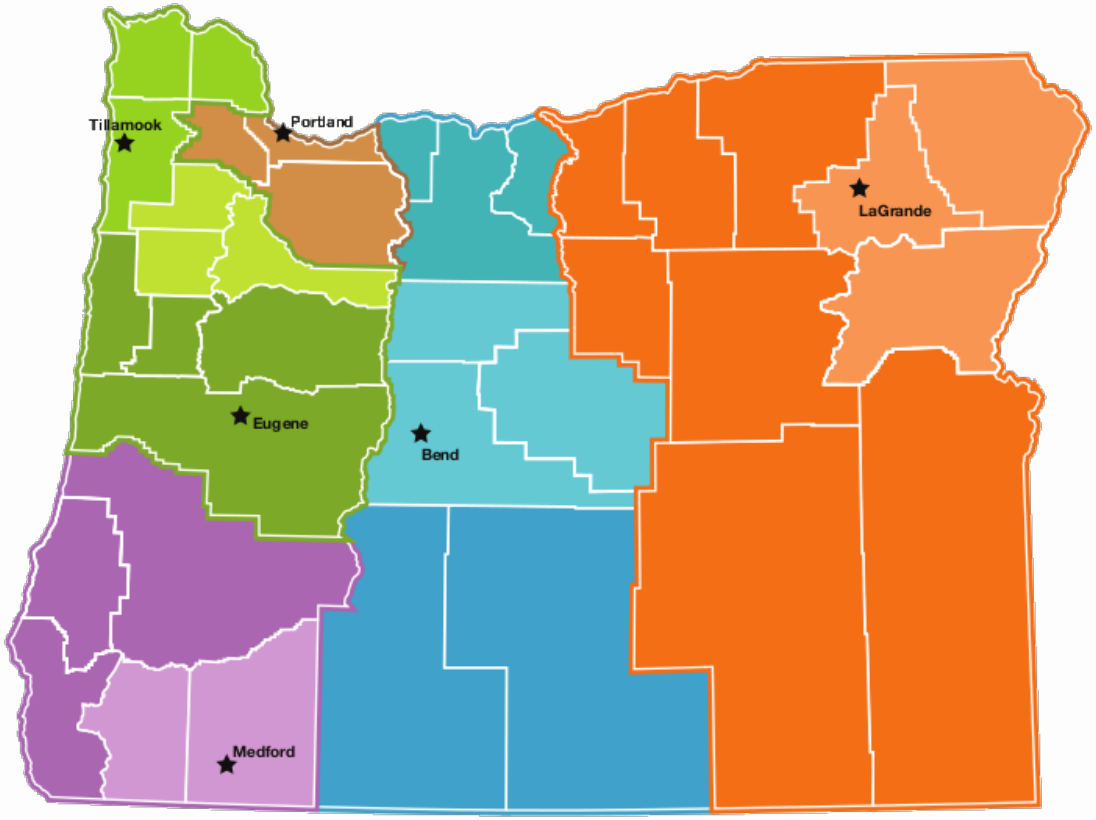
Coalition members

January 2017

1000 Friends of Oregon
Albina Community Bank
Allen Enterprises 2000
Associated Oregon Industries
Association of Oregon Counties
Audubon Society of Portland
Beyond Toxics
Black Helterline LLP
Business Oregon
Cardno
Cities of Bend, Beaverton, Gresham, Hillsboro, Medford, Milwaukie, Portland, Salem, Tigard, Wilsonville
Clackamas County
Clackamas County Business Alliance
Columbia Corridor Association
DEQ
Durham & Bates Insurance Brokers
GEI Consultants
Groundwork Portland
IBEW
Jordan Ramis
League of Oregon Cities
Maul, Foster & Alongi
Metro
Multnomah County
Multnomah County Environmental Health
Native Plant Society of Oregon
NEEK Engineering
Neighborhood Partnerships
Northeast Oregon Economic Development District
Northwest Environmental Business Council
Oregon Business Authority
Oregon Business Council
Oregon Coalition of Police/Sheriffs
Oregon Health Authority
Oregon Home Builders Association
Oregon Opportunity Network
Oregon Public Ports Association
Oregon State Building & Construction Trades Council
Oregon State Chamber of Commerce
PBS Engineering + Environmental
Port of Portland
Portland Business Alliance
Portland Development Commission
Portland State University
Regional Solutions Center
Stoel Rives
Sussman Shank LLP
Terraphase Engineering
Tonkon Torp
US EPA Brownfields Program - Oregon
Verde NW
Washington County
Westside Economic Alliance
US Army Corps of Engineers

Oregon Health Authority

Governor's Office Regional Solutions Teams



Oregon Health Authority

Promoting the Reuse of Oregon Mill Sites

Who are we, and what's our project objective?

In 2015, using the Collective Impact approach, staff from four Oregon agencies teamed up with the goal of creating the first centralized inventory and map of abandoned or diminished wood-product mill sites ("sites"), a significant subset of Oregon's brownfield sites. Using the definition of mill site in ORS 197.719, the team identified shared interests in potential for reuse that addresses cross cutting needs in economic development, environmental restoration, land use, and health - specifically in rural areas.

What's the issue?

The wood products industry peaked in the 1970s, and since then the industry and wages that the industry supported have experienced a steady decline. Meanwhile, no single statewide inventory or map exists to identify the status, location, or footprint of these sites. The state has no portfolio to market or characterize the extent or magnitude of these sites. Our team's collective expertise with these sites

Karen Homolac – Business Oregon

Expertise:
financing for assessment through cleanup on contaminated properties

Desired Outcomes:
1. Economic and / or community redevelopment of properties such that tax revenues generated contribute to prosperity of local, region and state;
2. Understanding of industrial / employment lands availability for reuse;
3. Understanding of local capacity to initiate/address reuse needs of property

Key Strategies:
1. Leveraging Department funding resources to support and develop local capacity to effect economic / community redevelopment on underutilized / abandoned properties.
2. Identify gaps – policy or financial – and seek solutions which incent economic and / community change.

Gil Wistar - DEQ

Expertise: environmental regulation and enforcement, DEQ/ECSI database

Desired Outcomes:
1. restore or enhance environmental conditions at these sites, based on investigation and cleanup, as needed;
2. create a healthy and sustainable local environment, both as a result of site remediation and from envisioning – and perhaps implementing – long-term site uses the community wants; and
3. help build bridges to the future for a community, including its businesses, organizations, and residents.

Key Strategies: restoring, maintaining, and enhancing the quality of Oregon's air, water, and land

COLLABORATION MULTIPLIER ANALYSIS

Goal: Gain a shared understanding of Mill sites

WHAT RESULTS/OUTCOMES CAN BE ACHIEVED TOGETHER?

Identify mill site status (vacant, redeveloped – to what/how)
Identify quantity of mill sites statewide
Identify mill site locations statewide
Identify mill site footprint on statewide scale
Identify existing environmental concerns,
Identify land use zoning opportunity for mill sites statewide
Identify redevelopment constraints according to zoning, or economic interests
Identify economic considerations
Identify health promoting opportunities

WHAT PARTNER STRENGTHS CAN THE COLLABORATIVE UTILIZE?

Tom –GIS capacity to map Mill sites, contribute land use layer
Karen –EcoNW MFA statewide economic analysis of brownfields, contribute layers to GIS
Gil – provide DEQ data on environmental concerns for Mill sites
Kari – provide statewide data layers that highlight health priorities

WHAT STRATEGIES/ACTIVITIES CAN 2+ PARTNERS WORK TOGETHER ON?

Karen and Tom –provide data that identifies where Mills are
Gil –work with Tom to integrate statewide data on known environmental concerns into the GIS platform
Kari – work with Tom to integrate statewide data on chronic disease, food access, income/poverty, and proximity to residential, etc.
All – contribute support in response to rural community need through a pilot project approach

Prevention Institute

Tom Hogue - DLCD

Expertise:
Oregon land use system, economic development planning

Desired Outcomes:
1. Coordinated "ask" backed with data and plan
2. Ranked opportunities
3. Practical how-to guides for communities

Key Strategies:
1. Data rich mapping (see http://oregonexplorer.info/)
2. Outreach and implementation partners (RDI, Ford FF)
3. Enable needed changes (RST, IFA, LCDC others)
4. Work with LOC and AOC (esp if legislation needed)

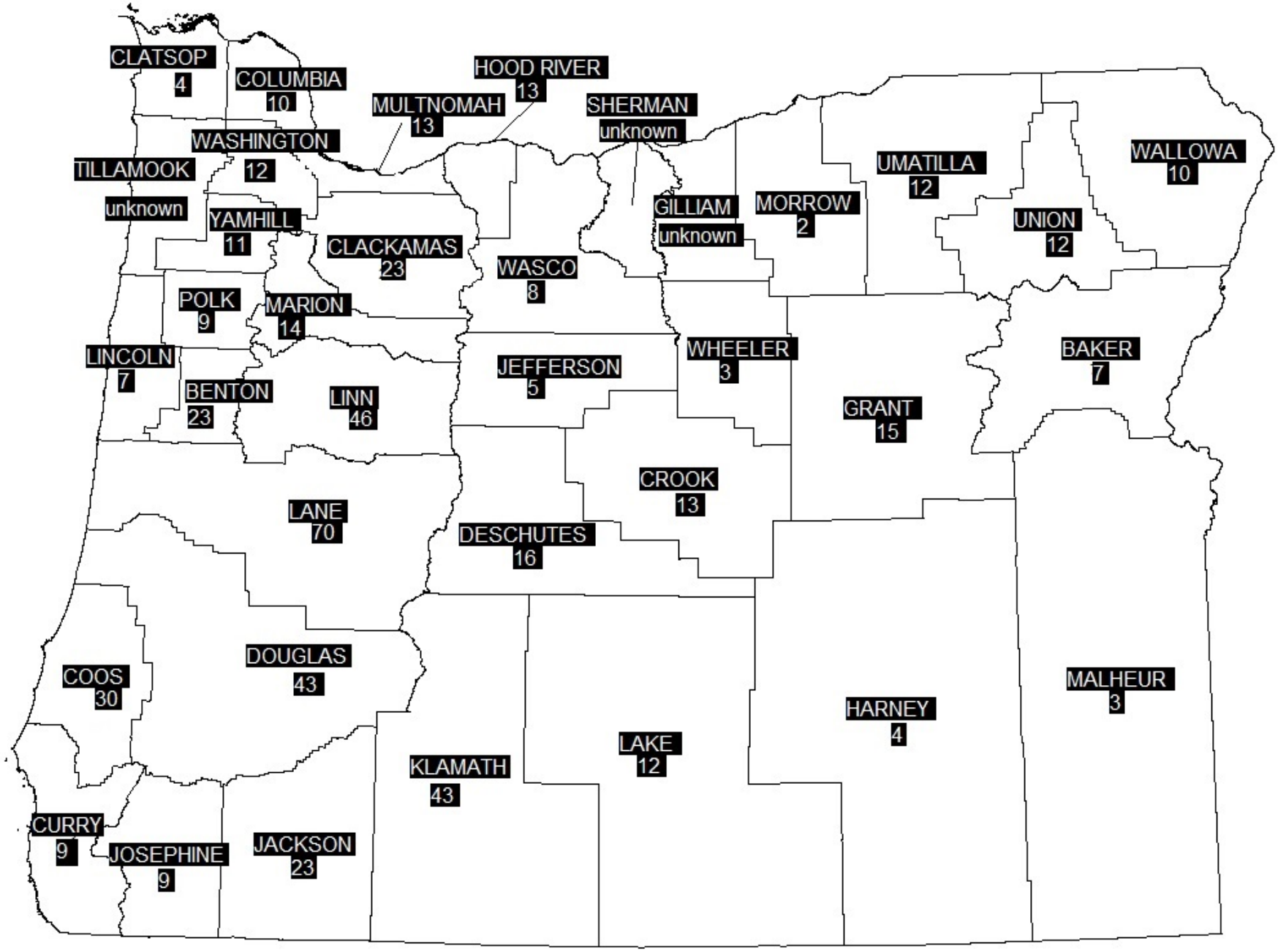
Kari Christensen - OHA

Expertise: Social determinants of health; engaging underrepresented communities; aligning redevelopment with opportunities that address health needs

Desired Outcomes:
1. Improved understanding of the landscape of opportunities to improve health through rural redevelopment of Mill sites
2. Criteria that identifies opportunities with regard to health, equity, and locally identified interests for brownfield redevelopment

1. **Key Strategies:** Leveraging public health resources to characterize Mill sites
2. Building relationships with partners who can help achieve rural response and redevelopment goals

Oregon Health Authority


CLATSOP
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COLUMBIA
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HOOD RIVER
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MULTNOMAH
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SHERMAN
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WASHINGTON
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TILLAMOOK
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YAMHILL
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CLACKAMAS
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WASCO
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GILLIAM
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MORROW
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UMATILLA
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WALLOWA
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UNION
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POLK
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MARION
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LINCOLN
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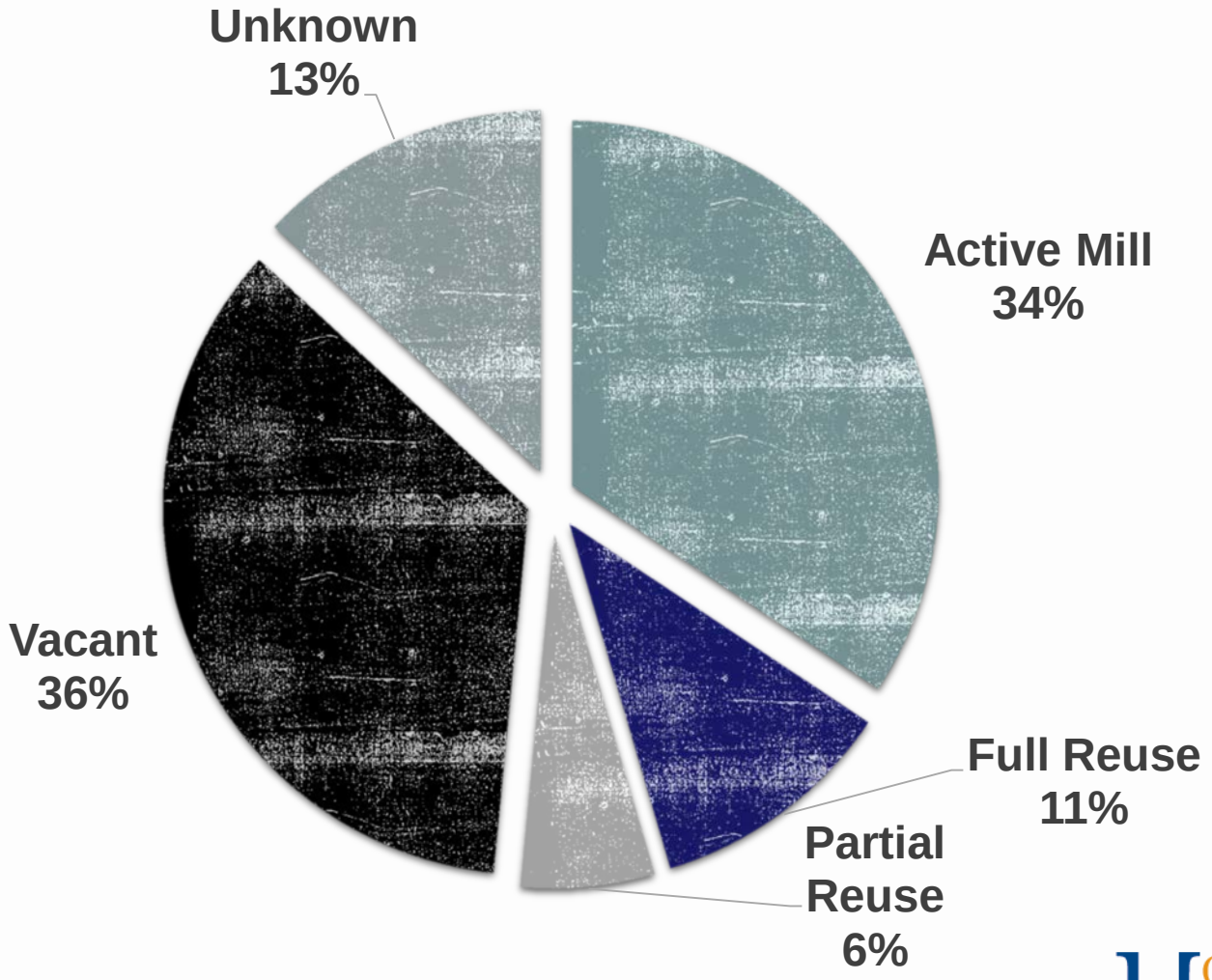
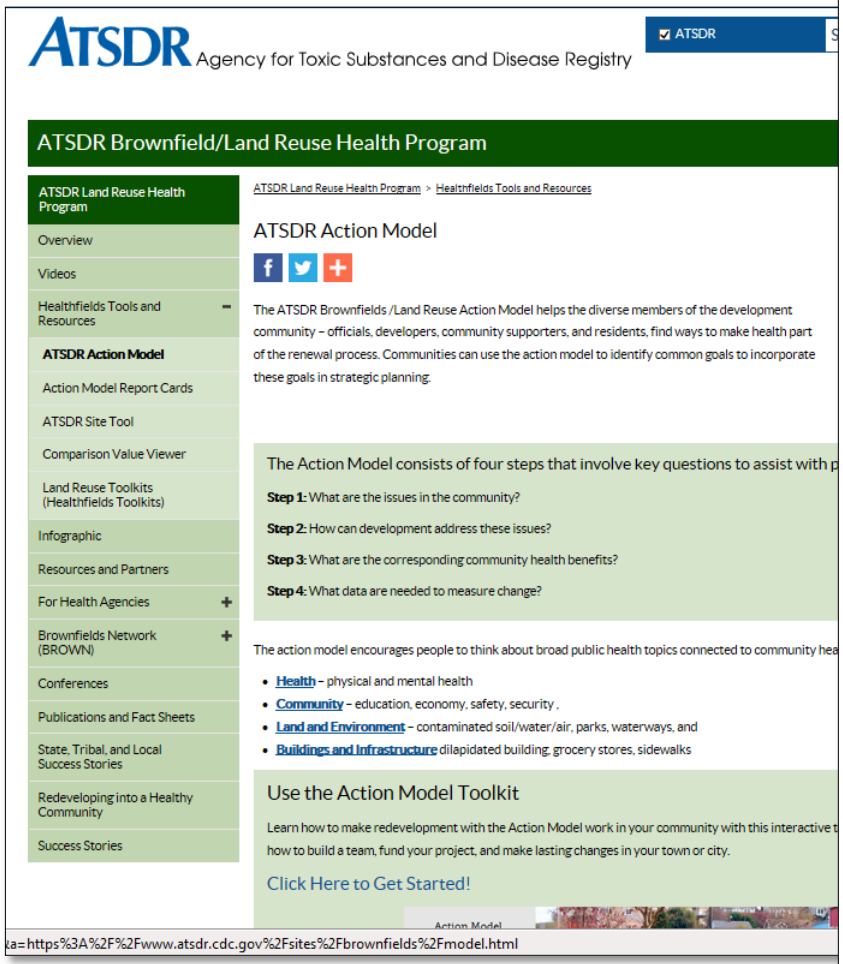
BENTON
23
LINN
46
JEFFERSON
5
WHEELER
3
BAKER
7
GRANT
15
CROOK
13
LANE
70
DESCHUTES
16
COOS
30
DOUGLAS
43
HARNEY
4
MALHEUR
3
LAKE
12
KLAMATH
43
CURRY
9
JOSEPHINE
9
JACKSON
23

Mill Site Status



Oregon Health Authority

FUNDING



Oregon Health Authority

Program Element and "Mini-grants" to LPHAs

Program Element: 06 Brownfields and Public Health: Building Capacity in Local Public Health Authorities (LPHA)

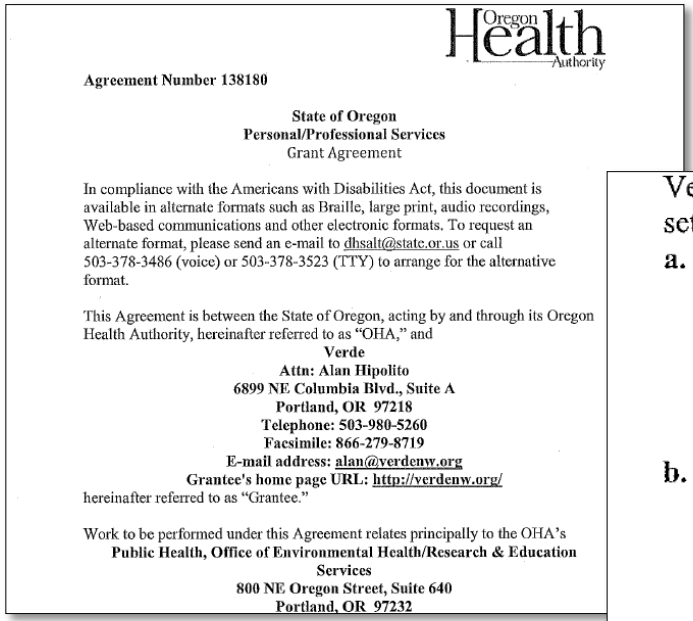
1. **Description.** Funds provided under the Financial Assistance Agreement for this Program Element may only be used, in accordance with and subject to the requirements and limitations set forth below, to build capacity to integrate public health considerations into Brownfield and Land Reuse planning, projects, and evaluations within LPHA service areas. Brownfield sites are inactive, underused or abandoned properties with perceived or known environmental contamination.

2. **Local Activities in Support of Building Public Health Capacity in Brownfield Planning and Projects.** To comply with performance standards of this program, LPHAs must engage in activities as described in subsections 2.a. through 2.e. below. The purpose of these activities is to integrate health considerations into brownfields planning and identify and carry out public health actions that: engage local residents, foster collaborations among diverse stakeholders, provide health-based education and recommendations, and promote the health benefits of redevelopment. NOTE: LPHA must complete the planned activities in its Local Program Plan before September 30, 2014 to retain eligibility to receive funding under this Program Element if future funding is made available.

2013-14
Washington
Coos

2015
Multnomah

Oregon Health Authority



Oregon Health Authority

Agreement Number 138180

State of Oregon
Personal/Professional Services
Grant Agreement

In compliance with the Americans with Disabilities Act, this document is available in alternate formats such as Braille, large print, audio recordings, Web-based communications and other electronic formats. To request an alternate format, please send an e-mail to dhsalt@state.or.us or call 503-378-3486 (voice) or 503-378-3523 (TTY) to arrange for the alternative format.

This Agreement is between the State of Oregon, acting by and through its Oregon Health Authority, hereinafter referred to as "OHA," and

Verde
Attn: Alan Hipolito
6899 NE Columbia Blvd., Suite A
Portland, OR 97218
Telephone: 503-980-5260
Facsimile: 866-279-8719
E-mail address: alan@verdenw.org
Grantee's home page URL: http://verdenw.org/
hereinafter referred to as "Grantee."

Work to be performed under this Agreement relates principally to the OHA's
Public Health, Office of Environmental Health/Research & Education Services
800 NE Oregon Street, Suite 640
Portland, OR 97232

Oregon Health Authority ↔ VERDE

Verde will work with Oregon Health Authority (OHA) staff to meet the objective set forth by carrying out the following activities:

a. Conduct culturally appropriate outreach

- Facilitate public participation and develop community networks for information sharing pertaining to OHA risk assessment activities.
- Provide interpretative services at meetings/events.
- Translate educational and training materials and make materials available for community members at meetings/events.

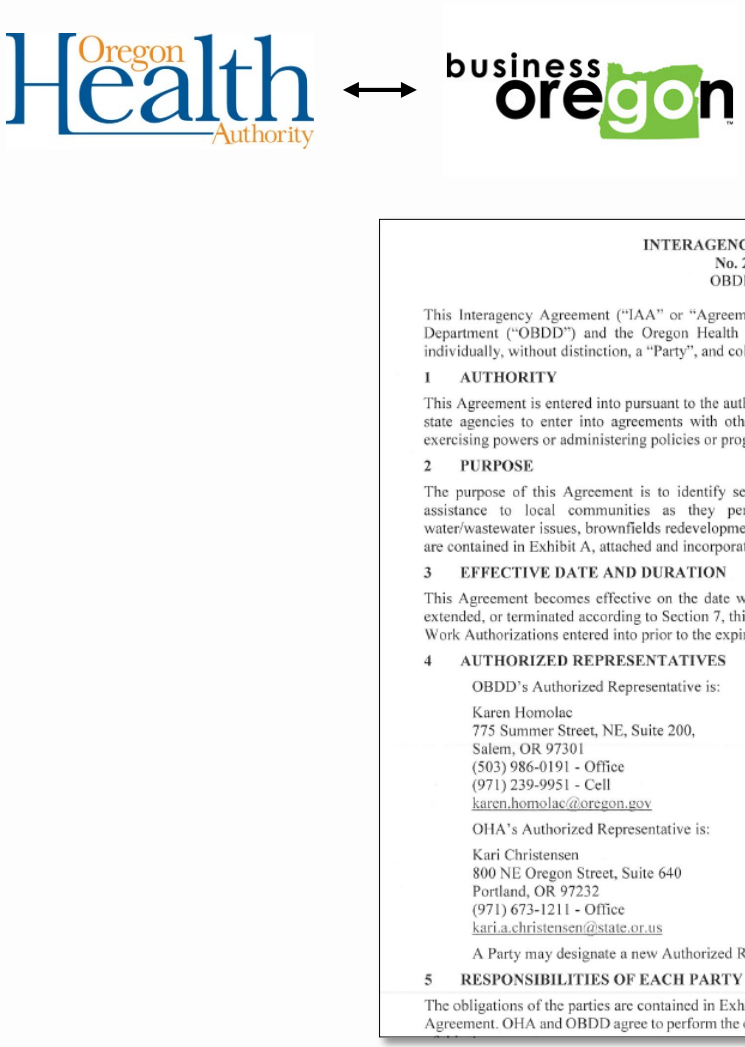
b. Host community events and meetings

- Provide meeting space in the Cully neighborhood for residents to participate in the OHA risk assessment process.
- Facilitate meetings to involve community members in the OHA risk assessment process.

c. Encourage community involvement

- Implement strategies to reduce barriers for community members to attend meetings and site related work. This may include providing individuals with honoraria and/or assisting with transportation and childcare needs for participants to attend meetings and site related work.

Oregon Health Authority



INTERAGENCY AGREEMENT
No. 2015191
OBDD - OHA

This Interagency Agreement ("IAA" or "Agreement") is between the Oregon Business Development Department ("OBDD") and the Oregon Health Authority - Public Health Division ("OHA"), both individually, without distinction, a "Party", and collectively, the "Parties".

1 AUTHORITY

This Agreement is entered into pursuant to the authority granted by ORS 190.110 and 283.110, allowing state agencies to enter into agreements with other state agencies to cooperate in performing duties, exercising powers or administering policies or programs.

2 PURPOSE

The purpose of this Agreement is to identify services OHA can provide that complement OBDD's assistance to local communities as they pertain to economic and community development, water/wastewater issues, brownfields redevelopment, and health priorities. The obligations of the parties are contained in Exhibit A, attached and incorporated by this reference.

3 EFFECTIVE DATE AND DURATION

This Agreement becomes effective on the date when this Agreement is fully executed. Unless earlier extended, or terminated according to Section 7, this Agreement expires on **30 September 2020**. Specific Work Authorizations entered into prior to the expiration date of this Agreement will survive this date.

4 AUTHORIZED REPRESENTATIVES

OBDD's Authorized Representative is:

Karen Homolac
775 Summer Street, NE, Suite 200,
Salem, OR 97301
(503) 986-0191 - Office
(971) 239-9951 - Cell
karen.homolac@oregon.gov

OHA's Authorized Representative is:

Kari Christensen
800 NE Oregon Street, Suite 640
Portland, OR 97232
(971) 673-1211 - Office
kari.a.christensen@state.or.us

A Party may designate a new Authorized Representative by written notice to the other Party.

5 RESPONSIBILITIES OF EACH PARTY

The obligations of the parties are contained in Exhibit A, attached and incorporated by reference into this Agreement. OHA and OBDD agree to perform the obligations in accordance with the terms and conditions

OREGON BUSINESS | HOW WE CAN HELP | GLOBAL CONNECTIONS | INNOVATE & CREATE | ECONOMIC ANALYSIS | INFRASTRUCTURE | ABOUT US

>Home >Brownfields Conference

2018 Conference

- Home
- Agenda
- Registration
- Lodging
- Conference Sponsors
- Sponsor/Exhibit Opportunities
- Awards Program
- Scholarship Program

Register Today!

2018 OREGON Brownfields Conference & Awards Luncheon

Presented by business oregon

DEQ State of Oregon Department of Environmental Quality

NEBC

CENTER FOR

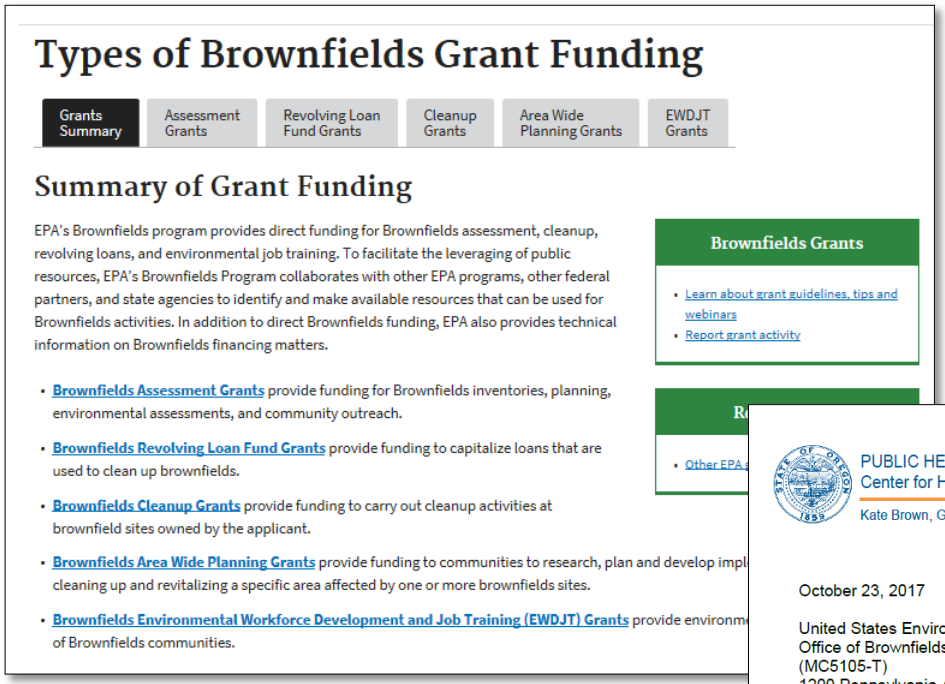
CONFERENCE AGENDA

Sunday, April 29, 2018, Pre-conference Activities	
11:00 am-3:00 pm	Brownfields 101 Workshop Registration
11:30 am-3:00 pm	Brownfields 101 Workshop
3:00 pm-6:30 pm	Mobile Workshop—Toledo and Newport Sites
6:30 pm-7:30 pm	Pre-conference Evening Mixer

Monday, April 30, 2018				
7:30-9:00 am		Conference Registration & Networking—Continental Breakfast		
9:00-9:10 am		Welcome & Opening Remarks		
9:10-10:15 am	Plenary	Big Time Brownfields—Embracing the Possibilities		
10:15-10:30 am		Morning Coffee Break		
		A: Nuts & Bolts	**Breakout Tracks B: Approaches**	**C: Big Picture**
10:30 am-noon	Session 1	A Scalable Approach to Finding and Analyzing Brownfields in Your Community description	A Developer's View of the Market—What Makes a Developer Want to Build and Where description	Working in Open Space—Issues and Challenges description
12:15-2:00 pm		Brownfields Awards Luncheon and Presentation **Sponsored by Stantec**		
2:00-3:30 pm	Session 2	Environmental Risk Trends: A Look Forward into 2018 description	Affordable Housing and Brownfields Cleanup—A Natural Partnership description	Brownfields Through a Public Health Lens description
3:30-4:30 pm	Session 3	Who and What EPA Grantees Need to Know description	Conversation Tables: description 1. Let's Talk Prospective Purchaser Agreements 2. Oregon's Mill Site Project 3. Redeveloping Landfills 4. Environmental Justice 5. Funding Opportunities to Consider 6. Land Bank Authority Anyone? 7. Working with the Governor's Regional Solutions Teams	
4:30-6:30 pm		Evening Reception and Screening of *Built By Zidell Portland*—A David Bee Film **Sponsored by Maul Foster & Alongi, Inc.**		

Oregon Health Authority ↔ business oregon

Oregon Health Authority



Types of Brownfields Grant Funding

Grants Summary | Assessment Grants | Revolving Loan Fund Grants | Cleanup Grants | Area Wide Planning Grants | EWDJT Grants

Summary of Grant Funding

EPA's Brownfields program provides direct funding for Brownfields assessment, cleanup, revolving loans, and environmental job training. To facilitate the leveraging of public resources, EPA's Brownfields Program collaborates with other EPA programs, other federal partners, and state agencies to identify and make available resources that can be used for Brownfields activities. In addition to direct Brownfields funding, EPA also provides technical information on Brownfields financing matters.

Brownfields Grants

- Learn about grant guidelines, tips and webinars
- Report grant activity

- **Brownfields Assessment Grants** provide funding for Brownfields inventories, planning, environmental assessments, and community outreach.
- **Brownfields Revolving Loan Fund Grants** provide funding to capitalize loans that are used to clean up brownfields.
- **Brownfields Cleanup Grants** provide funding to carry out cleanup activities at brownfield sites owned by the applicant.
- **Brownfields Area Wide Planning Grants** provide funding to communities to research, plan and develop impl cleaning up and revitalizing a specific area affected by one or more brownfields sites.
- **Brownfields Environmental Workforce Development and Job Training (EWDJT) Grants** provide environm of Brownfields communities.

Oregon Health Authority

CITY OF Salem AT YOUR SERVICE

Marion County OREGON Public Health

PUBLIC HEALTH DIVISION
Center for Health Protection
Kate Brown, Governor

Oregon Health Authority

800 NE Oregon Street, Suite 640
Portland, OR 97232
Phone: (971) 673-0977
Fax: (971) 673-0979
TTY: (971) 673-0372

October 23, 2017

United States Environmental Protection Agency
Office of Brownfields and Land Revitalization
(MC5105-T)
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: Support for Corvallis Coalition
EPA Brownfield Area-wide Assessment Funding

To Whom It May Concern:

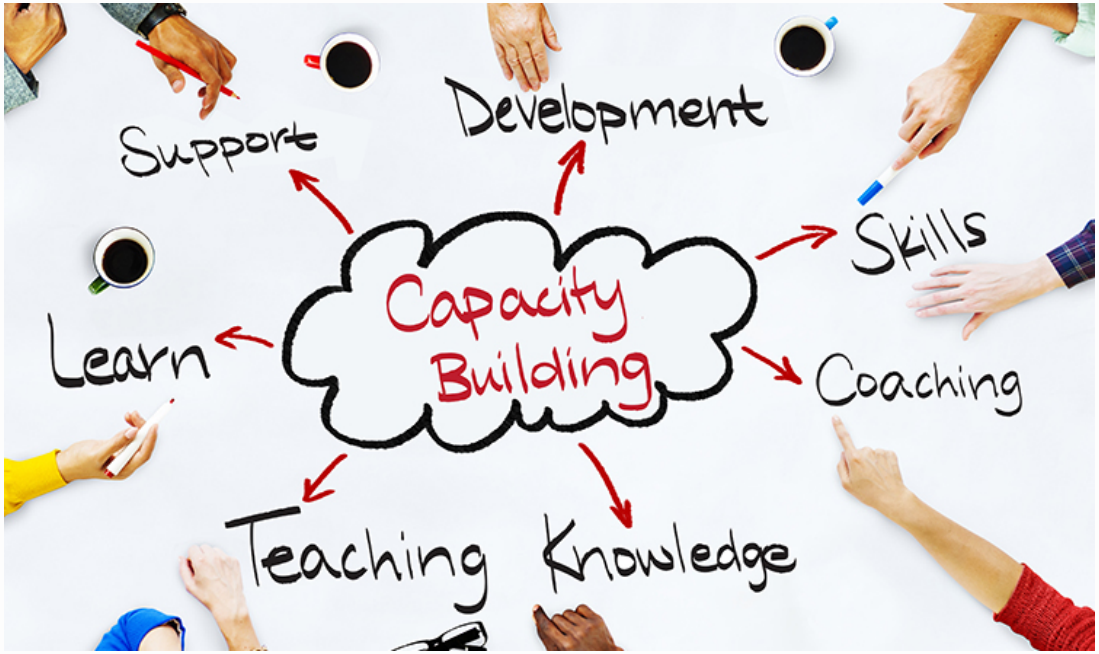
I am writing on behalf of the Oregon Health Authority-Public Health Division (OHA-PHD) to express our support for the City of Corvallis, along with Coalition partners in Albany, Philomath, Monroe and Benton County to obtain EPA Brownfield funding. Since 2010, the OHA-PHD Brownfield Initiative has served as a resource for public health data; in assistance to local health agencies and local jurisdictions; and in support of robust community engagement that benefits communities most in need of brownfield assistance statewide.

Oregon Health Authority

CAPACITY BUILDING

Partners

OHA

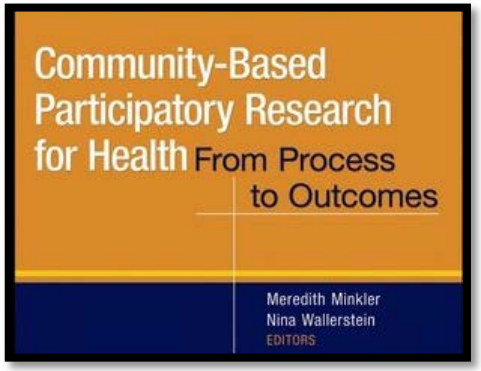


Oregon Health Authority

“Worldview” is a term used to describe the collective thought process of a people or culture. Thoughts and ideas are organized into concepts. Concepts are organized into constructs and paradigms. Paradigms link together to create worldviews.

Understanding worldviews and how they relate to health education work can serve to enhance the ability to meet the needs of a community.

This project is based on two worldviews, the Relational Worldview Model and the public health and social change worldview, as characterized by Meredith Minkler.



All the programming at NAYA is offered using the indigenous lens of the Relational Worldview Model

Oregon Health Authority

Effective Adult Learning

A Toolkit for Teaching Adults

Developed by

Northwest Center for Public Health Practice
School of Public Health, University of Washington

in partnership with The Network for Public Health Law

What's Different About Teaching Adults?

To be effective in teaching adults, it's important to know your audience and have a general understanding of how adults learn. Much has been written about the topic, and you can find suggestions for additional reading in Section 4: References.

To best reach adults, there are five key factors you should focus on in the development of your training:

1. The material presented should have immediate usefulness to the learners.
2. The material presented should be relevant to adult learners' lives.
3. The training environment should be welcoming so that all learners feel safe to participate.
4. The training presentation should be engaging.
5. The training should be presented in a respectful manner, where learners have an opportunity to share their experiences.

Following these key principles will help you determine what to include in your training and how to present it. Make your training relevant to the learner by recognizing the unique background and experience of people working in public health. To engage your audience, use examples or anecdotes showing how the material is relevant.

(Adapted from Knowles, M.L., The Adult Learner 6th ed., 2005)

How to Reach Adult Learners

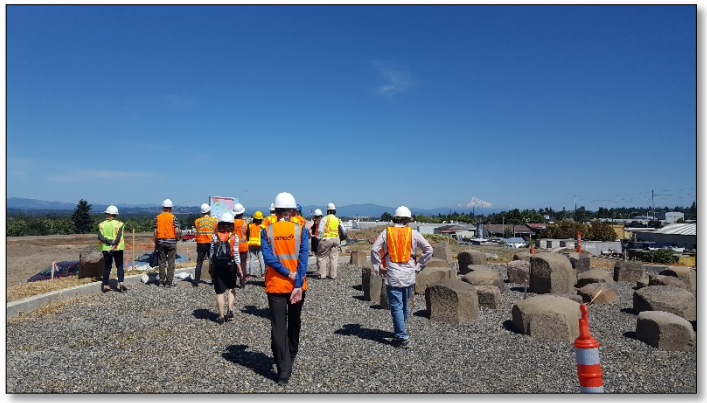
You want to connect with your adult audience. Make sure your course is:

- immediately useful
- relevant
- welcoming
- engaging
- respectful

Make Connections

Stories, cases, and anecdotes help make connections.

Do you have a story related to your topic ready to share with your audience?



Oregon Health Authority

Cully Park Environmental & Human Health Assessment
Community Involvement Committee (CIC)

Purpose

The CIC engages the community in the Phase II assessment of the KFD/Cully Park site. The CIC serves as an advisory body to agency staff performing the health and environmental assessment. More importantly, the CIC serves as a conduit for the community to participate in the process. The CIC receives information about health and environmental topics. Member participation helps to engage other community members in this effort. Members share what they learn with neighbors and their respective community groups and bring back information to the CIC meetings with agency staff.

Participants

1) Ed Gilbert, NE 72nd Street resident
2) Jamie Hogue, Cully resident
3) Claudia Gonzalez, Hacienda resident
4) Juliana Gonzalez-Mejia, Scott School student
5) Julie Madsen, PCRI
6) Michael Crupper, Cully Association of Neighbors
7) Muna Farah, Hacienda CDC
8) Rafael Bautista, Hacienda resident
9) James Larson, Cedar Shade resident
10) Laura Campos, NAYA client
11) Ron Klickman, Cedar Shade resident

Staffing

Tony DeFalco, LUBCP/Verde
Kari Christensen, OHA-OEPH
Rebecca Wells-Albers, DEQ
Anna Gordon, translation
Joey Hickey, GeoEngineers
Claudia Muñoz, childcare

Observers

Metro
PP&R
Mike Slater, EPA
BES
Pedro Moreno, Verde
Annie Olson Caparoso, Scott School

Oregon Health Authority

Learning Objectives

- Be comfortable with describing the units of measure used in sampling results.
- Be comfortable with talking with neighbors, friends and family about how sampling results are used to determine if a site is safe, healthy or poses risks.
- Increase awareness and knowledge of the terms listed below.

Terms we will learn about today

- Parts per million "ppm"
- Parts per billion "ppb"
- Non detect "ND"
- Reference value
- Comparison values "CVs"
- Risk-based concentrations "RBCs"
- Equivalence factors
- Agency for Toxic Substances and Disease Registry "ATSDR"
- Environmental Protection Agency "EPA"
- Department of Environmental Quality "DEQ"
- Oregon Health Authority "OHA"

Cully Phase II Community Involvement Committee (CIC) Meeting
June 6, 2012

Survey of current knowledge

Please circle your answer below.

1. Do you feel like you have a good understanding of what micrograms per kilogram, parts per million, milligrams per kilograms and parts per billion mean?
   a. Yes
   b. No
2. Now that we have sampling results, do you think you could describe how to use the numbers to determine if the site is healthy or safe?
   a. Yes
   b. No
3. Would you know what numbers and sources to use to compare the sampling results to in order to know if the results are high, low, or risky or safe?
   a. Yes
   b. No
4. If a sample result is "ND", or non-detect, does that mean that the chemical is not present in the soil?
   a. Yes
   b. No
5. If you have suggestions for improvements in how information is being presented, please include them here (and on the back of this page) so that we can modify our approach at future meetings.

Thank you!

Oregon Health Authority

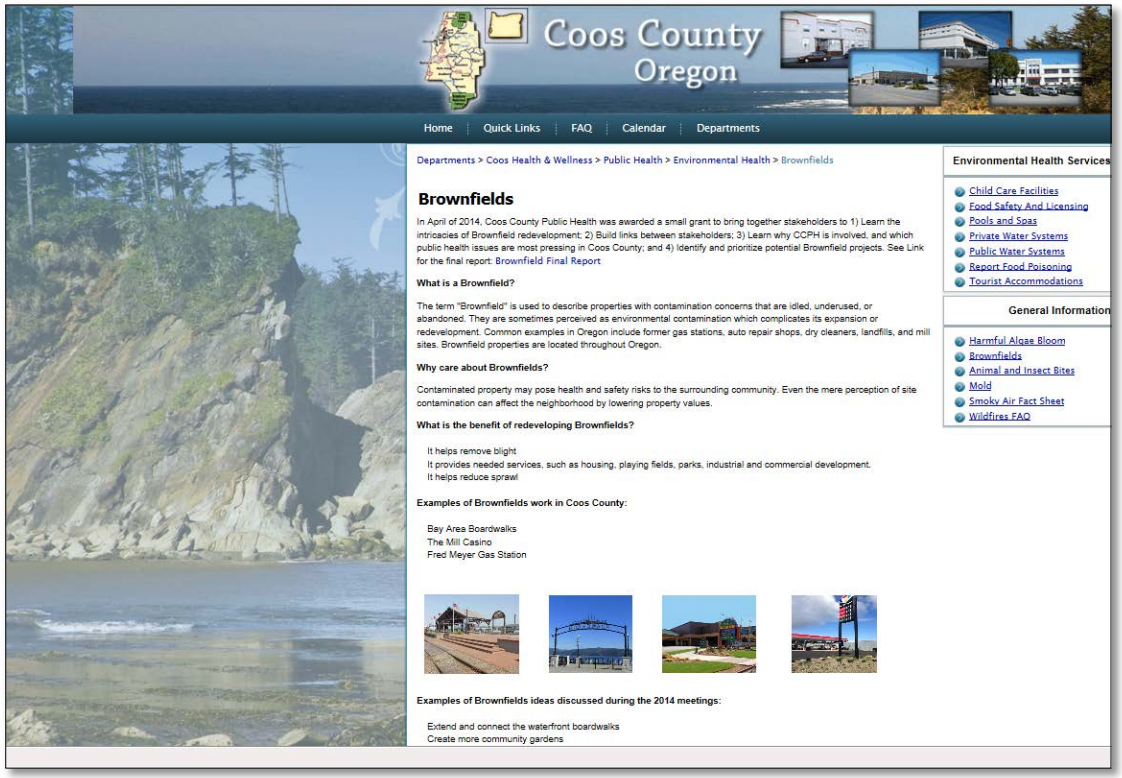
ADAPTABILITY

Sweet Home Mill, Linn County,

Photo Credit: Alex Paul – Democratic-Herald

Oregon Health Authority

Coos County, Oregon



Oregon Health Authority

History of the park property

Cully Park is located on land that holds historic and cultural significance for many Cully residents, community-based organizations and tribal communities. Before European arrival, the nearby Neerchokikoo Indian Village thrived in the Columbia Slough area. A rich trade economy flourished along the Columbia River, which attracted thousands of Native American tribal members from across America. Some of the first maps of the village were drawn by Lewis and Clark in 1804–1805 and make reference to the Skil-lute Nation and "Sh-ha-las" people, a Chinook band.

From 1805 onward, the area was used by Oregon pioneers for travel, settling and trade. By 1936 the land was developed mainly for agricultural use. At this time houses and roads were also built in the area and the northwest corner of the future Cully Park property was developed into a rock quarry.

EVALUATION

OHA Brownfields Initiative Logic Model

Inputs	Process		Program Impacts		
	Activities	*Participation*	*Short-Term* *Increased Awareness*	*Mid-Term* *Involvement*	*Long-Term* *Institutionalization*
Staff Program Manager Program Coordinator Epidemiologist *In-kind Staff:* *Principal Investigator* *Toxicologist* *Health Educator* **Money** $150,000 12 month cooperative agreement, competitive **Partners** ATSDR EPA State Agencies (DEQ Business Oregon, Governor's Regional Solutions Teams) Local Jurisdictions Local Health Departments Community-based Orgs **OHA-PHD Internal Resources** Oregon EPHT Health Impact Assessment ATSDR APPLETREE	**A1**: Providing funding and technical assistance to mini-grantees **A2**: Assisting local jurisdictions with project development **A3**: Collaborating with State-level BF partners (Collective Impact) **A4**: Promoting the use of inclusive community engagement (Action Model) **A5**: Developing tools and educational materials **A6**: Developing expertise through State/Nat'l BF networks **A7**: Program Administration **A8**: Communications and outreach	Award grants, consult, advise, and support grantees. Assist with applications for funding, competitiveness, inclusiveness Assist with community engagement, health needs data, etc. Consult, advise, train, build networks, capacity building Create presentations, talking points and disseminate toolkit, etc. Attend quarterly forums, conferences, provide expertise, promote health equity partner participation Fulfill funding obligations, respond to requests of ATSDR (author book chapters, steering committee, provide training, conferences, success stories, etc.) web content, respond to requests from agency and other partners	**B1**: Increase awareness of the role and value of health partners in BFs **B2**: Increase credibility and respect for OHA-PHD among decision-makers **B3**: Promote participation in BFs by other health and equity focused partners **B4**: Increase awareness of health equity in BFs networks **B5**: Build capacity at the local level for health considerations and partners to be reflected in BF efforts	**C1**: OHA-PHD is viewed as an important stakeholder in BF redevelopment – BF project leaders seek the involvement of OHA-PHD **C2**: Health and equity partners gain resources and credibility to contribute to BF **C3**: Local jurisdictions and health departments are invited and involved in BFs **C4**: OHA-PHD is invited to serve in roles that influence BF projects and policies	**D1**: Health equity data informs BF efforts throughout the state (are viewed in the same light as economic/ROI data) **D2**: Health needs and inequities are addressed intentionally through BF efforts throughout the state **D3**: Redevelopment projects improve community health and address inequities **D4**: Health equity is institutionalized within BFs work at the state level **D5**: BFs redevelopment increases access to community assets that advance environmental justice and health equity

Assumptions

There is a need for health involvement in BF redevelopment at the state level
OHA-PHD participation in BFs will improve community health conditions
OHA-PHD investment in relationships with influential stakeholders in BFs redevelopment will support health agency involvement in BFs
Creating a toolkit will help LHDs to engage more in BFs

External Factors

Funding for the program is inadequate and unsustainable
The majority of local health departments in Oregon do not have existing resources to contribute to brownfield and land reuse efforts

"It was particularly helpful for me to listen to participants explain their health concerns to public health partners. It helped me better understand cumulative issues. The scope of concerns has broadened my awareness of what communities are facing." – State Agency representative

"There are barriers to participation here at the local level and the State is breaking them down to encourage and promote these kinds of projects. It's an opportunity to put it all together and connect all the dots. It's a teaching tool." – Local Jurisdiction representative

"More and more we're sitting on technical advisory committees and the more we do that, we get invited to serve on other ones." – LPHA representative

"It's a great way to get a foot in the door at the City… it's a great first step to having further conversations about equity and healthy community design." – Community-serving organization representative

"I feel like just knowing that this program exists opens up possibilities for local health departments. Even if we weren't funded, the process of applying - learning about the possibilities. it gets us thinking. It builds hope about public health having a more active role in changing the upstream causes of the health issues we face." – LPHA representative

Brownfield Initiative

Program Evaluation

Oregon Health Authority

Spring 2015

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(2) Stakeholder Group Analysis

The second analysis summarized findings according to stakeholder group.

State-Level Partners

State partners hold decision-making positions within other state agencies and view their interaction with OHA as a strong collaboration. State agencies consider OHA to be one of the only partners bringing health expertise to brownfield/redevelopment projects in Oregon. ***"Until [the OHA Brownfields Initiative Coordinator] had gotten involved in this, we hadn't heard a lot of information about it."***

Partners now agree that the public health perspective is important. One stakeholder explained that when public health partners are at the table, the project becomes more "holistic": ***"It has really only been in the last few years where there's actually a partner who can address public health needs and environmental justice issues… having the public health lens completes the circle, in a way, it allows for those discussions to occur."***

Oregon Health Authority

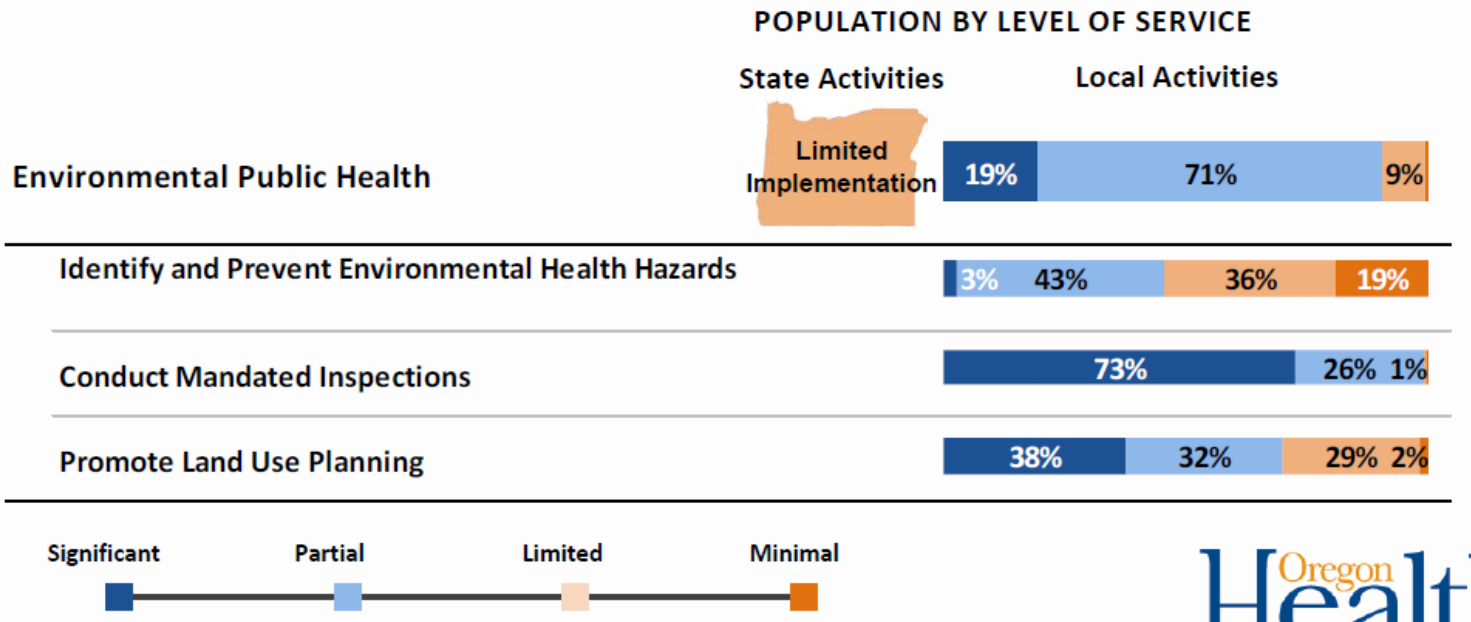
FUTURE

PH Modernization: A plan for the future

Oregon Health Authority

Programmatic gaps in current governmental public health system

- This assessment provides detailed information about programmatic gaps for all 11 foundational programs and capabilities:
  - E.g., Environmental Public Health:



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THANK YOU!

Brownfield Initiative

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Discussion

- Questions? Thoughts? Feedback?
- Ways to improve this work moving forward?
- Work happening elsewhere in the agency/in partner organizations that we can learn from?
- Ways our work might inform work in other parts of the agency/ work in partner organizations?
- Are there tools EPH could develop that would be useful to you?