



## Oregon Environmental Public Health Tracking

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[www.healthoregon.org/epht](http://www.healthoregon.org/epht)

### **Oregon Health Authority (OHA)**

### **Oregon Technical Advisory Group (OTAG)**

Wednesday, October 28, 2015 9-11 a.m.  
Portland State Office Building, Conference Room 1A-80

#### **EPHT Mgmt &Staff:**

Curtis Cude	Program Manager/Principal Investigator
Emily Martinez	OIS Project Manager
Mary Dinsdale	Lead Research Analyst
Eric Main	Research Analyst/GIS Specialist
Kelly Cogswell	Epidemiologist
Nadege Dubuisson	Public Health Educator
Karen Worden	Administrative Specialist

#### **Attendees:**

Juanita Heimann	OHA Director's Office
Don Austin	OHSU Epidemiologist
Ellen Larsen	Hood River County Health Department Director
Anna Harding	OSU Faculty
Brian Kennedy	CDC Project Officer
Brendon Haggerty	OHA Epidemiologist
Emily York	Oregon Climate and Health Program Coordinator

**Program Updates (Curtis Cude):**

1. State of the Tracking Program:
  - Potential budget cuts in CDC’s National Center for Environmental Health based on President’s budget (0-50%) to be confirmed in the next few weeks.
  - Especially if budgets are cut, national and local Tracking programs need to prioritize program activities. For example, Tracking should evaluate whether all content areas bring value to stakeholders (ie: Regulated Drinking Water Systems - this info is available through the Drinking Water Program; Air Quality Monitoring Data, poor quality; etc).
2. OR Tracking looking to rebuild the Portal, in partnership with IT. The plan is to build a new portal using updated technology that will include new functionality, data sets, and responsive design (portal is fully functional on any platform). It will also transfer more control over data and information updates to program staff, rather than relying on OIS. Colorado recently presented their method of meeting these requirements using a Google platform. Oregon Tracking is exploring the use of a Google platform and is working with OIS Business Engagement Services on a business change request to DAS.
3. Oregon data portal is currently down due to complimentary suppression issues.
  - Step 1 Fix the current portal
  - Step 2 Add in critical data sets
  - Step 3 work toward requirements for the next portal- Oregon Tracking plans to add traffic injuries and birth anomalies to the current data portal. Traffic injuries has already had initial development work and birth anomalies is a required indicator. No other developments planned beyond these two new indicators. Data refreshes to existing indicators (adding new years of data) will also occur while Oregon Tracking is working on requirements and developing a new data portal.

**OTAG Evaluation Results (Nadege):**

Slides were presented with the results of the 2015 spring evaluation of OTAG. Ten surveys were collected, with answers to questions on participation, structure and content, and impact of OTAG. Based on survey feedback, Oregon Tracking will determine a more convenient meeting time, incorporate more discussion content rather than presentation sessions, report back on OTAG feedback, and request OTAG feedback outside of OTAG as appropriate. Expect an electronic doodle poll to determine most convenient time and day of the week for future OTAG meetings.

*Discussion:*

- *Reconsider the time of meetings and perhaps a smaller room.*
- *Somewhat typical for established programs to have a lull in advisory meeting participation and content. Reach out to internal stakeholders for strategies on keeping group alive and well.*
- *Advisory Groups tend to have policy and technical directions but they can also be pulled in for strategy in dealing with reduced funding and priority designations.*

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**Tracking and CCOs Discussion (Eric):**

Slides were shared demonstrating some of the challenges of providing indicators within CCO boundaries. CCOs are not all uniform in size and block groups do not nest inside some CCOs.

This makes it difficult to associate indicators from the American Community Survey. Some CCO boundaries were defined using Census block boundaries showing that several CCOs overlap and some overlap substantially. Noticeable there are some enclaves in southern Oregon are sparsely populated. Oregon Tracking can customize some indicators for CCO boundaries including BMI; access to food, alcohol and tobacco; and access to public transit.

*Discussion:*

1. *Is it relevant to include CCO as a geography?*  
*Yes , but sub-county data should be provided and coded as falling within a CCO and also aggregated to the CCO level. There are technical challenges with boundaries including small enclaves and overlaps. Tracking might consider looking at tribal reservation geography. Some areas can be accessed on BMI data but should approach this cautiously. A past OHA employee may be a good connection to begin these conversations (Sujata Joshi).*
2. *What sorts of informational needs are there?*  
*CCOs and public health leadership are looking for the data.*
3. *What kinds of data should Tracking display?*  
*We know that some CCOs are looking at housing, food, and transportation-social determinants for large grants.*
4. *Given some of the technical challenges, is this actually feasible?*  
*Seems feasible as a division but more discussions are needed for methodology. Need a direct dialogue with Southern Oregon stakeholders about enclaves and overlaps.*
5. *What are other programs doing?*  
*OPHAT is working to make birth data available at CCO level. Has gotten requests from Pacific Source and others. However, no population estimates for CCo's, cost of developing these is high. Recommended EPHT look to join OPHAT methodological discussions.*

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**CLIMATE CHANGE NCDM'S Presented by Kelly Cogswell**

**Climate Change NCDM (Kelly)**

Slides were shared describing the four content areas chosen by the national content work group relating to climate change. The national content workgroup is currently evaluating:

1. **Wildfire.** Oregon is leading this team, and initial evaluation of several measures has begun. Measures evaluated include aerosol optical depth, length of fire season, firefighter deaths, respiratory hospitalizations, and respiratory ED visits.
2. **Lyme disease.** States are currently split on the most appropriate case definition. Discussion point for Oregon is: given low case numbers is there value added to including Lyme disease on the Tracking portal. Lyme disease is of high interest to the public.
3. **Injuries/deaths caused by extreme weather.** This team is using e-codes to identify cases, and have so far concluded that numbers are very small and dominated by extreme heat or cold events.

4. **Maximum temperature.** This group is interested in receiving 14 x 14 km grid cells of daily temperature data from CDC. Discussion is currently about how these sub-county data could be usefully displayed.

Brendon also shared the extreme heat work that the Climate and Health program has completed for Oregon. Provided the CSTE definition of extreme heat and showed some maps displaying population centroid for each county; 'most' are representative of where people are. He also calculated reference days for each county and calculated estimated increase for each county.

*Discussion:*

1. *Are the four indicators (Min/Max Temp, Injuries by Extreme Weather Events, Lyme Disease, and Wildfire) relevant to Oregon and possible to adopt? Yes, great interest from the public, especially Lyme disease. For wildfire, fire seasons different for various states and what type of fire it is, grass fires, etc. Wildfire is an OCC Health Issue. Looking at where people are or are not and determining the denominator can be difficult. Those in Public Health trying to work together on this issue. This is an area for exploration. Points of interest to land and fire fighters. OCC Health, Climate Health, Tracking all working together in this area. In regards to PM, Oregon Tracking starting to work with DEQ to draw monitoring data.*
2. *Specifically, is there value added to Lyme disease indicator for the state? (see <http://www.capcvet.org/parasite-prevalence-maps/> and <http://www.cdc.gov/lyme/stats/>) Many don't report contact by a tick. The quality of testing is not great. Maybe worth talking with Communicable Disease folks rather than just confirmed cases. There are diseases in the tropics that are moving up North*
3. *Are there other infectious diseases we should consider? Need to connect with Communicable Disease folks and PSET.*
4. (did not cover) *How should we consider displaying/accessing climate change indicators on the portal?*
5. (did not cover) *Are there any other recommendations for climate change and Tracking?*

OCTOBER 2015

**OTAG**

OREGON TECHNICAL ADVISORY GROUP



Oregon Environmental  
Public Health Tracking

# AGENDA

Time	Topic	Presenter
<b>9:05-9:10</b>	Welcome & Introductions	<b>All</b>
<b>9:10-9:25</b>	Program Update	<b>Curtis</b>
<b>9:25-9:40</b>	OTAG Evaluation Results	<b>Nadege</b>
<b>9:40-10:05</b>	Tracking and CCOs Discussion	<b>Mary/Eric</b>
<b>10:05-10:55</b>	Climate Change Measures Discussion	<b>Kelly</b>
<b>10:55-11:00</b>	<b>Meeting Wrap-Up &amp; Adjourn</b>	<b>Curtis</b>



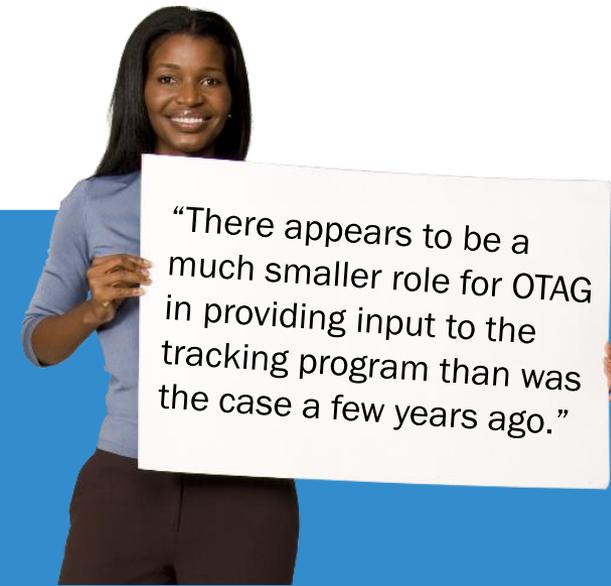
# OTAG EVALUATION



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# PARTICIPATION (n=10)

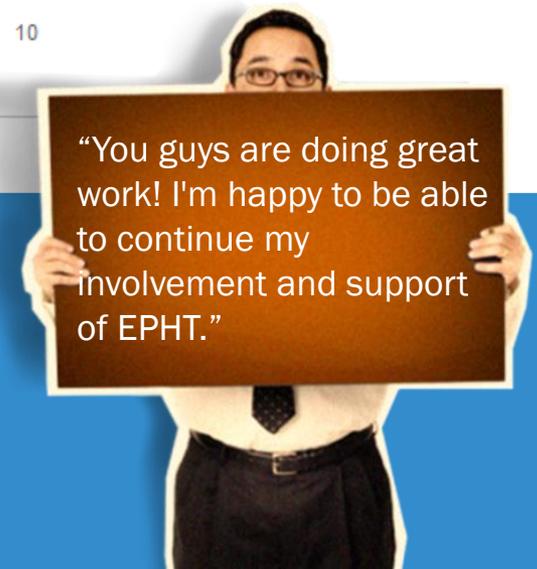
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
My time is used effectively	30.00% 3	40.00% 4	20.00% 2	10.00% 1	0.00% 0
I feel my input is valued in OTAG	30.00% 3	50.00% 5	20.00% 2	0.00% 0	0.00% 0
I feel that my knowledge and skills are being used in the OTAG process	10.00% 1	50.00% 5	40.00% 4	0.00% 0	0.00% 0
My participation on OTAG is beneficial to me and my organization	30.00% 3	40.00% 4	30.00% 3	0.00% 0	0.00% 0
I am likely to attend another	50.00% 5	40.00% 4	10.00% 1	0.00% 0	0.00% 0



“There appears to be a much smaller role for OTAG in providing input to the tracking program than was the case a few years ago.”

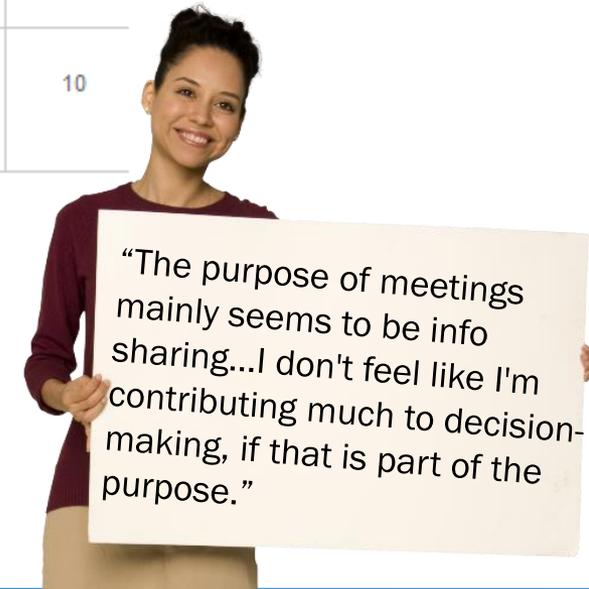
# STRUCTURE & CONTENT (n=10)

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
▼ The goals of Oregon Tracking are important	40.00% 4	50.00% 5	10.00% 1	0.00% 0	0.00% 0	10
▼ The content presented and discussed in OTAG meeting is relevant	10.00% 1	80.00% 8	10.00% 1	0.00% 0	0.00% 0	10
▼ OTAG meetings are productive	30.00% 3	60.00% 6	10.00% 1	0.00% 0	0.00% 0	10
▼ The length of the meeting is good	10.00% 1	40.00% 4	50.00% 5	0.00% 0	0.00% 0	10



# IMPACT (n=10)

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Oregon Tracking is responsive to OTAG recommendations and suggestions	10.00% 1	30.00% 3	60.00% 6	0.00% 0	0.00% 0	10
Oregon Tracking benefits from contributions of OTAG	10.00% 1	40.00% 4	50.00% 5	0.00% 0	0.00% 0	10



“The purpose of meetings mainly seems to be info sharing...I don't feel like I'm contributing much to decision-making, if that is part of the purpose.”

# MOVING FORWARD

1. Keep bi-annual meetings
2. Incorporate more discussion in OTAG meetings
3. Request feedback outside of OTAG meetings, when appropriate
4. Communicate activities resulting from OTAG input

[nadege.dubuisson@state.or.us](mailto:nadege.dubuisson@state.or.us)



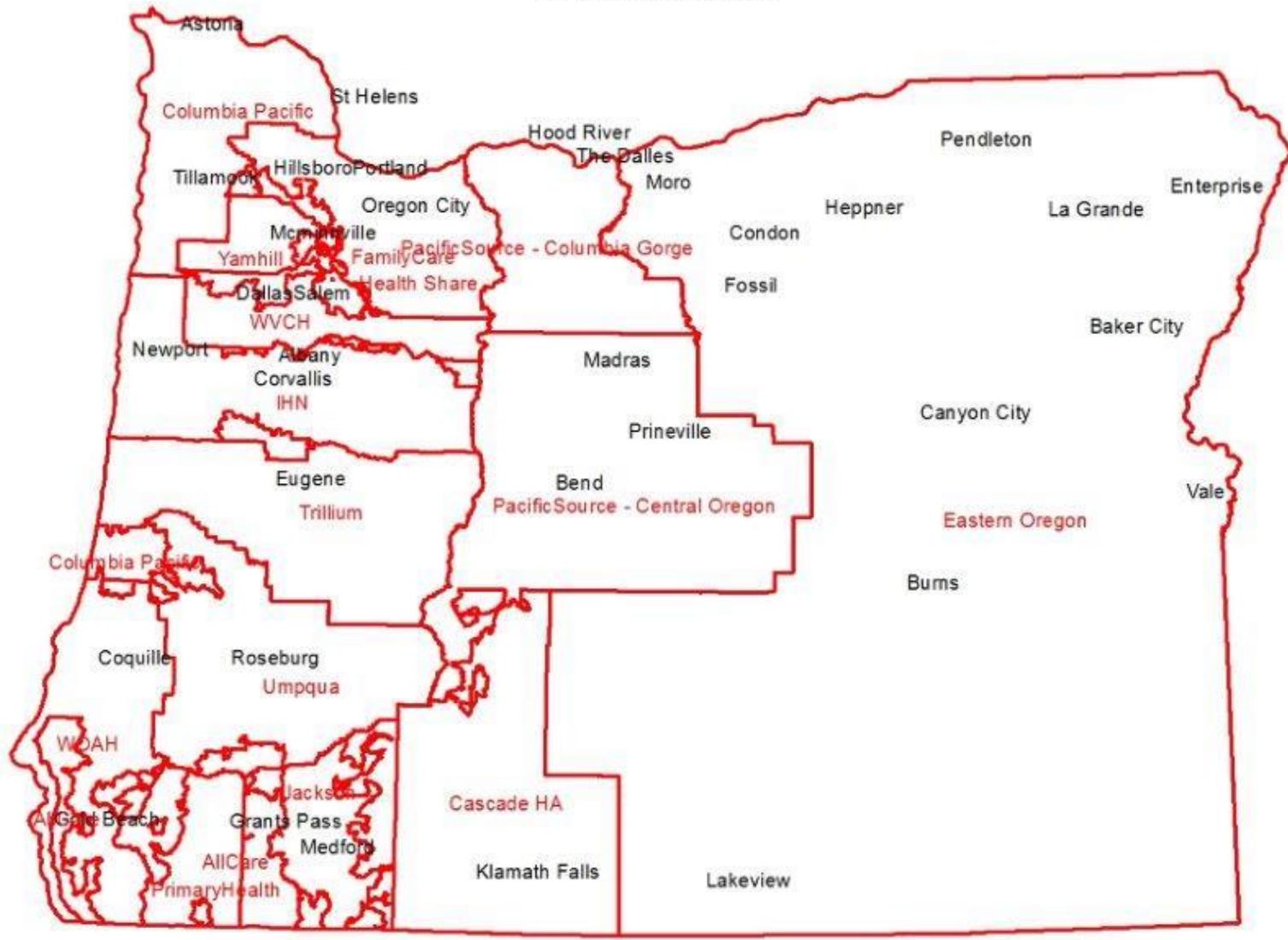
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# TRACKING AND CCOs



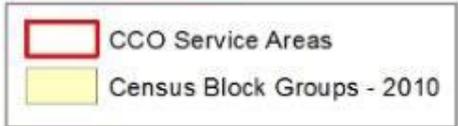
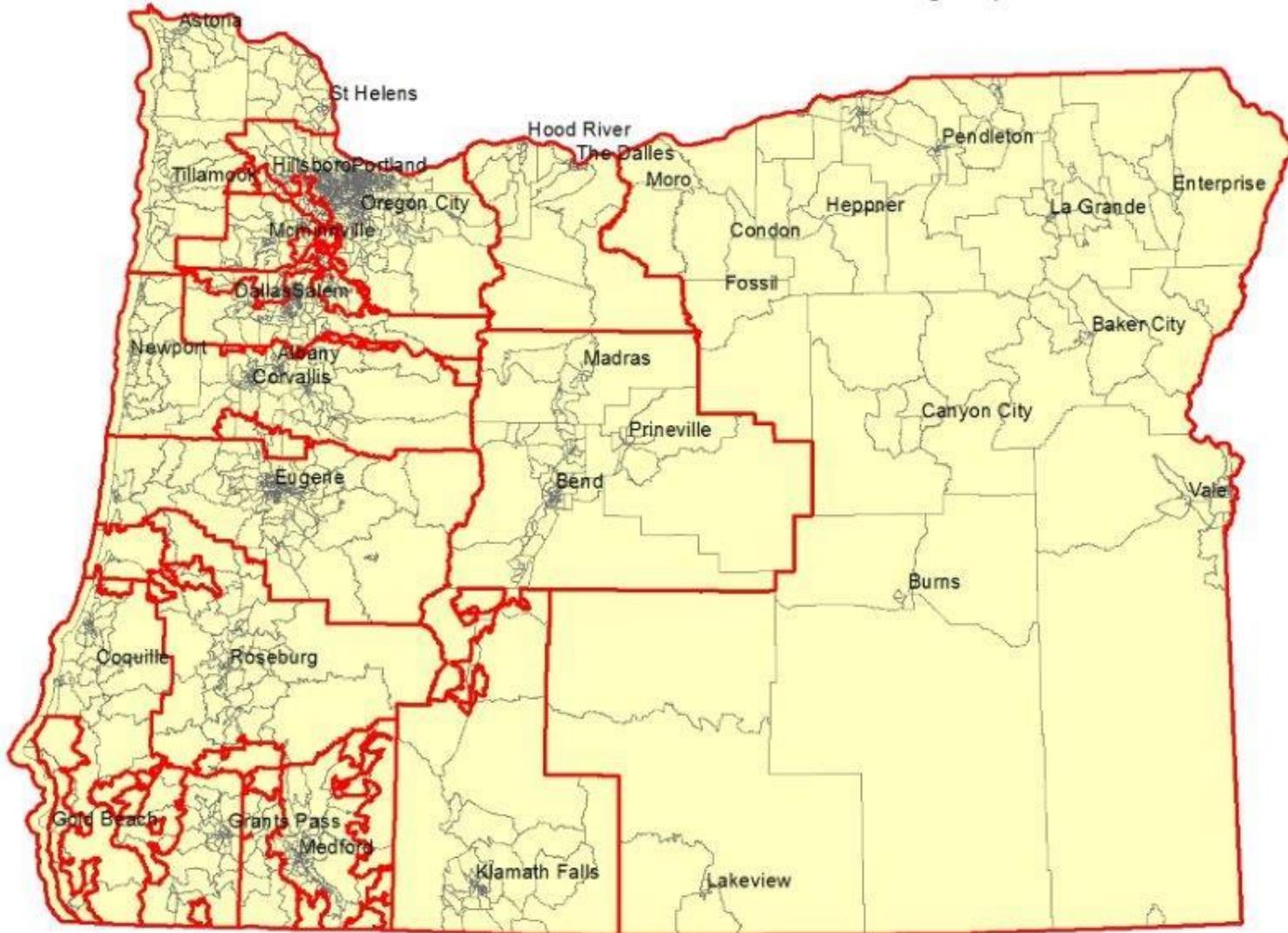
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# CCO boundaries

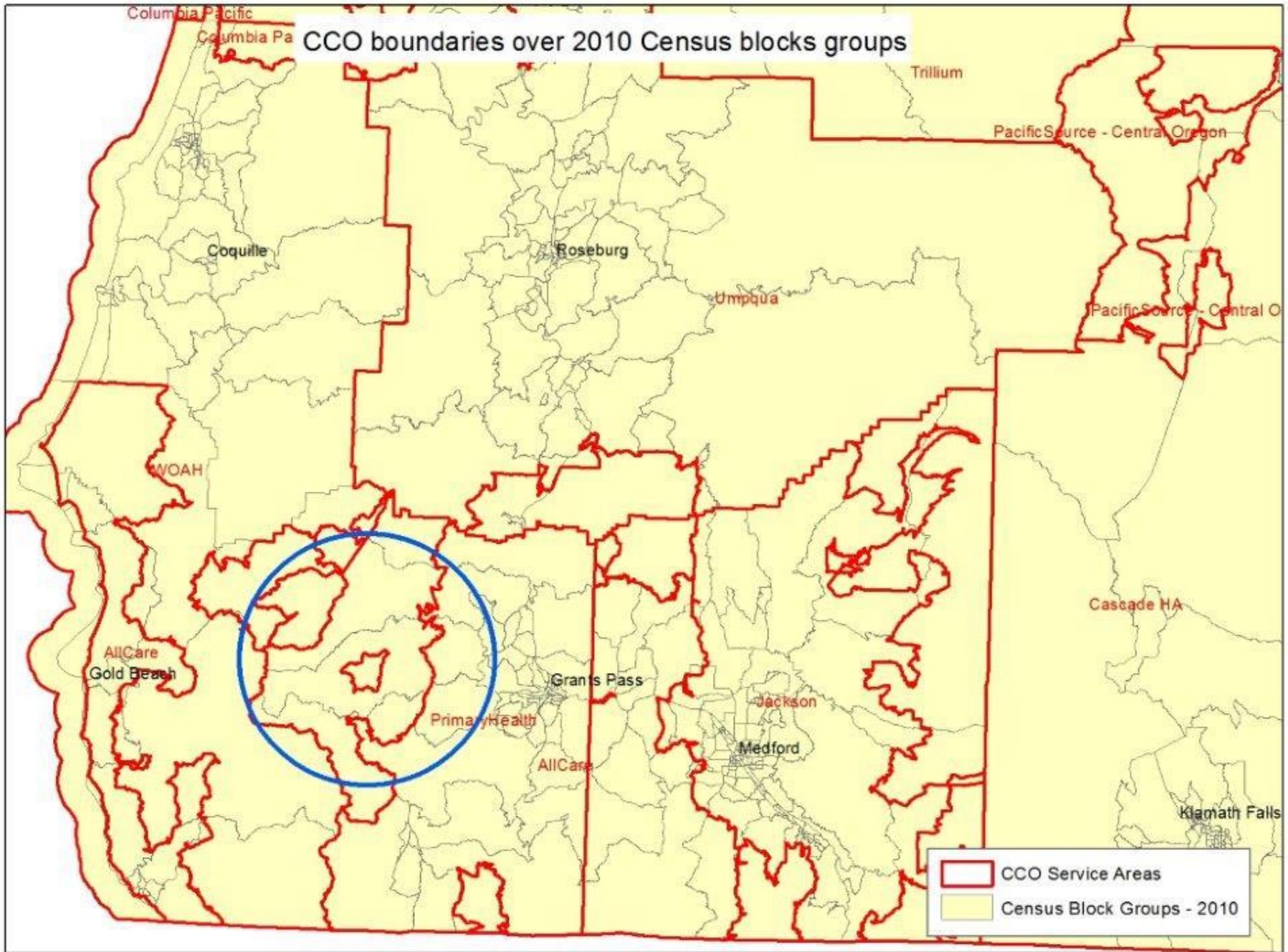


 CCO Service Areas

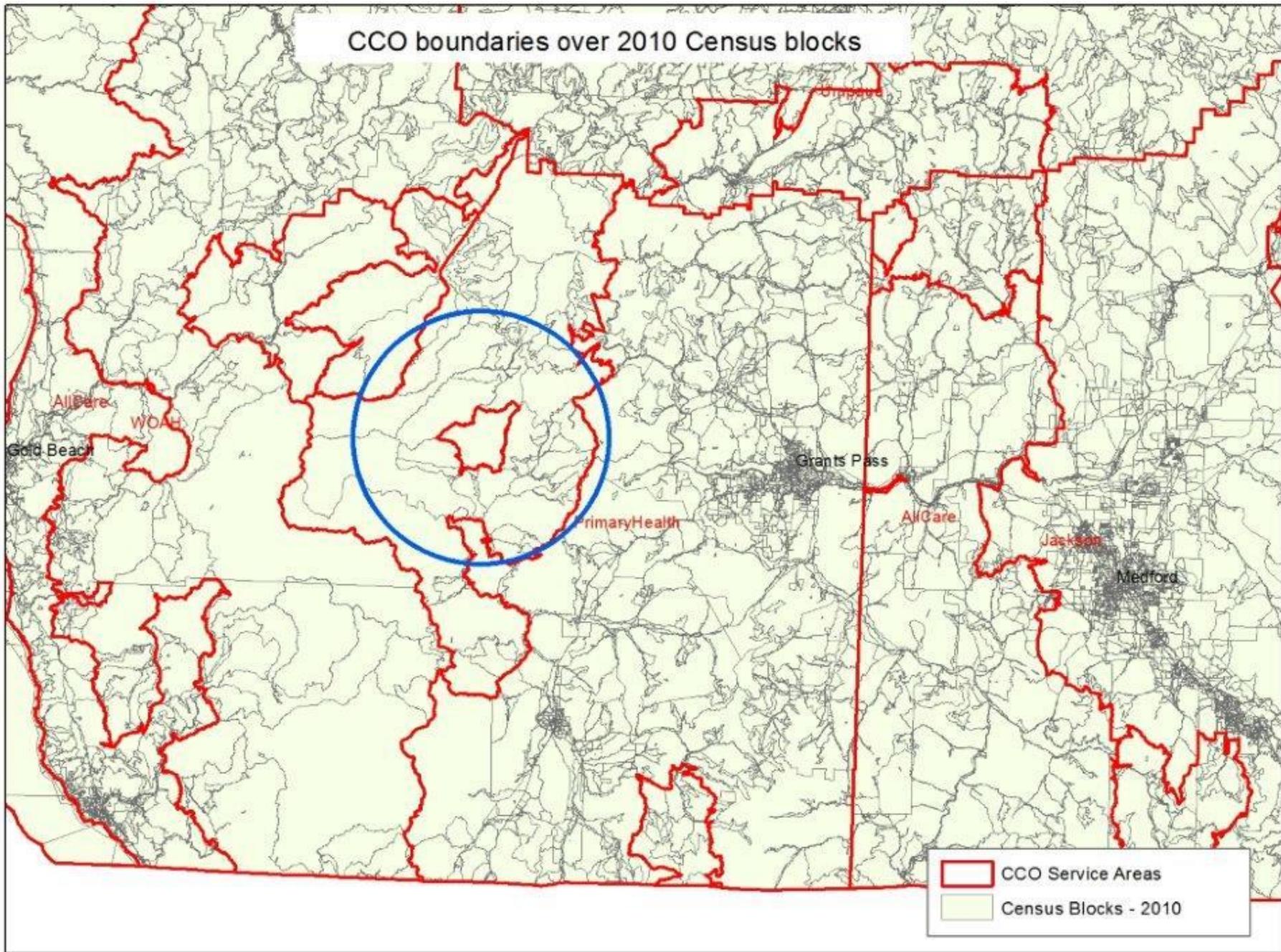
# CCO boundaries over 2010 Census blocks groups



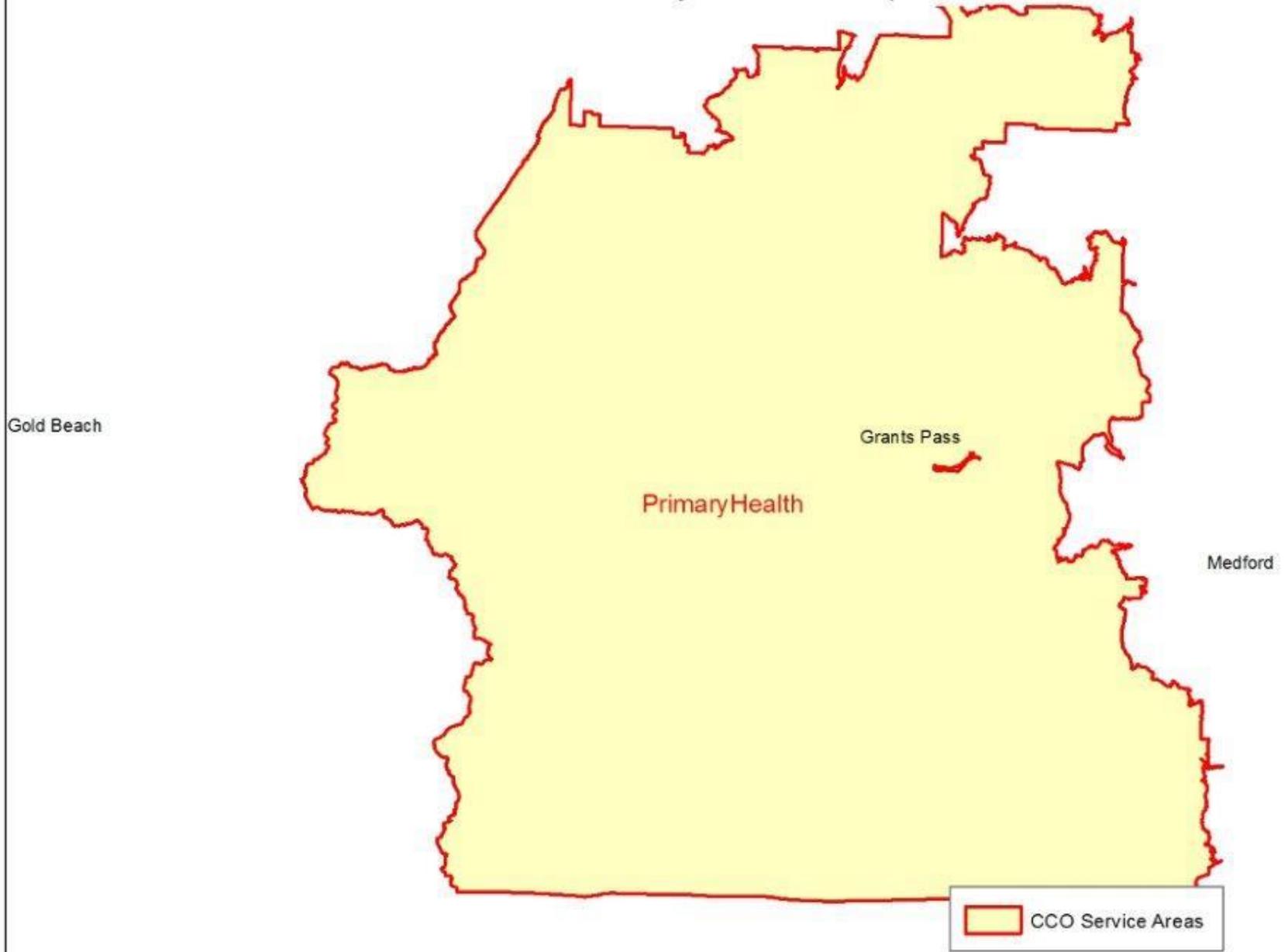
# CCO boundaries over 2010 Census blocks groups



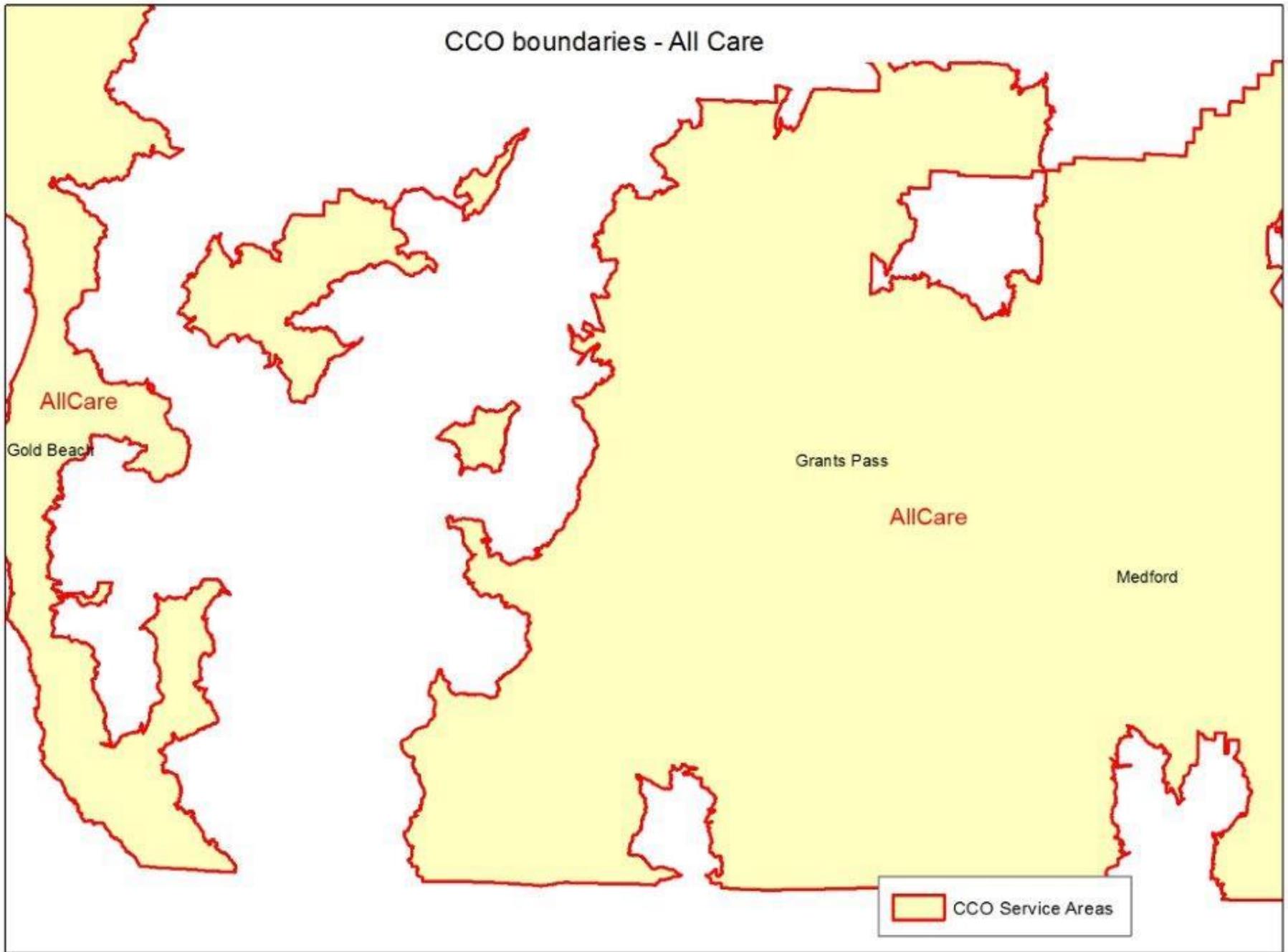
# CCO boundaries over 2010 Census blocks



# CCO boundaries - Primary Health of Josephine

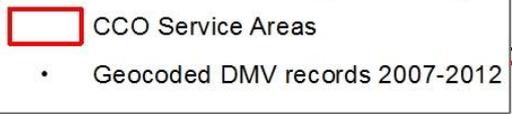
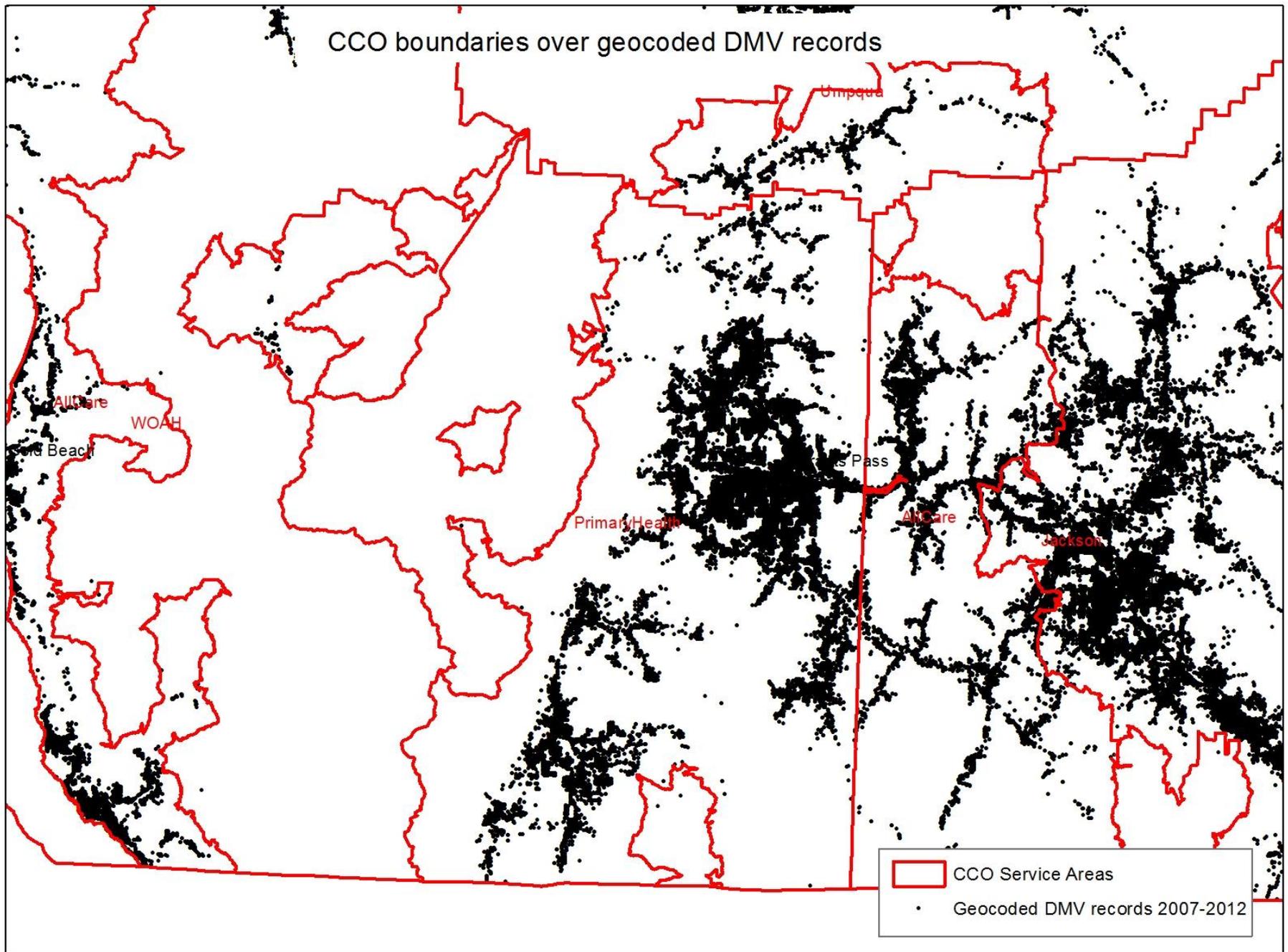


CCO boundaries - All Care



CCO Service Areas

# CCO boundaries over geocoded DMV records



# INDICATORS & MEASURES

...that could conform to CCO boundaries:

- Body Mass Index (BMI)
- Access to Food, Alcohol, and Tobacco
- Retail Food Environment Index
- Access to Public Transit



# TRACKING & CCOs DISCUSSION

1. Is it relevant to include CCO as a geography?
2. What sorts of informational needs are there?
3. What kinds of data should Tracking display?
4. Given some of the technical challenges, is this actually feasible?
5. What are other programs doing?
6. Would you recommend Tracking add “results by CCO”?



# CLIMATE CHANGE NCDM



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# WILDFIRE

## Measures:

- Aerosol Optical Depth
  - MODIS satellite data
- Length of fire season
  - Burn danger index
- Acres burned
- Respiratory disease hospitalizations
- Respiratory disease ED visits



# LYME

## Measures:

- Confirmed cases
- Probable cases
- Sum of confirmed and probable cases

## Geography:

- State
- County

## Subcategories:

- Age
- Sex

## Timeframe:

- Year
- Monthly (multiple years combined)



# INJURIES & DEATHS FROM EXTREME WEATHER

Identify weather related morbidity and mortality

- **Data sources:**
  - SHELDUS: Spatial Hazard Events and Losses Database for the United States
    - Recommended as data source in CSTE indicators
    - Possibly not complete for injuries/deaths
    - Not free
  - Hospitalizations/ED visits
    - e-codes for heat, cold, storms, flood, lightning
    - Dominated by heat and cold events
    - Low numbers, especially when separated into event type or when split by county



# MAXIMUM TEMPERATURE

## Measures:

- Daily maximum temperature
- Daily heat index

## Data source:

- North American Land Data Assimilation System (NLDAS) data
- Geography: 14 x 14 km grid cells

National Tracking currently calculates measures for the entire country, displayed at a county level (grid cells converted using population weighted centroid).



# CLIMATE CHANGE MEASURES DISCUSSION

Max Temp • Injuries by extreme weather events • Lyme Disease • Wildfire

1. Are the four indicators relevant to Oregon and possible to adopt?
2. Specifically, is there value added to Lyme disease indicator for the state? (see <http://www.capcvet.org/parasite-prevalence-maps/> and <http://www.cdc.gov/lyme/stats/> )
3. Are there other infectious diseases we should consider?
4. How should we consider displaying/accessing climate change indicators on the portal?
5. Are there any other recommendations for climate change and Tracking?



# Extreme heat

> 95<sup>th</sup> percentile 1971-2000 and  $\geq 85^\circ\text{F}$

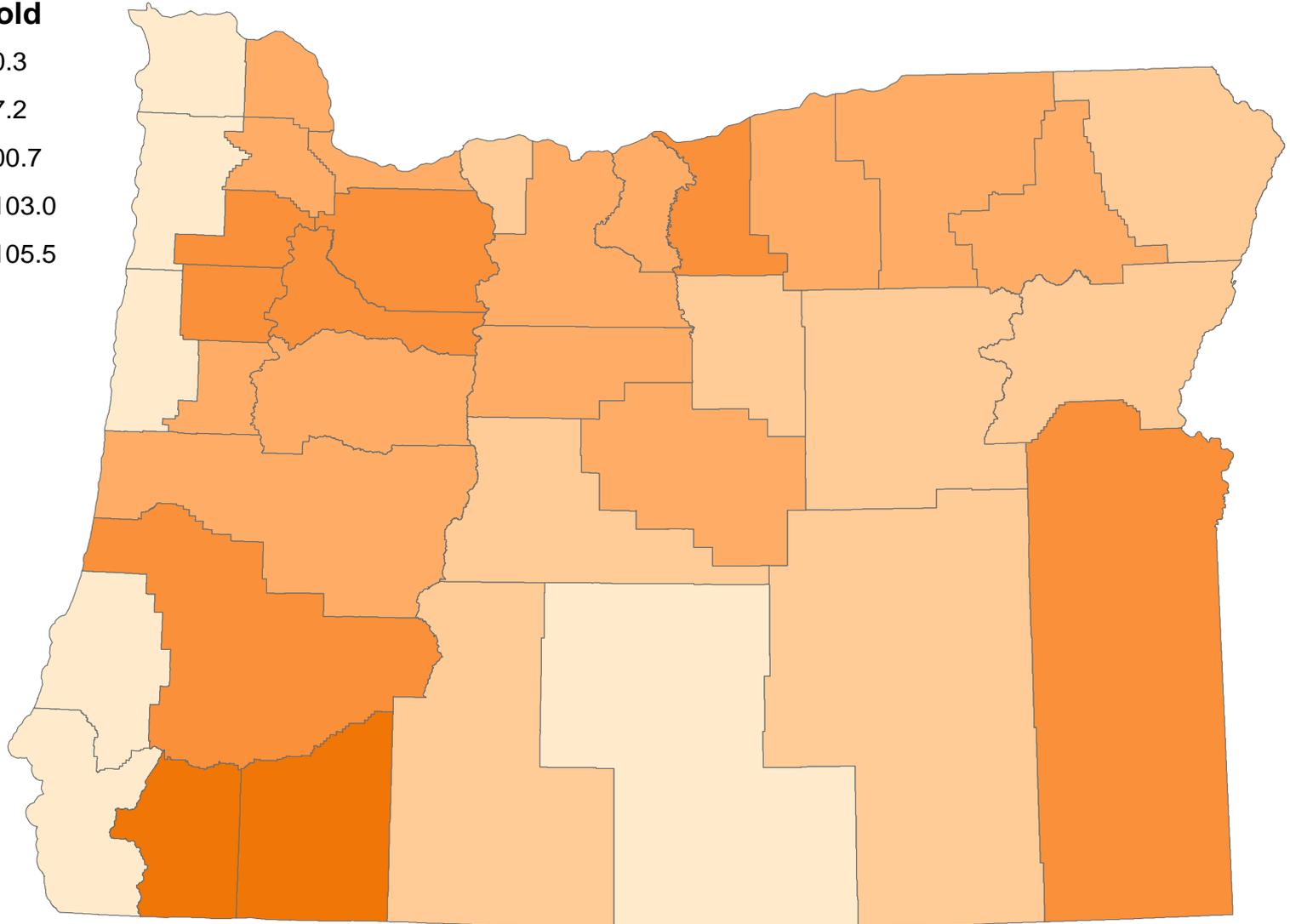
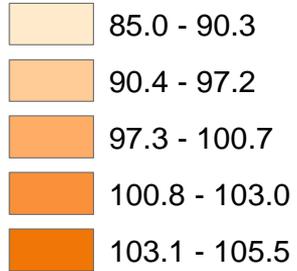
Source: English et al. 2009



# Extreme heat threshold for August 10th

## Counties

### EHD Threshold



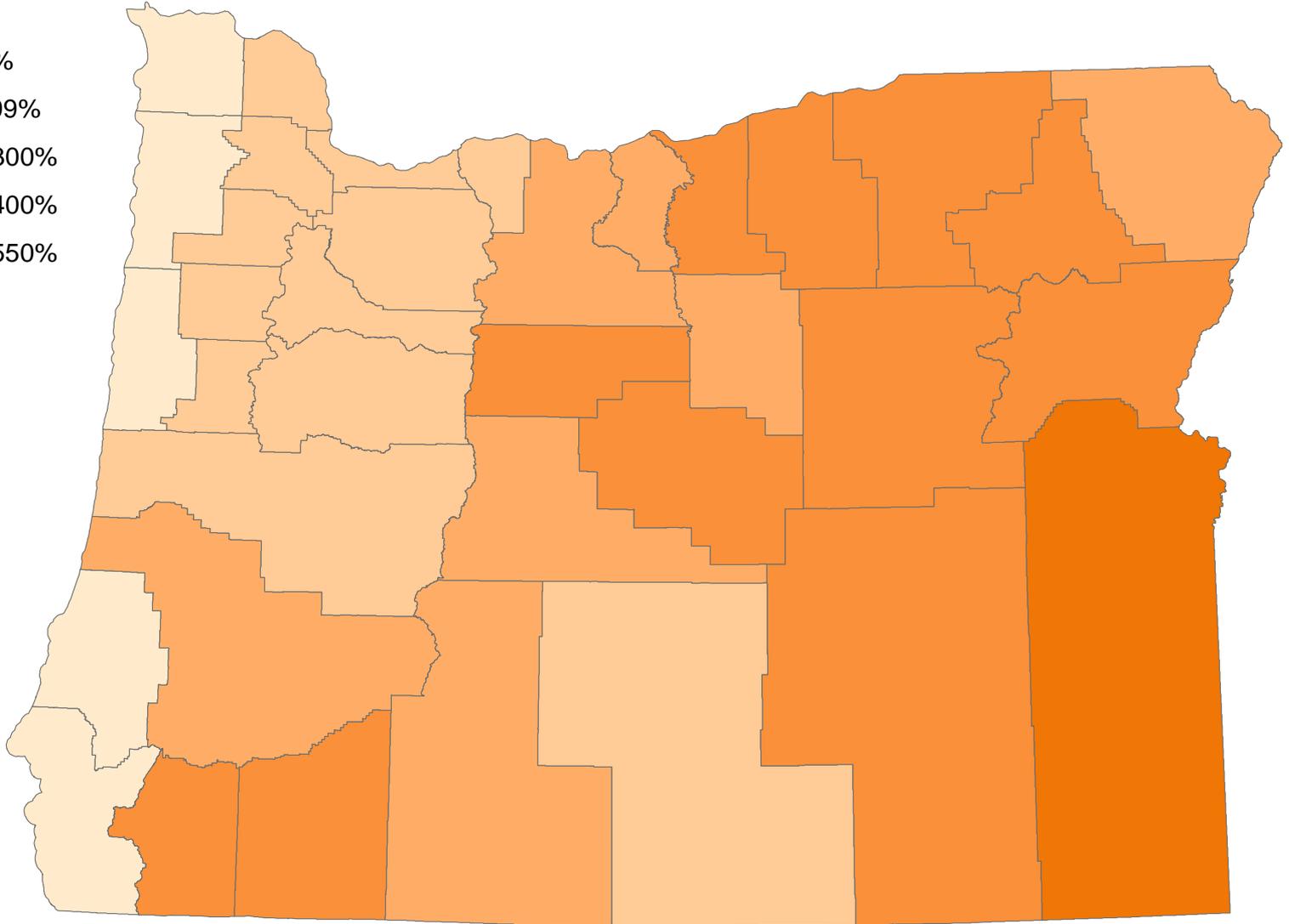
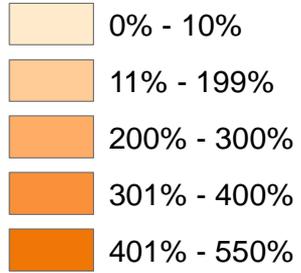
# Average annual extreme heat days, Multnomah County

1971-2000	2040-2069		
Reference	Low	Med	High
8.5	13.9	18.6	20.1

# Change in extreme heat days 2040-2069 vs. 1971-2000

## Counties

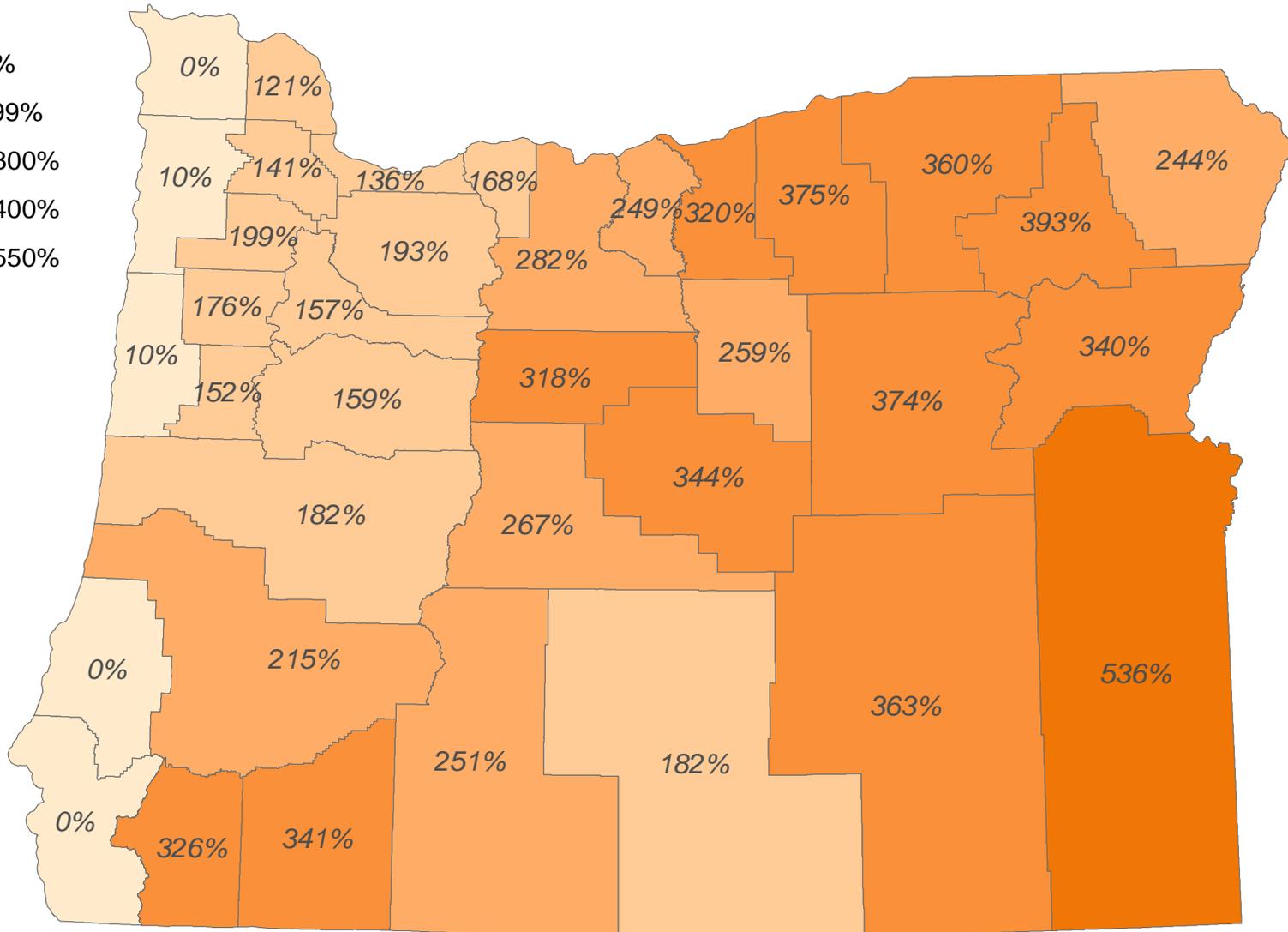
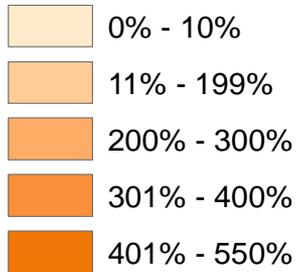
## Pct Change



# Change in extreme heat days 2040-2069 vs. 1971-2000

## Counties

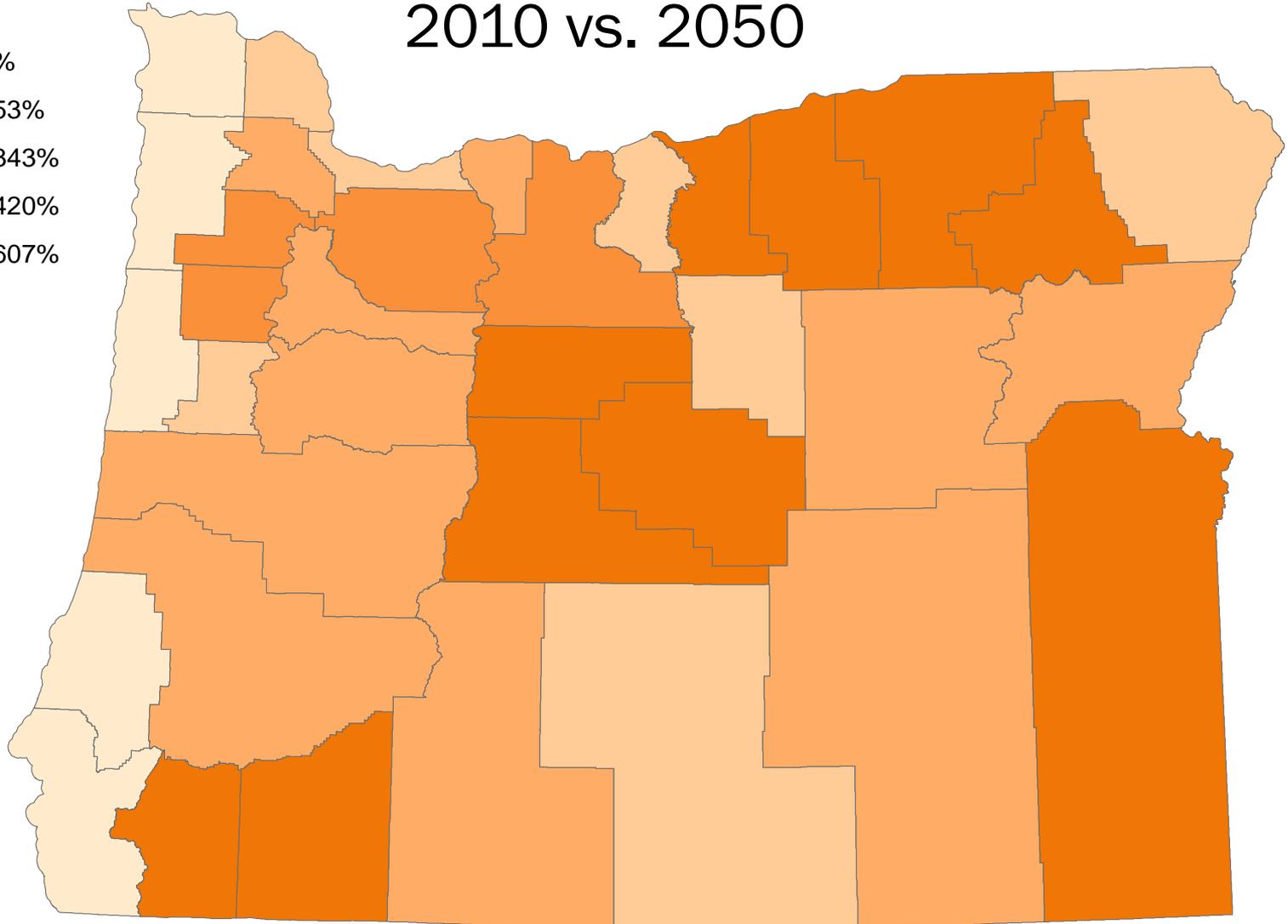
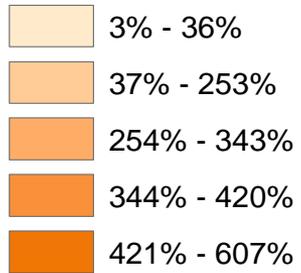
## Pct Change



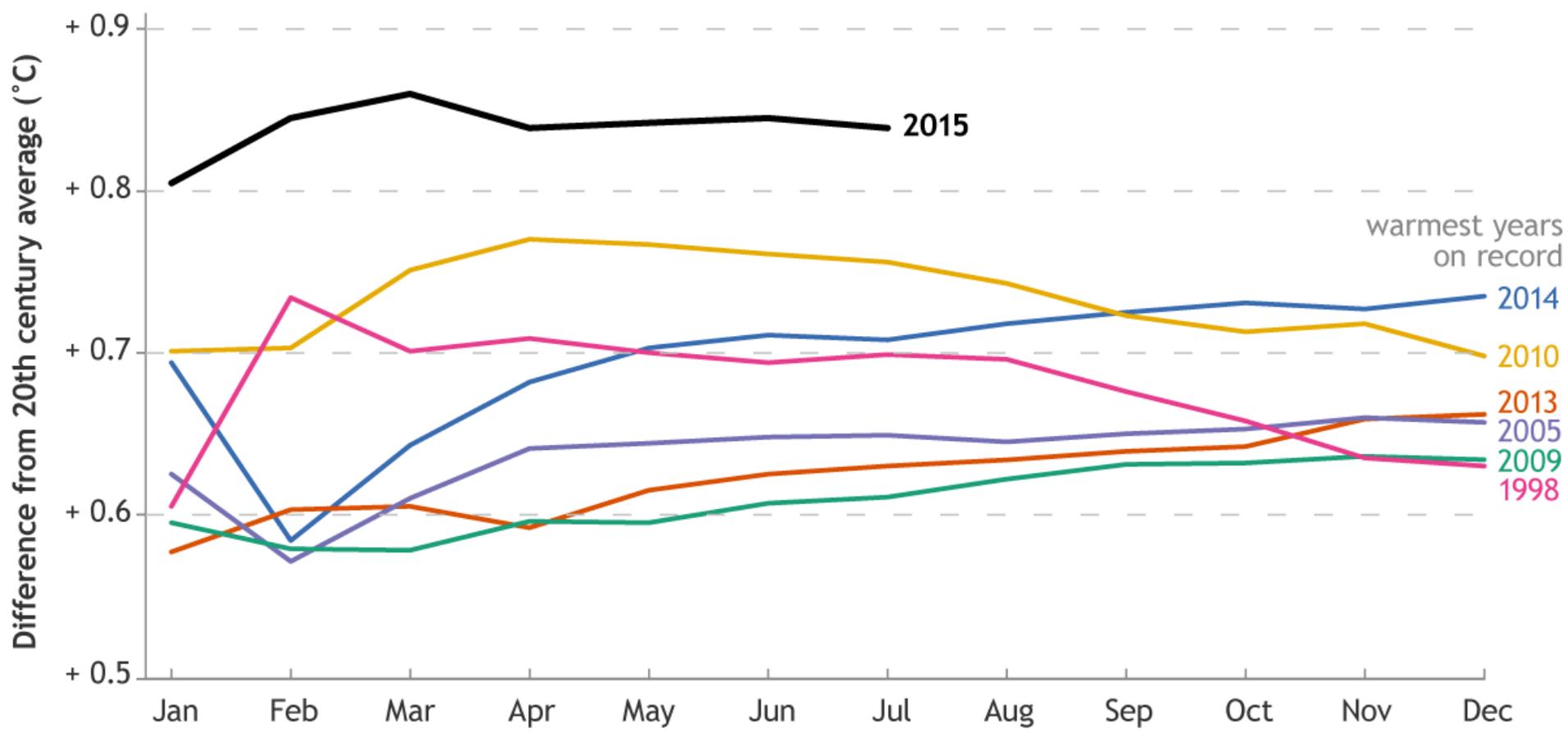
# Change in person-days of exposure to extreme heat 2010 vs. 2050

## Counties

### Pct Increase

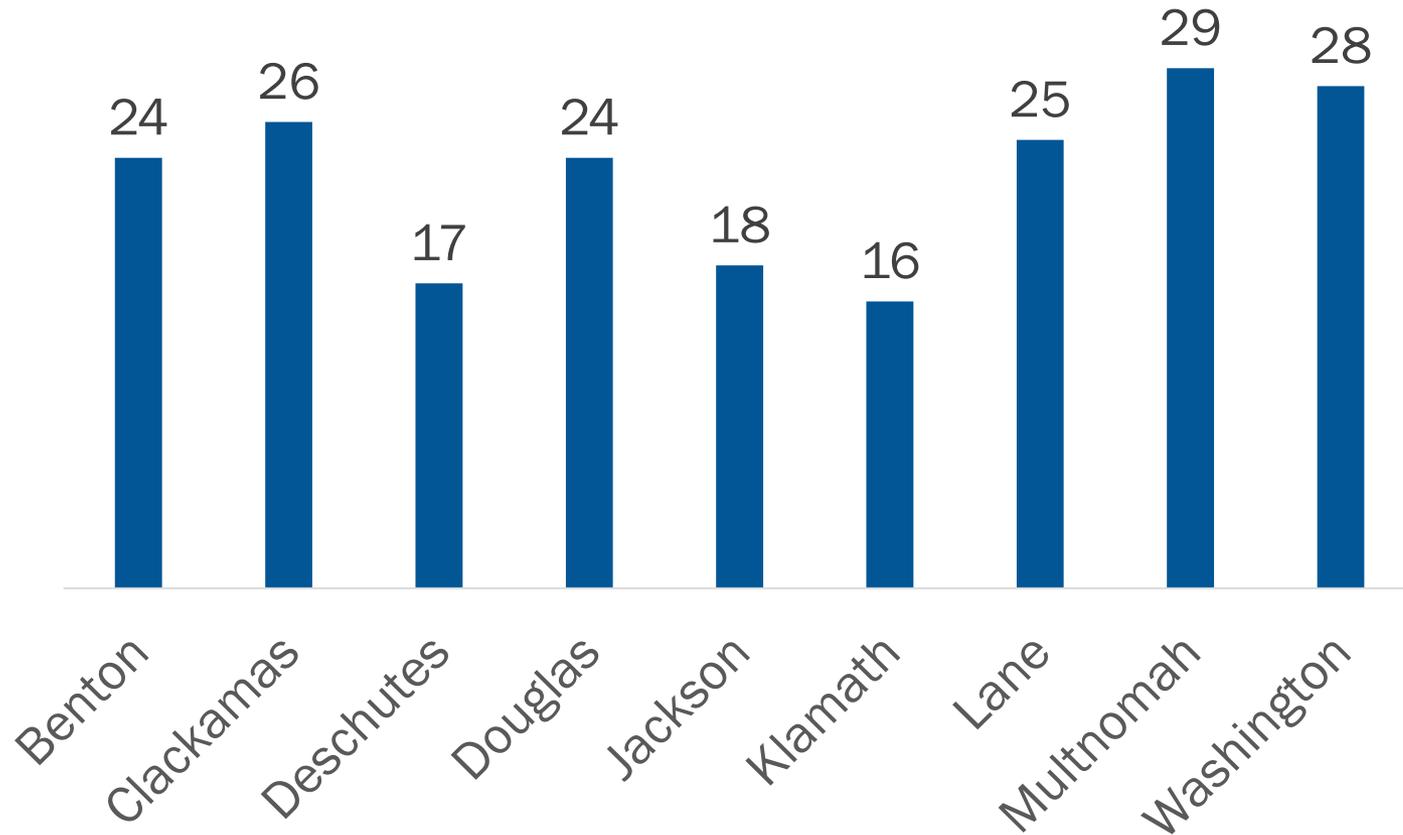


# Global temperatures for 2015

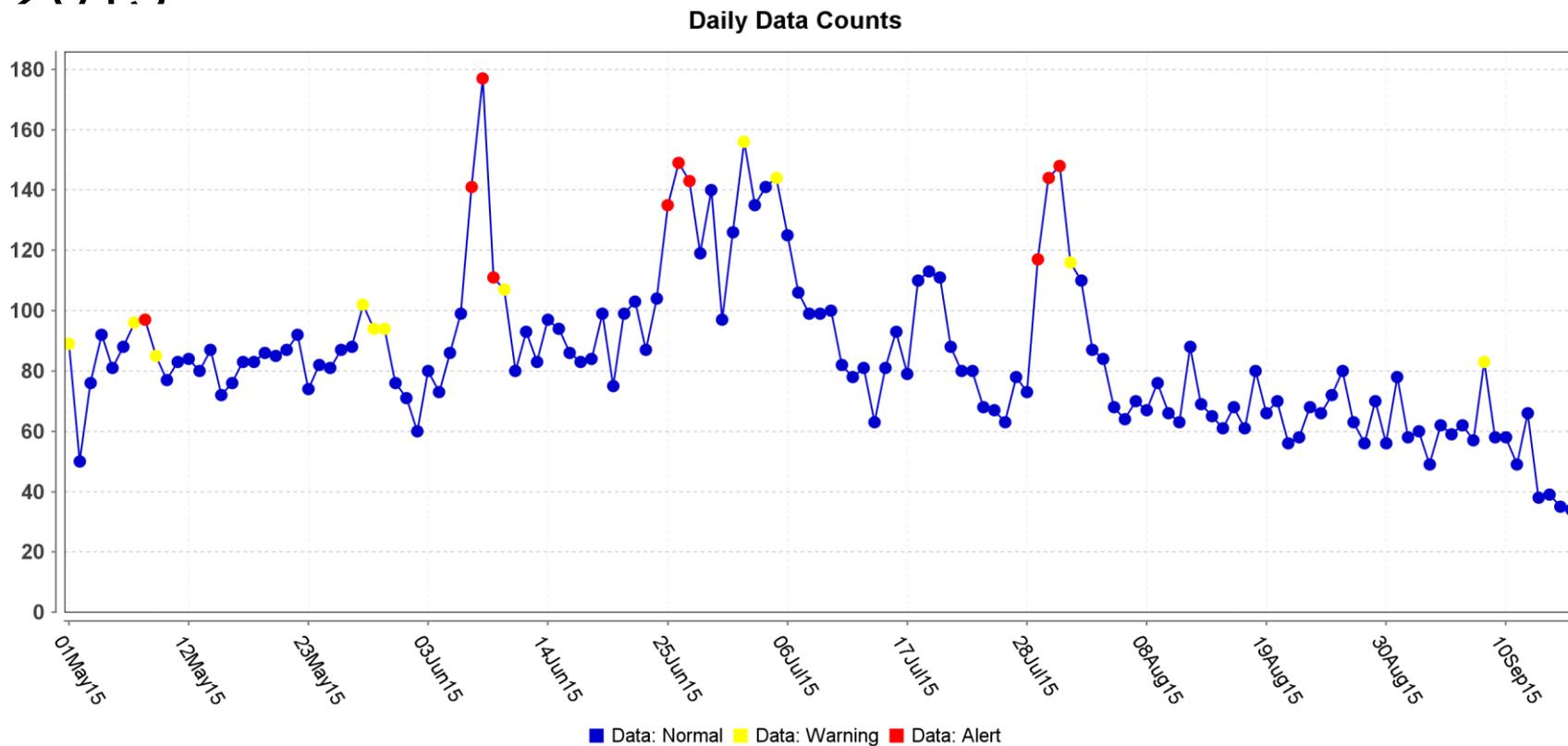


Source: climate.gov

# Days of exposure to extreme heat in selected counties, May 1-Sept 14 2015



# Heat-related ED visits in Oregon, May 1-Sept 16 2015



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