

# **Drought Impacts 2018**

**Oregon Water Resources Commission Meeting  
November 16, 2018**

**Julia Ostapiej, Drought Impacts Intern**

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# Drought Impacts 2018

- **The Need to Document Impacts of Drought**
- **Drought Impacts 2018 – Summer Project**
- **Lessons Learned**

# The Need to Document Impacts of Drought

- 2018 Drought Readiness Council
- 2018 Water Supply Availability Committee
- 2017 Integrated Water Resources Strategy (5.5A)
- 2015 Drought Task Force

# The Need to Document Impacts of Drought

- **Hydrologic Impacts**
- **Economic Impacts – previously collected by OSU Extension and Department of Agriculture**
- **Social / Cultural Impacts**

# Drought Impacts 2018 – Summer Project

- Introducing Julia Ostapiej, Drought Intern
- Project Design
- Interviews
- Results Placed onto a Story Map...

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Story not shared ×

Edit

A Story Map



Intro

Locations by primary impact categories

Edit

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## Oregon 2018 Drought Impact Stories

During the summer of 2018, the Oregon Water Resources Department commissioned a study to document the impacts of drought on Oregon homes and cities, businesses and farms, recreation, culture, and environment.

Interviewees included 11 watermasters, six Oregon State University (OSU) extension agents, colleagues from four state agencies, four municipalities, four river outfitters, a botanist, an irrigation district, tribal staff, and the Drought Readiness Council, which recommended that the Governor declare drought in nine Oregon counties during the course of the project.

The resulting narratives were wide-ranging, and rich with description. In



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# Oregon 2018 Drought Impact Stories

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Edit

A Story Map



Intro Locations by primary impact categories

Edit

## Oregon 2018 Drought Impact Stories

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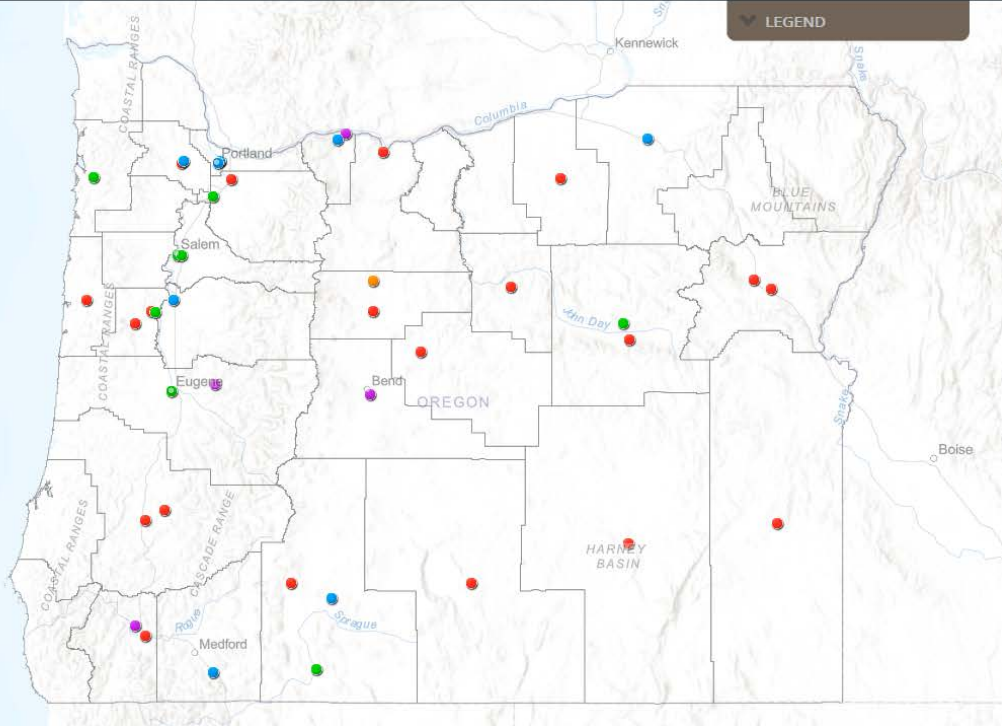
Story not shared x

### Story location maps

The locations of all the stories are depicted on the map to the right. The story locations are color coded by their primary impact category (click on the legend in the upper right corner to see all of the categories).

You can view pictures and other attachments associated with each story by clicking on the "Locations by primary impact categories" tab above and then on a tab for each category. It can take several seconds to load when you click on the tab the first time.

The drought impact scale runs from 0 (no impact) to 4 (highest impact).



















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# Oregon 2018 Drought Impact Stories

No issues detected × Story not shared ×

Intro Locations by primary impact categories

- Agriculture/livestock
- Domestic/municipal
- Fisheries/wildlif/ecosystem
- Recreation/tourism
- Cultural/resources

 <p><b>1</b> Lake County Board of Commissioners</p>	 <p><b>2</b> OR Drought Readiness Council (Baker county)</p>	 <p><b>3</b> OR Drought Readiness Council (Douglas county)</p>	 <p><b>4</b> OR Drought Readiness Council (Harney county)</p>
 <p><b>5</b> OR Drought Readiness Council (Klamath county)</p>	 <p><b>6</b> OR Drought Readiness Council (Lincoln county)</p>	 <p><b>7</b> OR Drought Readiness Council (Morrow county)</p>	 <p><b>8</b> OR Drought Readiness Council (Wheeler)</p>
 <p><b>9</b> OSU Extension Service (Crook, Deschutes, &amp; Malheur co.)</p>	 <p><b>10</b> OSU Extension Service (Klamath, Douglas, &amp; Wheeler co.)</p>	 <p><b>11</b> OSU Extension Service (Linn, Benton, &amp; Lane)</p>	 <p><b>12</b> OSU Extension Service (Malheur co.)</p>
			

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1 City of Albany Public Works



2 City of Ashland Public Works



3 City of Hillsboro Water Department



4 City of Pendleton Public Works



5 Farmers Irrigation District



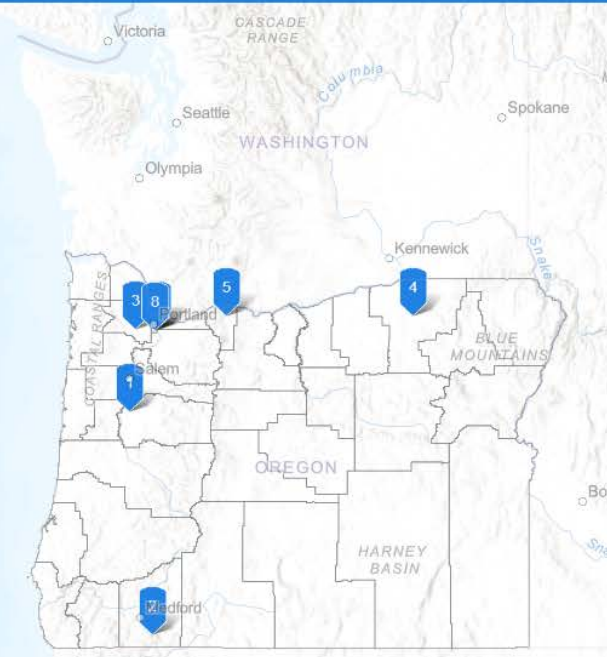
6 Oregon Health Authority, Climate & Air Quality



7 Oregon Health Authority, Drinking Water Services



8 Portland Water Bureau











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 <p>1 Oregon Department of Fish and Wildlife</p>	 <p>2 Oregon Department of Forestry</p>	 <p>3 OR Drought Readiness Council (Grant county)</p>	 <p>4 OWRD District 1 Watermaster</p>
 <p>5 OWRD District 2 Watermaster</p>	 <p>6 OWRD District 16 Watermaster</p>	 <p>7 OWRD District 17 Watermaster</p>	 <p>8 Wilbur Bluhm</p>



# Oregon 2018 Drought Impact Stories

No issues detected × Story not shared ×

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1 Helfrich River Outfitters



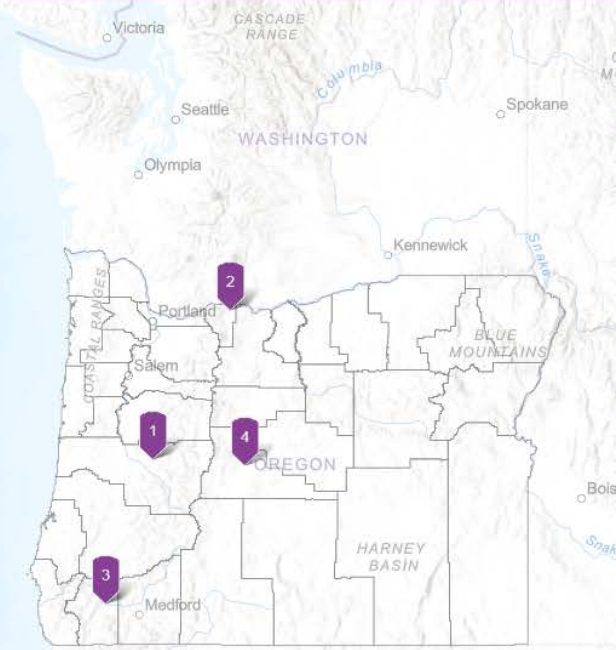
2 Northwest Rafting Company



3 Orange Torpedo Trips



4 Wanderlust Tours



# Oregon 2018 Drought Impact Stories

No issues detected ✖

Story not shared

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1 Confederated Tribes of Warm Springs



# Oregon 2018 Drought Impact Stories

No issues detected x Story not shared x

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## 1 Confederated Tribes of Warm Springs



Story date: August 1, 2018

Scale of impact (1-4): 4

Impacted area: Warm Springs Indian Reservation

The interviewee is a tribal emergency manager for the Confederated Tribes of Warm Springs. The drought this summer had severe impacts on the traditional food and water supply for the tribal community. The drought impacted the quality of the drinking water with the presence of blue-green algae. The tribal community has also noticed a steep decline in their traditional food sources in the last five years: Alaskan caribou, deer, elk, salmon, and wild berries. Over time, the tribal community has noticed a significant decline in snowpack and quicker than normal snow melt. The drying up of creeks has caused the deer population to migrate to areas where water sources are available. Moreover, there was also a significant decline in the fish populations. The tribal community has also noticed a significant increase in pests. Warm Springs also had the longest streak of hot temperatures in the last thirty years. Temperatures were above 101 degrees (F) for eleven consecutive days. The tribe had to send out notices to their vulnerable populations.



# Oregon 2018 Drought Impact Stories

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Story not shared x

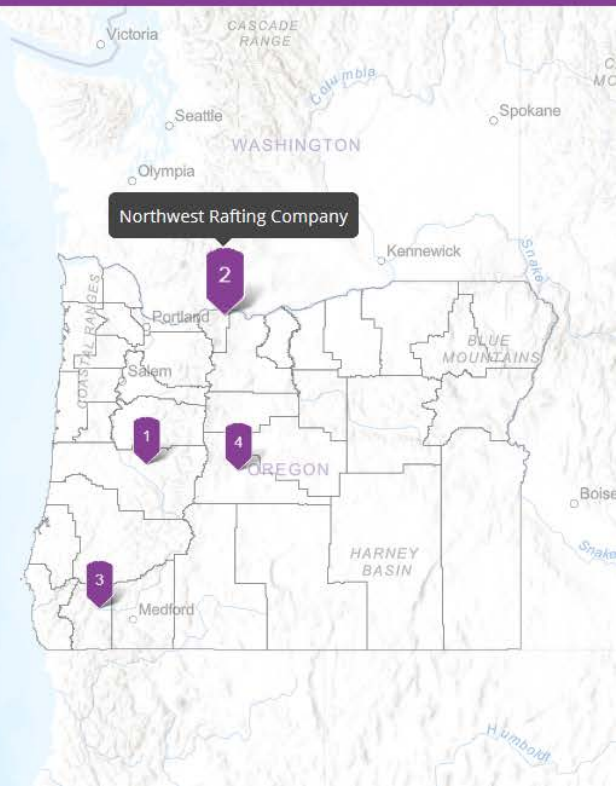
Intro Locations by primary impact categories

Agriculture/livestock Domestic/municipal Fisheries/wildlif/ecosystem Recreation/tourism Cultural/resources

## 2 Northwest Rafting Company



Story date: July 27, 2018  
Scale of impact (1-4): 2  
Impact area: Rogue River, Owyhee River, Illinois River, and Chetco River



# Oregon 2018 Drought Impact Stories

No issues detected × Story not shared ×

Intro Locations by primary impact categories

- Agriculture/livestock**
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- Cultural/resources

## 10 OSU Extension Service (Klamath, Douglas, Jackson, Lake, Josephine)



Story date: Jul 27, 2018

Scale of impact (1-4): 3.5

Impacted area: Klamath, Douglas, Jackson, Lake, and Josephine Counties

In general, southern Oregon is a low precipitation area. Due to a short growing season, water availability from mid-April through September is critical for the agricultural industry.



Intro Locations by primary impact categories

Agriculture/livestock

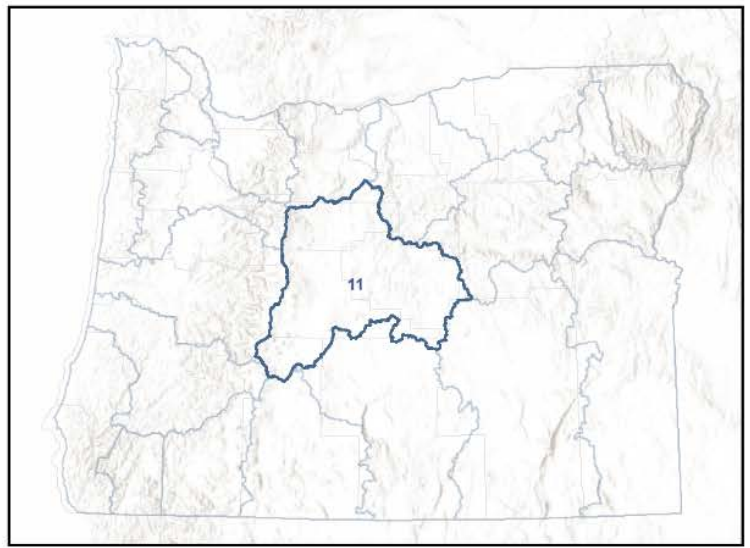
Domestic/municipal

Fisheries/wildlif/ecosystem

Recreation/tourism

Cultural/resources

## 17 OWRD District 11 Watermaster



Story date: August 7, 2018  
Scale of impact (1-4): 4  
Impacted area: Watermaster District 11





# Observations / Lessons Learned

- Participation bias
- Drought worsened throughout the summer
- Definition of drought
  - --- --- ---
- Exposure to new terms
- Staff hours spent
- Similar initiatives across the U.S.
- Great experience with ArcGIS
- Feedback from Commission?