



**Oregon's been
in a drought,
help us out.**



**Conserve Water –
Even when it rains.**

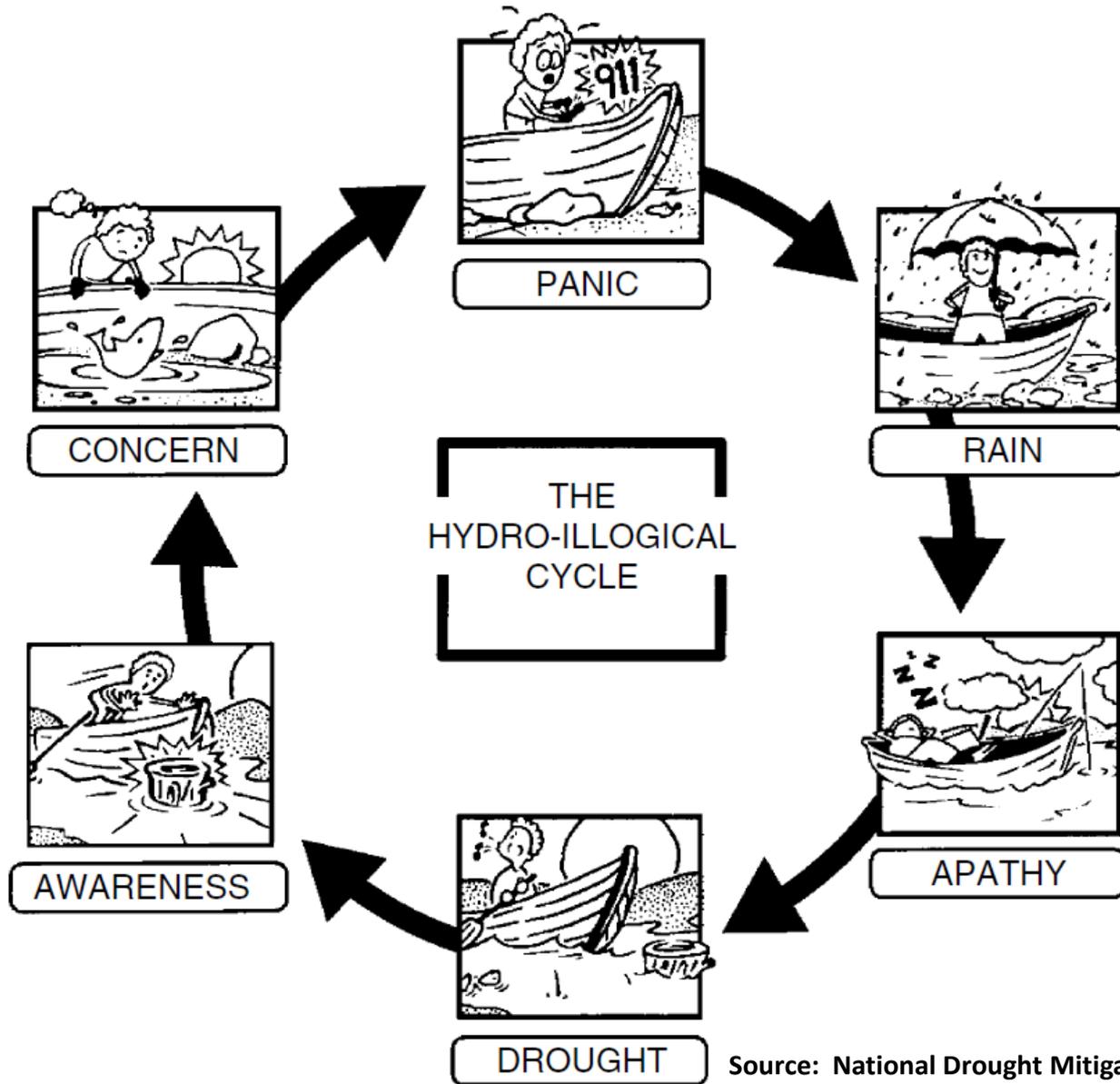


**An Overview of Drought in Oregon and
the State's Response: The Role of
Water Conservation**

**AWWA-PNWS
May 2016**

**Racquel Rancier
Senior Policy Coordinator**

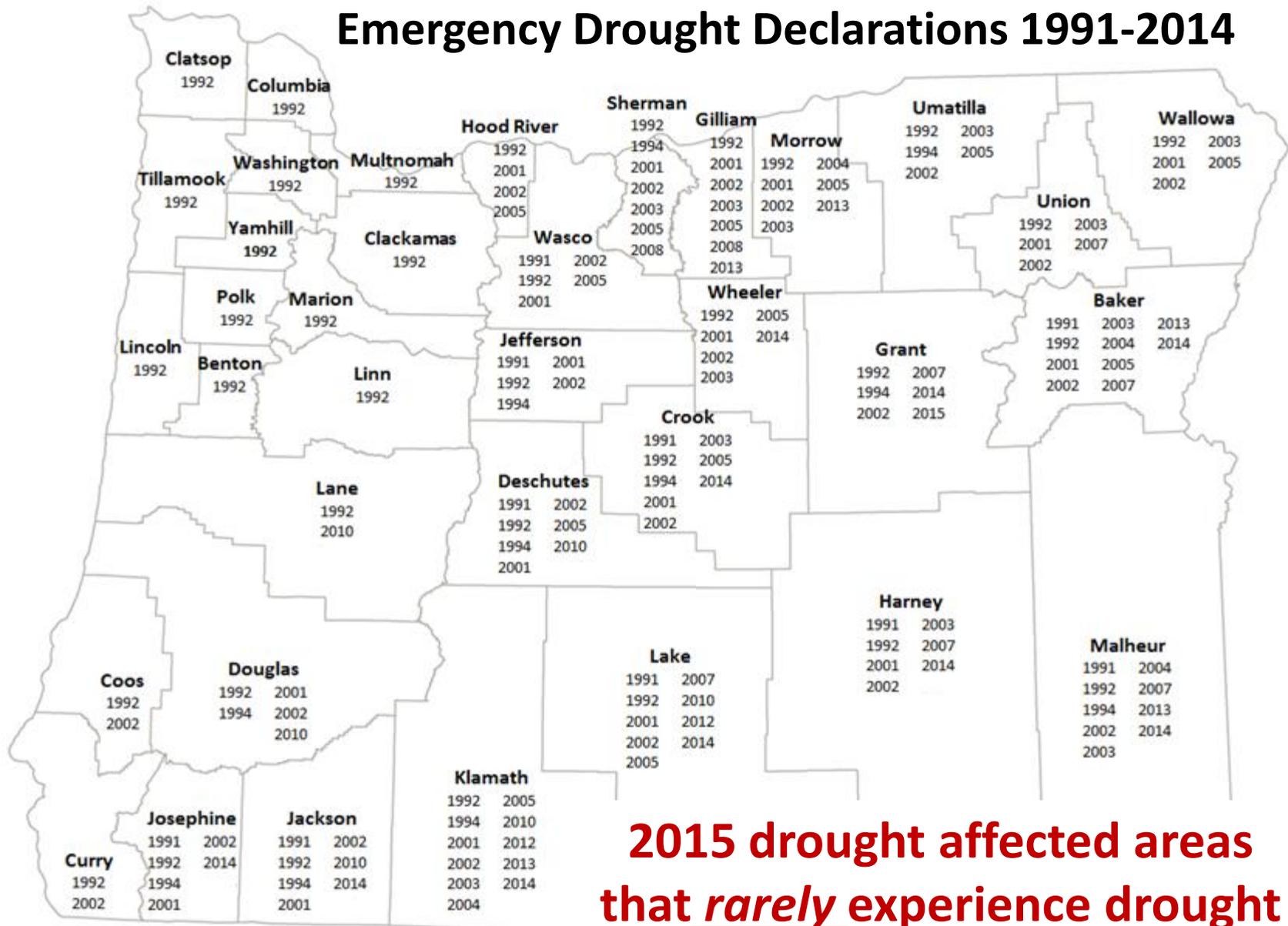
The Hydro-illogical Cycle



Source: National Drought Mitigation Center

History of Drought

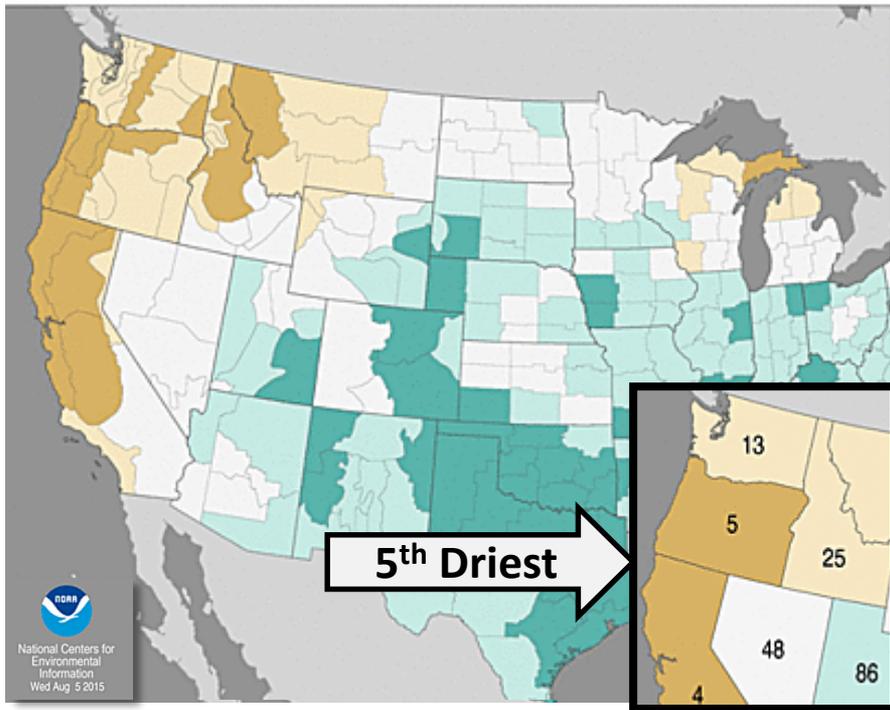
Emergency Drought Declarations 1991-2014



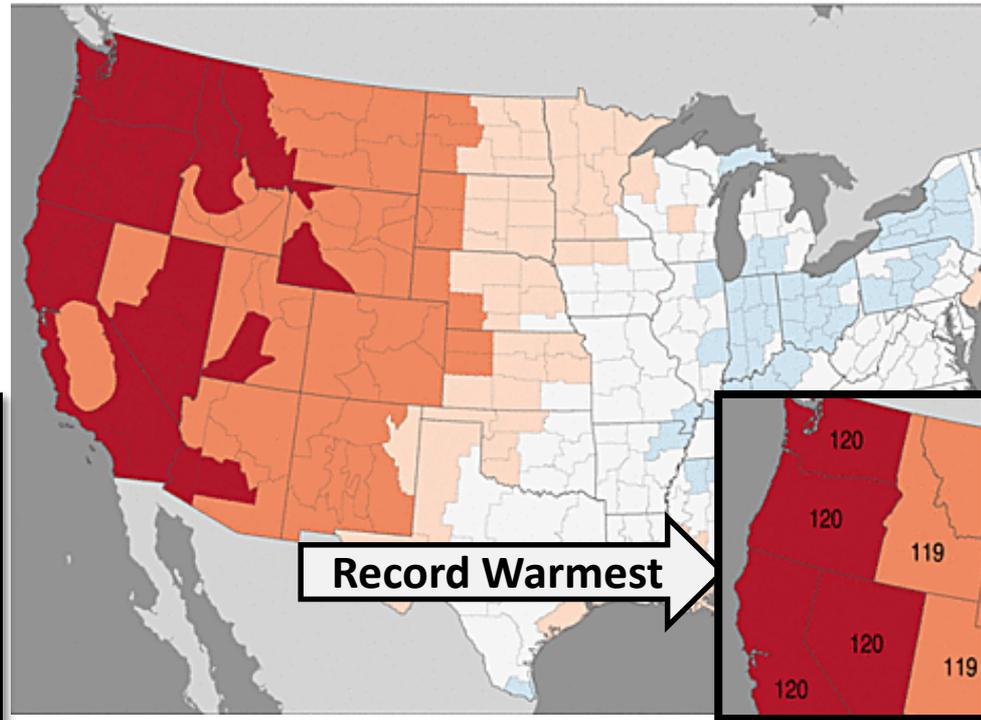
2015 drought affected areas that rarely experience drought

2015 Recap: Jan. – Sept. Conditions

Divisional Precipitation Ranks
January–September 2015
Period: 1895–2015

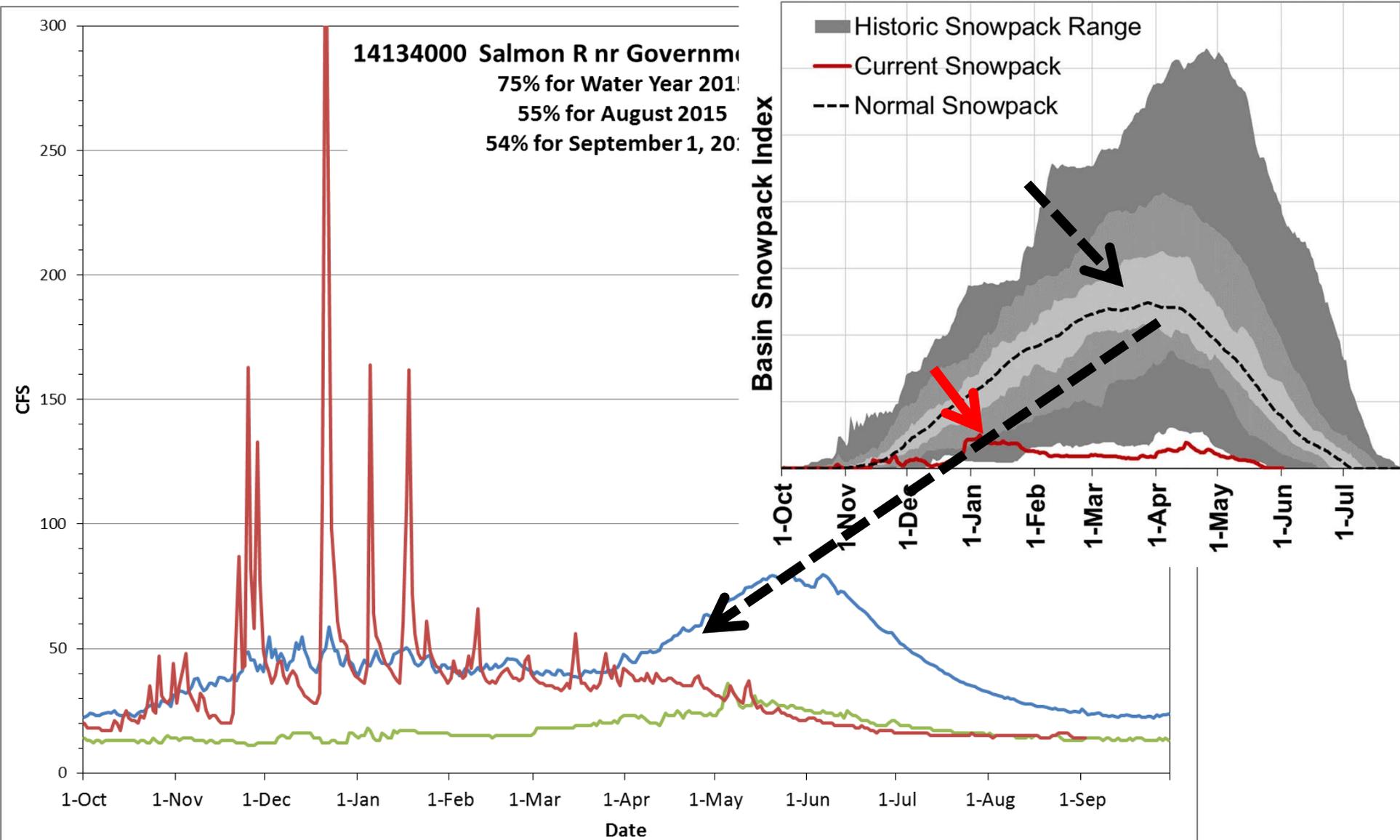


Divisional Average Temperature Ranks
January–September 2015
Period: 1895–2015

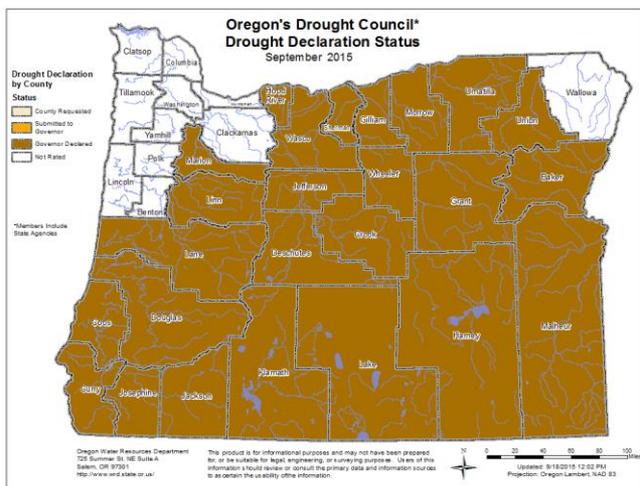


Snowpack as a Storage Reservoir

Mountain Snowpack

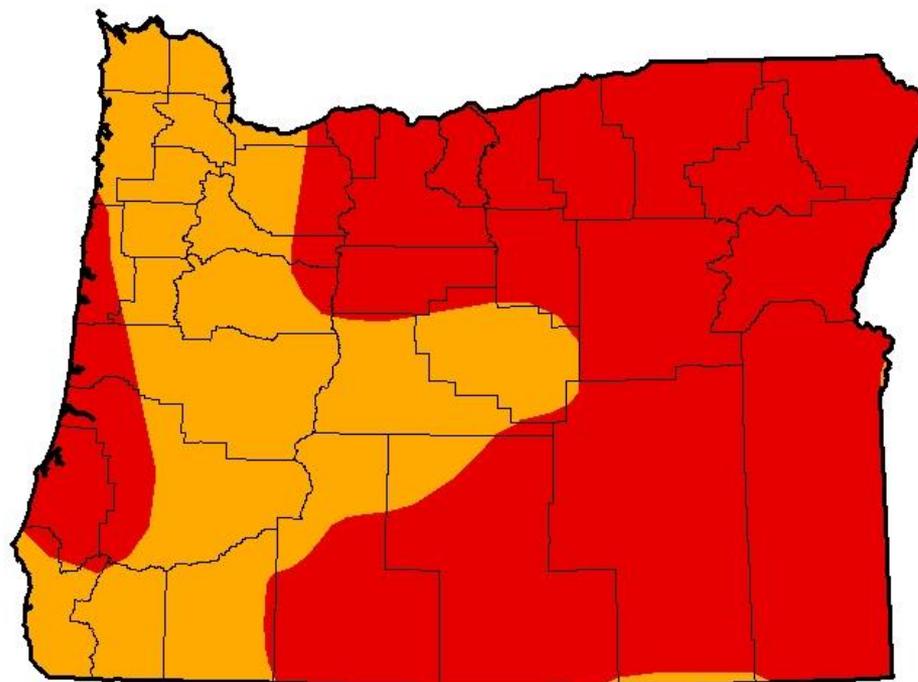


Extent of Drought 2015



U.S. Drought Monitor Oregon

August 25, 2015
(Released Thursday, Aug. 27, 2015)
Valid 8 a.m. EDT



Intensity:



67 percent in extreme drought

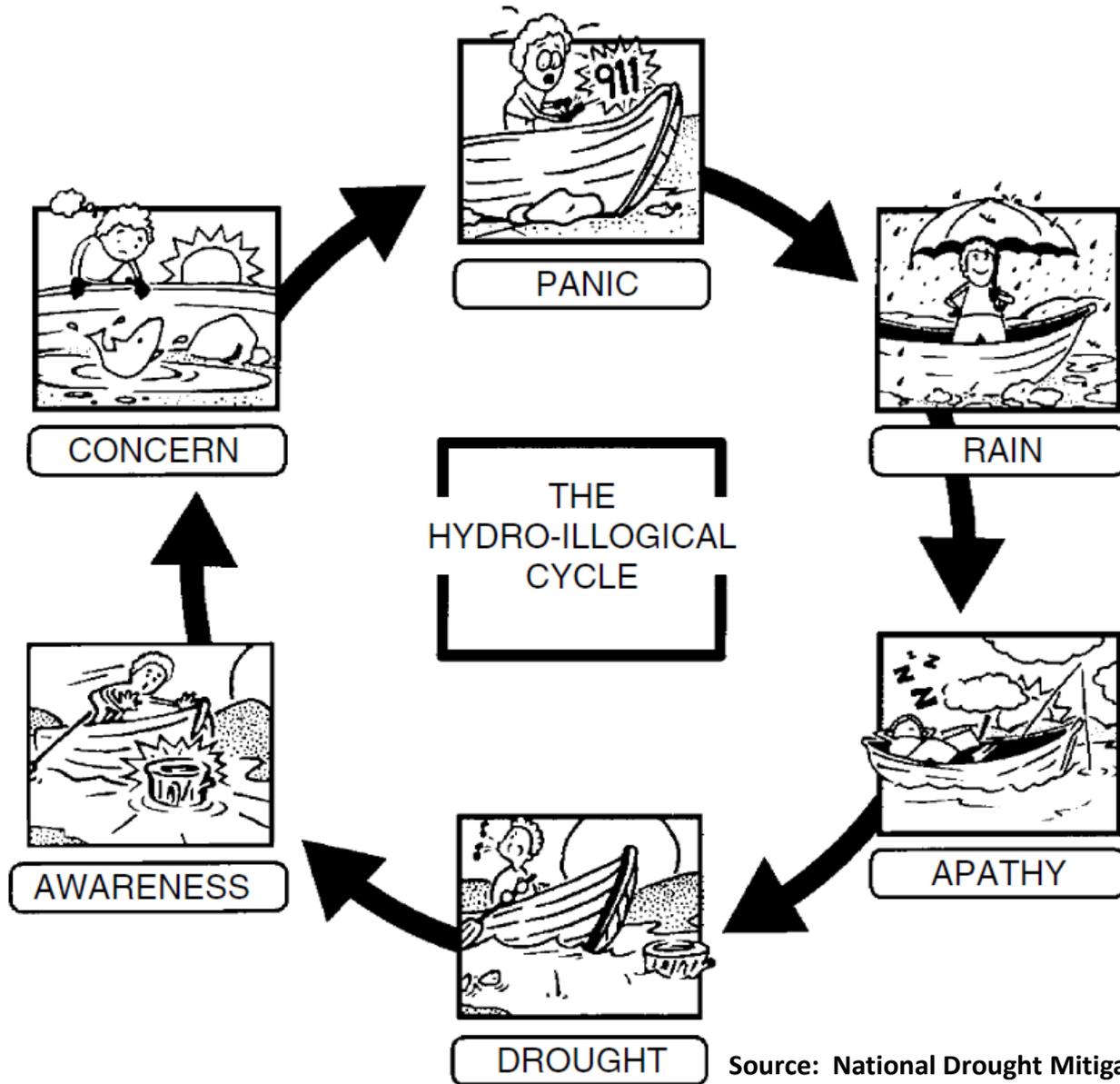
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Anthony Artusa
NOAA/NWS/NCEP/CPC



<http://droughtmonitor.unl.edu/>

The Hydro-illogical Cycle



Source: National Drought Mitigation Center

State Drought Response

Declaration that a severe, continuing drought exists

- Can direct state agencies and political subdivisions to implement a water conservation or curtailment plan
- Provide existing water right holders with access to temporary water management tools

Declaration of State of Emergency

- Severe water emergency (ex. drinking water shortage)
- Much broader action; deployment of people and equipment

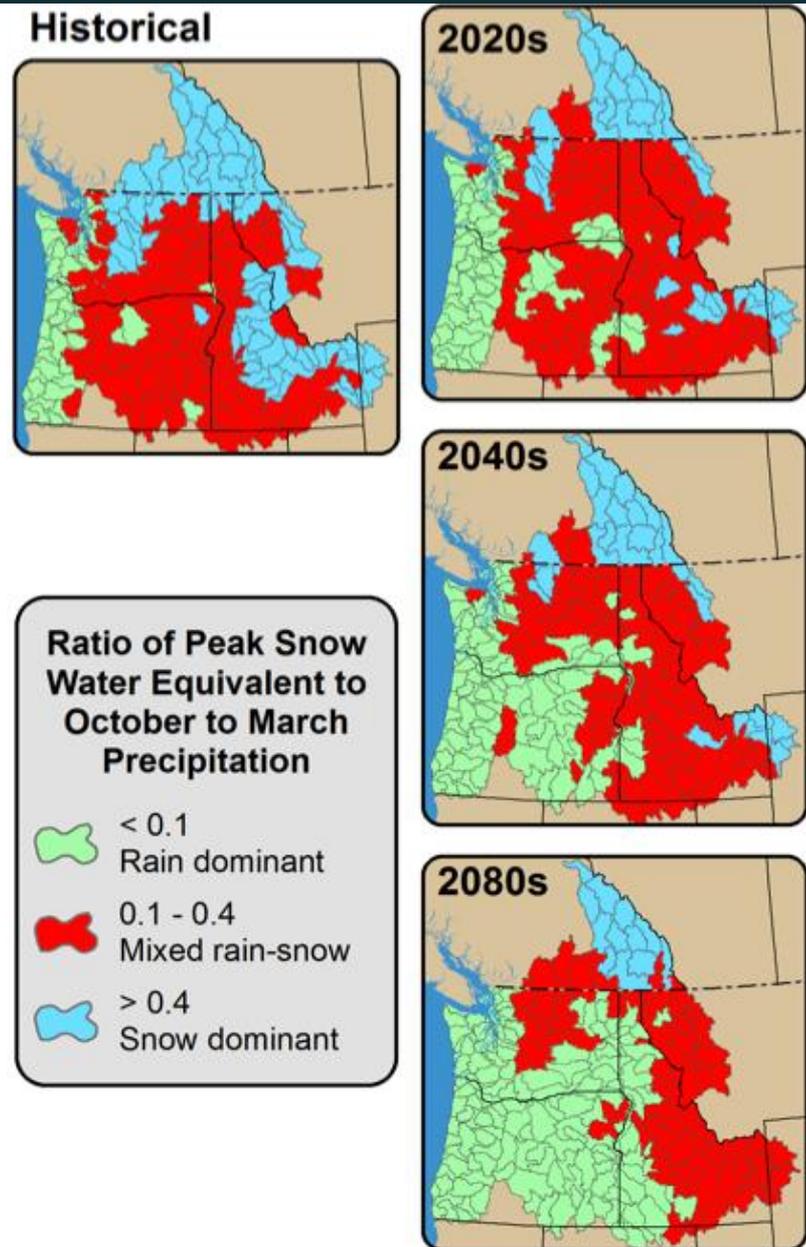
Response Effort Beyond Transactions

- **Drought Tools Limited Applicability**
- **Increased Press and Public Interest**
- **Impacts to Other State Agency Programs**
- **Increased Regulation for Senior Water Rights**
- **Result: Needed to respond to broader audience**
 - **Information and Outreach**
 - **Interagency Coordination**



Drought Messaging

- **2015 Drought is a Warning Shot**
- **Conditions similar to climate change projections**
- **Limited opportunity to get ahead of more serious problems**
- **Everyone do their part to use water more carefully**
- **Address water resources needs now and into the future**



Internal Communication

- **Weekly Drought Reports**
- **Interagency PIO Team and Coordination**
- **Weekly WRD Drought Meetings**



Watermaster Travis Kelly at Mt. Ashland Ski Bowl Road Snow Course Site (April 1, 2015).

Weekly Drought Reports



Drought Report for the Week of June 29, 2015



Current Water Conditions: The NRCS reports that State-wide, Oregon's snowpack this winter peaked at the lowest levels measured in the last 35 years. Many snow monitoring sites set records for the lowest peak snowpack and earliest melt-out date since measurements began. Consequently, streamflow is expected to be well below normal through the end of summer, especially in the more arid regions of the state. The current statewide average precipitation is 87%.

County-wide drought declarations go through a three-part process before securing a drought declaration from the Governor's Office.

First, County Commissions meet to determine whether they want to seek a Governor's declaration.

Second, these recommendations go to the Water Availability Committee (chaired by the Oregon Water Resources Department) and then the Oregon Drought Council (chaired by Oregon Emergency Management) for technical review. The next meeting of the Oregon's Drought Council is July 9, 2015. The Water Availability Committee will convene if requested by the Drought Council.

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- Oregon Basin Report (Click picture for full report)
- Water Supply Assessment by Basin
- Oregon Declaration Status
- Oregon SNOTEL Current Snow Water Equivalent % of Normal
- Oregon SNOTEL Water Year to Date Precipitation % of Normal
- Oregon Drought Monitor
- Water Right Drought Permit Application: Summary Report

Additional Resources:

- Reservoir Storage Diagrams
 - [Deschutes Basin](#)
 - [Willamette Basin](#)
 - [Tualatin River Basin](#)
 - [Rogue Basin](#)
 - [Umatilla River Basin](#)
 - [Southeastern Oregon](#)
- [Three Month Outlook – Temperature Probability](#)
- [Three Month Outlook – Precipitation Probability](#)
- [Oregon Surface Water Supply Index](#)



Current Basin Water Status

Basin #	Basin Name	Basin Status	Reason
Edit 1	North Coast	Drought Unavoidable	
Edit 2	Willamette	Drought Unavoidable	Below normal streamflow; Dry Forecast
Edit 3	Sandy	Drought Unavoidable	Below normal streamflow; Dry Forecast
Edit 4	Hood	Drought Unavoidable	Below normal streamflow; Dry Forecast
Edit 5	Deschutes	Drought Unavoidable	Reservoirs are near full
Edit 6	John Day	Drought Unavoidable	No Storage or Snowpack; Dry Forecast
Edit 7	Umatilla	Drought Unavoidable	Reservoirs are roughly 50%; Dry Forecast
Edit 8	Grande Ronde	Drought Likely	Snowpack >5000'
Edit 9	Powder	Drought Unavoidable	Reservoir Storage is mixed; no snowpack
Edit 10	Malheur	Drought Unavoidable	Reservoir storage is near empty



Weekly Drought Reports



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	<u>Drought Year</u>	<u>County</u>	<u>Drought Title</u>	<u>Drought Status</u>	<u>County Request Date</u>	<u>Forwarded to Governor Date</u>	<u>Governor Declaration Date</u>	<u>Federal Declaration Date</u>	<u>Executive Order</u>	<u>Drought Begin Date</u>	<u>Drought End Date</u>
Select	2015	Baker	BAKER DROUGHT	Governor Declared	03/18/2015	04/10/2015	04/20/2015	04/22/2015	15-04	04/20/2015	12/31/2015
Select	2015	Coos	COOS DROUGHT	Governor Declared	06/11/2015	06/12/2015	06/12/2015		15-06	06/12/2015	12/31/2015
Select	2015	Crook	CROOK DROUGHT	Governor Declared	03/18/2015	03/20/2015	04/02/2015	04/22/2015	15-03	04/02/2015	12/31/2015
Select	2015	Deschutes	DESCHUTES DROUGHT	Governor Declared	04/29/2015	05/15/2015	05/22/2015	04/22/2015	15-05	05/22/2015	12/31/2015
Select	2015	Douglas	DOUGLAS DROUGHT	Governor Declared	06/10/2015	06/12/2015	06/12/2015	03/22/2015	15-06	06/12/2015	12/31/2015
Select	2015	Gilliam	GILLIAM DROUGHT	Governor Declared	06/03/2015	06/12/2015	06/12/2015	06/10/2015	15-06	06/12/2015	12/31/2015
Select	2015	Grant	GRANT DROUGHT	Governor Declared	04/29/2015	05/15/2015	05/22/2015	03/18/2015	15-05	05/22/2015	12/31/2015
Select	2015	Harney	HARNEY DROUGHT	Governor Declared	03/18/2015	03/20/2015	04/02/2015	04/22/2015	15-03	04/02/2015	12/31/2015
Select	2015	Jackson	JACKSON DROUGHT	Governor Declared	05/13/2015	05/15/2015	05/22/2015	03/18/2015	15-05	05/22/2015	12/31/2015
Select	2015	Jefferson	JEFFERSON DROUGHT	Governor Declared	06/03/2015	06/12/2015	06/12/2015	06/10/2015	05/06	06/12/2015	12/31/2015
Select	2015	Josephine	JOSEPHINE DROUGHT	Governor Declared	05/06/2015	05/15/2015	05/22/2015	03/20/2015	15-05	05/22/2015	12/31/2015
Select	2015	Klamath	KLAMATH DROUGHT	Governor Declared	03/17/2015	03/20/2015	04/02/2015	04/08/2015	15-03	03/20/2015	12/31/2015
Select	2015	Lake	LAKE DROUGHT	Governor Declared	03/10/2015	03/11/2015	03/16/2015	04/08/2015	15-02	03/16/2015	12/31/2015
Select	2015	Lane	LANE DROUGHT	Governor Declared	05/12/2015	05/15/2015	05/22/2015		15-05	05/22/2015	12/31/2015
Select	2015	Malheur	MALHEUR DROUGHT	Governor Declared	03/04/2015	03/11/2015	03/16/2015	04/08/2015	15-02	03/16/2015	12/31/2015
Select	2015	Morrow	MORROW DROUGHT	Governor Declared	05/06/2015	05/15/2015	05/22/2015	03/20/2015	15-05	05/22/2015	12/31/2015

Weekly Drought Reports



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Drought Water Right Summary Report

Search Criteria

Start Drought Year:

County:

End Drought Year:

Records per Page:

Drought Year	County	Applications Rec'd	Applications Denied	Applications Approved	Acres Approved	Transfers Rec'd	Transfers Denied	Transfers Approved
2015	Baker	0				1		
2015	Crook	1				1		1
2015	Harney	2		1	372.60	1	1	
2015	Klamath	37	1	36	21679.59			
2015	Lake	2				1		1
2015	Lane	0				3		
2015	Malheur	13		13	3006.82	4		4
2015	Morrow	1		1	32.70			

Weekly Drought Reports



Drought Report for the Week of June 29, 2015



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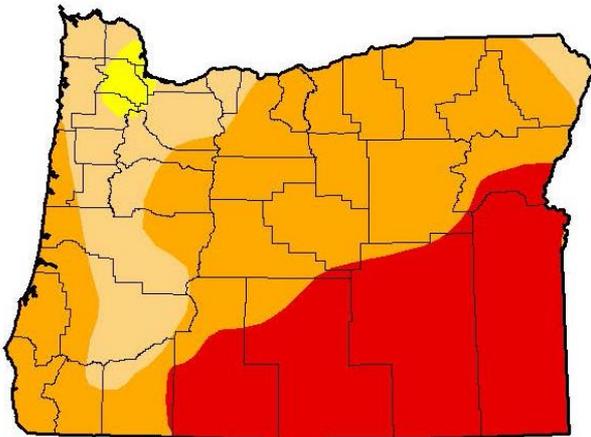
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2015	Morrow	1		1	32.70			

Weekly Drought Reports

U.S. Drought Monitor Oregon



June 23, 2015
(Released Thursday, Jun. 25, 2015)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current 6/23/2015	0.00	100.00	98.60	81.72	34.09	0.00
Last Week 6/16/2015	0.00	100.00	97.80	78.15	34.09	0.00
3 Months Ago 3/24/2015	14.36	85.64	82.30	47.93	33.72	0.00
Start of Calendar Year 1/20/2014	13.61	86.39	80.70	49.29	34.11	0.00
Start of Water Year 9/30/2014	1.56	98.44	76.61	56.26	35.30	0.00
One Year Ago 6/24/2014	6.09	93.91	72.78	46.01	9.31	0.00

Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Richard Tinker
CPC/NOAA/NWS/NCEP

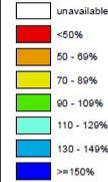


<http://droughtmonitor.unl.edu/>

Oregon SNOTEL Current Snow Water Equivalent (SWE) % of Normal

Jun 29, 2015

Current Snow Water Equivalent (SWE) Basin-wide Percent of 1981-2010 Median

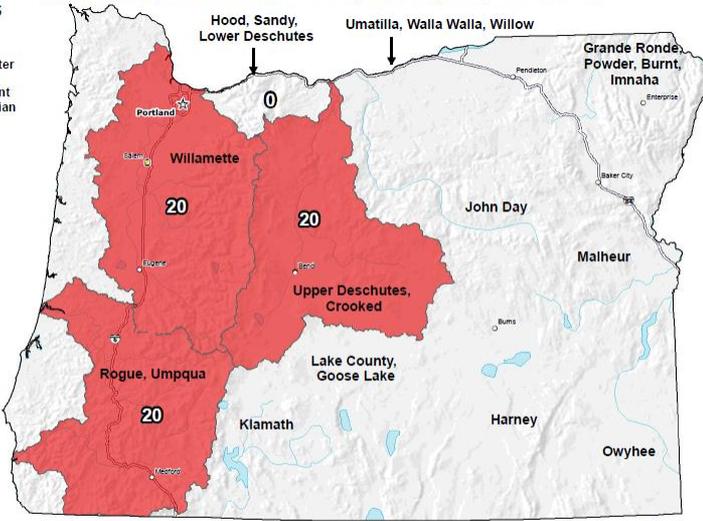


* Data unavailable at time of posting or measurement is not representative at this time of year.

Provisional Data Subject to Revision



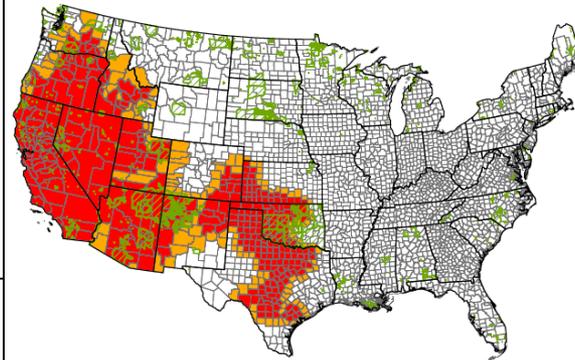
The snow water equivalent percent of normal represents the current snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 0000).



0 10 20 40 60 80 100 Miles

Prepared by:
USDA/NRCS National Water and Climate Center
Portland, Oregon
<http://www.wcc.nrcs.usda.gov>

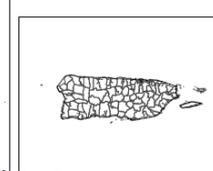
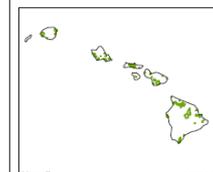
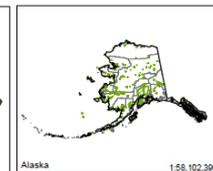
2015 Secretarial Drought Designations - All Drought



Secretarial Drought Designations for 2015
Disaster Incidents as of June 24, 2015



USDA Farm Service Agency
Production, Emergencies and Compliance Division
Washington, D.C.
June 24, 2015



Fact Sheets

Saving Water within municipal systems

We can all do our part to lessen the effects of limited water supplies this summer. We can start by conserving the water we use today. Here are many helpful and common tips for municipal water providers.

☑ Maintain a fully metered system and perform annual water audits

Doing so allows a water provider to compare the amount of water produced against the amount of water sold/consumed, the difference of which can alert a water provider to system leaks and unauthorized uses of water.

☑ Locate and repair leaks

Water utilities with a systematic program in place to detect and repair leaks in their distribution system can help reduce unnecessary losses of water in a timely manner. This, in turn, reduces the amount of money spent by a utility to divert and treat water that is ultimately lost due to leakage.

☑ Manage water pressure in your system

Pressure management is an important tool that can be implemented by a water utility in its efforts to reduce system leakage. Since leakage is driven by pressure, any efforts to reduce water pressure will help reduce leakage to some extent. Typically this is an economical approach with immediate results. The American Water Works Association's Manual M36 on water audit and loss control programs provides further detail: <http://www.awwa.org/store/productdetail.aspx?productid=99928904>

☑ Adopt rate structures that encourage water conservation

In Oregon, water rate structures must be based, at least in part, on the amount of water metered at the customer's service connection. Beyond this minimum requirement, there are several types of rate structures that are used throughout the United States to encourage conservation:

An *inclinng block rate structure* has a base fee and commodity charge using block rates under which the price per unit of water increases as metered consumption passes one or more usage threshold. This encourages conservation by sending a price signal to customers that their consumption costs more, as more water is consumed.

Saving Water inside the home

We can all do our part to lessen the effects of limited water supplies this summer. We can start by conserving the water we use today. Here you will find helpful and common tips for saving water inside your home.

☑ Monitor your water bill

Checking your water bill for unusually high water use can alert you to leaks in your home. Knowing how much water your household typically uses make this easier to determine. If your water use seems high, first determine if the increase is due to changes in your daily routine. If not, you may have a leak.

☑ Periodically test and check for water leaks

If it's easy to find, check your water meter before and after a two-hour period when no water is being used. If the meter does not read exactly the same, you probably have a leak. Common household leaks include: running toilets, dripping faucets, and other leaking valves. If leaks are found, repairing them in a timely manner will not only conserve water, but will save you money by reducing your water bill.

Toilet leaks are often easy to detect. One way to check is to remove the tank lid, then drop 1 dye tablet or 10 drops of food coloring into the tank. (Dye tablets may be available from your local water provider.) Put the lid back on the toilet tank and come back in 10 to 15 minutes. If the water in the bowl has changed color, you have a leak. If the water hasn't turned a color, everything is okay.

Grabbing a wrench to repair a leaky faucet is simple, inexpensive, and can save up to 140 gallons of water per week. These types of leaks are often caused by faulty washers that don't allow your faucet to shut off properly. Faulty washers can be replaced fairly easily and inexpensively (typically for less than \$1), which can help you save water and reduce your water bill.

☑ Wash only full loads

The average American household uses about 23 percent of its water running the clothes washer and dishwasher. Just one partially full load can waste 5 – 10 gallons of water.

Saving Water on the farm or ranch

We can all do our part to lessen the effects of limited water supplies this summer. We can start by conserving the water we use today. Here you will find helpful and common tips for saving water on your farm or ranch.

☑ Fix any leaks in the irrigation system

Some studies have shown as much as 16 percent is lost due to leaks.

☑ Make your irrigation system more efficient and easier to maintain

Consider a reduction in nozzle size or installation of drip irrigation. Research has shown that drip tape uses 30 percent to 50 percent less water than overhead irrigation.

Saving Water outside the home

We can all do our part to lessen the effects of limited water supplies this summer. We can start by conserving the water we use today. Here you will find helpful and common tips for saving water outside your home.

☑ Adjust sprinklers & water when it's cool

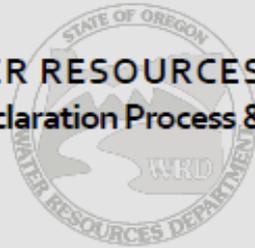
Sprinklers should water your lawn and garden, not the street or sidewalk. Most automatic irrigation timers are set to go off in the early morning (5:00 am – 7:00 am); therefore, utilities must often super-size their facilities to meet early morning demands. Setting irrigation timers at other times of the morning or night (11:00 pm – 5:00 am), when temperatures are cooler, helps minimize evaporation and shave peak water usage.

☑ Inspect your irrigation system

Look for leaks, broken lines, or blockage in the lines. A well maintained system will save you money, time, and water. Even little things like a shut-off nozzle for your garden hose can save you about 5 – 7 gallons each minute.

Fact Sheets

OREGON WATER RESOURCES DEPARTMENT State Drought Declaration Process & Emergency Tools



State Drought Declaration Process

Drought declarations for an area typically go through a three-part process before securing a state drought declaration from the Governor. First, a county commission submits a request for a state drought declaration to the Office of Emergency Management. Second, the Water Availability Committee, chaired by the Water Resources Department, meets to discuss information on weather and water supply conditions and subsequently make recommendations to Oregon's Drought Council. Chaired by the Office of Emergency Management, the Drought Council assesses the impact of drought conditions and makes recommendations to the Governor's Office on whether to declare drought in an area.

The Governor may then choose to issue an Executive Order declaring a drought emergency. State drought declarations are typically issued at a county scale. The primary benefits of a state drought declaration from the Governor are that it creates greater awareness of drought conditions; facilitates coordination between state agencies; and allows the Water Resources Department to provide existing water right holders with access to emergency water management tools. These tools are outlined below.

The Governor or the Oregon Water Resources Commission can also direct state agencies and political subdivisions to implement a water conservation plan or water curtailment plan.

Emergency Drought Tools for Water Right Holders

A state drought declaration allows the Water Resources Department to offer certain tools to water right holders in a drought-declared county. These tools have an expedited review process, reduced fee schedule, and are intended to be short-term emergency authorizations, not permanent solutions to deal with water supply challenges. Water right holders seeking long-term solutions should first contact their watermaster to help identify what options may exist.

• Temporary Emergency Water Use Permit

An approved emergency water use drought permit allows a water user to temporarily replace water not available under an existing water right. The most common drought permit allows the use of groundwater as an alternative to an existing surface water right. A well-prepared application generally takes approximately ten business days to process. Emergency water use permits are issued through an expedited process and are valid for one year or the term of the drought declaration, whichever is shorter.

• Temporary Transfer

A water user can apply to change the type of use, place of use, or the location of the diversion under an existing water right. A temporary drought transfer takes place under an expedited process, and is in effect for the duration of the drought declaration or up to one year, whichever is shorter.

Federal Financial Assistance Programs

Federal Financial Assistance Programs for Drought Emergencies

Oregon Water Resources Department | June 2015

Several federal agencies offer loans or grants to assist with drought-related emergencies. Programs for farming and ranching operations are administered by the U.S. Department of Agriculture through the Farm Service Agency, Rural Development, and the Natural Resources Conservation Service. The U.S. Small Business Administration provides loans to businesses, including non-profit organizations. The U.S. Bureau of Reclamation also offers grants for drought resiliency planning and project implementation. The following is a short summary of various federal financial programs. More information is available at:

<http://www.disasterassistance.gov/get-assistance/assistance-by-federal-agency>

USDA Farm Service Agency



The Farm Service Agency provides assistance for natural disaster losses resulting from drought, flood, fire, freeze, tornadoes, pest infestation, and other calamities. The following programs are summarized on FSA's [Drought Assistance website](#).

➤ Emergency Farm Loans

The Farm Service Agency provides emergency loans up to \$500,000 to help producers located in a county declared by the President or designated by the Secretary of Agriculture as a primary disaster area or quarantine area. All counties contiguous to the designated area are also eligible for emergency loans. Applications must be received within eight months of the county's drought disaster declaration. Emergency loan funds may be used to:

- Restore or replace essential property
- Pay all or part of production costs associated with the disaster year
- Pay essential family living expenses
- Reorganize the farming operation
- Refinance certain debts, excluding real estate

Factsheet: http://www.fsa.usda.gov/Internet/FSA_File/emloanpr_mar2015.pdf

➤ Emergency Conservation Program (ECP)

The Emergency Conservation Program (ECP) provides funding and assistance to farmers and ranchers to repair farmlands damaged by natural disasters and helps put in place methods for water conservation during severe drought. The FSA County Committee inspects the damage to determine eligibility. Farmers and ranchers should check with their local FSA office regarding sign-up periods, which are set by the FSA County Committee.

Website: www.fsa.usda.gov/programs-and-services/conservation-programs/emergency-conservation/index

Fact Sheets - Wells

Domestic Well Tips during a Drought

Domestic Well Tips during a Drought

Oregon Water Resources Department | August 2015

Having supply issues with your well?

Groundwater is a source of water for many homes in rural Oregon and the quality and quantity of groundwater can vary based on geology, climate, and land use. Supply problems may occur when the pump is turned on and the water level drops sharply to meet demand. Well production will be severely reduced and damage to the pump may occur if the water level drops to the pump intake level. This can happen with aging wells due to the buildup of mineral deposits, silt, or bacteria and it can also happen during a drought.

If you're experiencing problems with your well during a drought, you may want to start by contacting a watermaster with Oregon Water Resources Department.

Contact your local watermaster. The Oregon Water Resources Department is responsible for managing water supplies, both groundwater and surface water, across the state. To accomplish this, the Department employs experts who work hard to determine how much water is available and the best way to protect it in order to assure that sufficient and sustainable water supplies are available to meet current and future needs.

If you are experiencing well issues, the Department's watermaster may be able to look at the well and well log, take measurements and check to see if well interference may be a factor. In many cases, you might just need to deepen your well, pump, or address maintenance related issues. Locations of region offices and contact information for watermasters can be found here: <http://www.oregon.gov/owrd/pages/offices.aspx>.

Examine pump or construction issues. Many water wells in Oregon have been drilled to deep depths, but some pumps are installed at shallow depths. This does not allow the pump access to all of the available groundwater and as groundwater levels decline due to the drought, wells with shallow pumps may experience reduced yields. To keep wells functioning properly, consider lowering your pump now and conducting any other well or pump maintenance. Well owners with a flowing artesian well may want to consider installing a pump to ensure access to groundwater in the event the artesian pressure diminishes. Licensed water well constructors can be found at: http://apps.wrd.state.or.us/apps/gw/well_license/

Monitor water levels and water use. During drought or other dry periods when your well is used a lot, it is helpful to measure the static (resting) water level in your well. The groundwater level in your well is an indication of how much groundwater is available for your use. It is common for groundwater levels to change seasonally, where the groundwater level often increases during the winter and spring as the aquifer recharges from rain and snowmelt. Groundwater levels typically decline through the summer and fall in response to natural discharge of the aquifer (to streams and springs) and in response to groundwater use from pumping wells. It is important to know where the groundwater level is relative to your well pump

Symptoms of a Dry Well

- Lots of air in the water.
- Running out of water after heavy usage (like watering the lawn).
- Pump doesn't produce as much water as it used to.
- Pump runs for a long time before shutting off.
- Water pressure is very low.
- Takes a long time to build up pressure.
- Neighbors have problems with their wells.

It is important to remember that experiencing these symptoms doesn't necessarily mean your well is going dry.

Well Tips during a Fire Emergency

Well Tips during a Fire Emergency

Oregon Water Resources Department | August 2015

Nearly one-quarter of Oregon's residents use wells as their main source of drinking water. Wildland fires affect areas where people rely on well water for their homes, ranches, and farms. There are a number of things to keep in mind if you have had any fire damage to your well. You can visually check for:

- Damaged and melted or exposed electrical wiring
- Damaged and melted PVC casing, liner or pipes
- Damaged well houses and pressure tanks
- Debris, such as ash and sediment entering uncovered wells
- Old dug wells with wood covers, which can become a safety threat

Exposed electrical wiring to the well poses a significant electrical safety hazard with the potential for an electrical short to the metal casing. If the electrical wiring has been damaged by fire, do not handle the wiring or touch the casing. Flag the area around the well casing as a warning.

Dug wells where the well cover has been damaged by fire presents a significant hazard to public safety. The well cover may be damaged to such an extent that the cover may drop into the well or be so unstable that walking on it may cause a collapse. If you discover what appears to be a sinkhole or an open hole, flag or barricade the area around it.

If your well has been damaged by fire, or you think an old dug well has been exposed, contact a local licensed and bonded well constructor or pump installer to determine the extent of the damages and what must be done to either repair or decommission the well. If you think a fire may have damaged your water supply, bring water back with you when you return to your home. The general rule is that each person will need at least one gallon per day of water for drinking, cooking and hygiene.

Wells must be maintained to prevent health hazards. Take steps to ensure your water is safe to drink after an emergency:

- Bring water to a rolling boil for one minute, let it cool and store in clean containers with covers; or
- Add 8 drops of unscented liquid household bleach per gallon of water, stir and let sit for 30 minutes; and
- Have a professional service test the water to make sure it's safe to consume.

If you have your well inspected, make sure you choose a water well constructor who is licensed and bonded in Oregon. Names of licensed constructors are available on the following website: http://apps.wrd.state.or.us/apps/gw/well_license/default.aspx.

There are a number of publications that provide additional information, including the Department's Well Owner's Handbook, available at: http://www.oregon.gov/owrd/PUBS/docs/Well_Water_Handbook.pdf

Contact Information

If you have additional questions, please contact the Oregon Water Resources Department at 503-986-0900

Proclamation "Water Awareness Month"

STATE OF OREGON
PROCLAMATION
OFFICE OF THE GOVERNOR

- WHEREAS: Drought in Oregon occurs in different forms at different times and in different parts of the state; high temperatures, low snowpack, and a lack of precipitation all contribute to drought conditions; and
- WHEREAS: In this water year, beginning in October of 2014, Oregon has had the lowest statewide snowpack on record, peaking at between thirty to ninety percent below normal levels and melting off weeks to several months earlier than normal; and in some cases resulting in the earliest melt-out dates since daily measurements began over 30 years ago; and
- WHEREAS: Statewide average temperature for the period from January to May of this year was the third warmest in the 121-year period that records have been kept and temperatures are forecast to be warmer than normal for the next three months; and
- WHEREAS: As a result of low snowpack, warm temperatures, and recent below normal rainfall, streamflows on many rivers are experiencing record or near-record lows; and
- WHEREAS: Water is the foundation for our economies, communities, ecosystems, and the health and welfare of

I, Kate Brown, Governor of the State of Oregon, hereby proclaim July 2015 to be

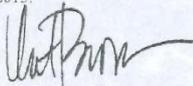
WATER AWARENESS MONTH

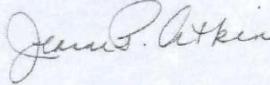
in Oregon and encourage all Oregonians to join in this observance.

in Oregon and encourage all Oregonians to join in this observance.



IN WITNESS WHEREOF, I hereunto set my hand and cause the Great Seal of the State of Oregon to be affixed. Done at the Capitol in the City of Salem in the State of Oregon on this day, July 7, 2015.


Kate Brown, Governor


Jeanne P. Atkins, Secretary of State

Governor's Outreach

Learn more about drought in Oregon

#ordrought

 <p>At Home</p>	 <p>At Play</p>	 <p>At Work</p>
<p>Save Water Inside the Home 📄</p> <hr/> <p>Save Water Outside the Home 📄</p>	<p>Boating</p> <hr/> <p>Current Campfire Rules</p> <hr/> <p>Fishing and Hunting</p> <hr/> <p>Travel Oregon</p>	<p>Drought Assistance Programs</p> <hr/> <p>Drought Status and Current Conditions</p> <hr/> <p>Resources for Municipal Systems</p> <hr/> <p>Save Water on the Farm or Ranch 📄</p>

Watch Governor Brown's PSA on Drought 

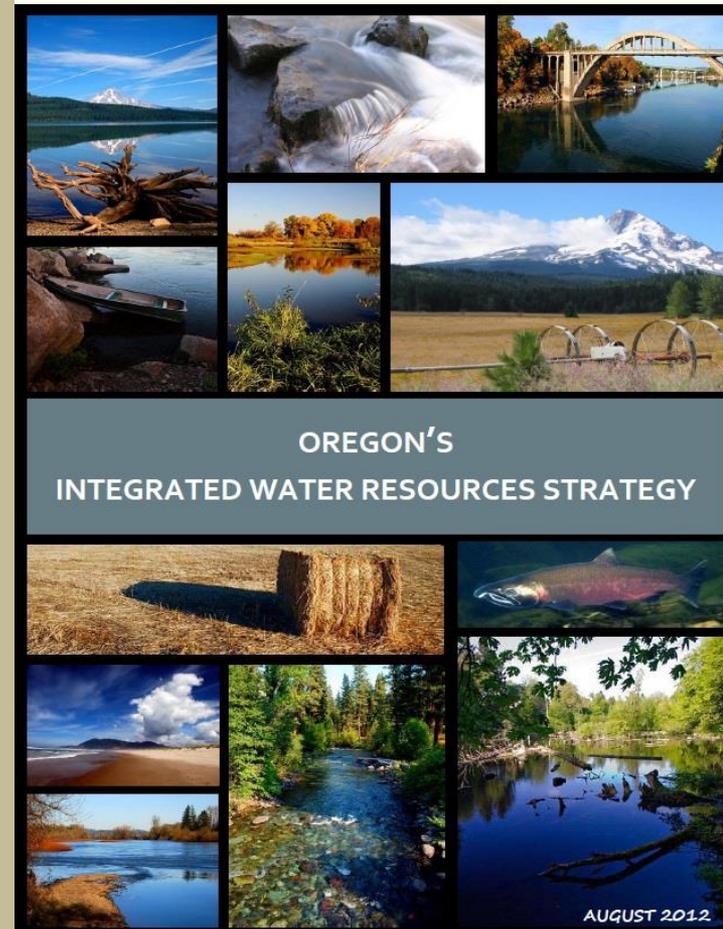


- For More Information:
- [Oregon Water Resources Department](#)
 - [Oregon Department of Fish and Wildlife](#)
 - [Oregon Department of Agriculture](#)
 - [Oregon Department of Forestry](#)
 - [Travel Oregon](#)
 - [Oregon State Marine Board](#)

**Governor's
2015
Drought
Team**



- Executive Order 15-09
 - Update the state's emergency plan for drought
 - Incorporate drought into the 2017 Integrated Water Resources Strategy
 - Water conservation messaging
 - Agencies reduce water use by 15 percent by 2020



Water Conservation Posters

Oregon's been in a drought, help us out.

Conserve Water – Even when it rains.

www.drought.oregon.gov



Oregon's been in a drought, help us out.

Conserve Water – Even when it rains.

www.drought.oregon.gov



Conserve Water

Water is the foundation for our economies, communities, ecosystems, and quality of life.

Save for the future.

www.drought.oregon.gov



Saving water is a priority.

Please report any leaks or significant water losses to your building manager.

www.drought.oregon.gov



Saving water is a priority.

Please report any leaks or significant water losses to your building manager.

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Drought Awareness on Websites

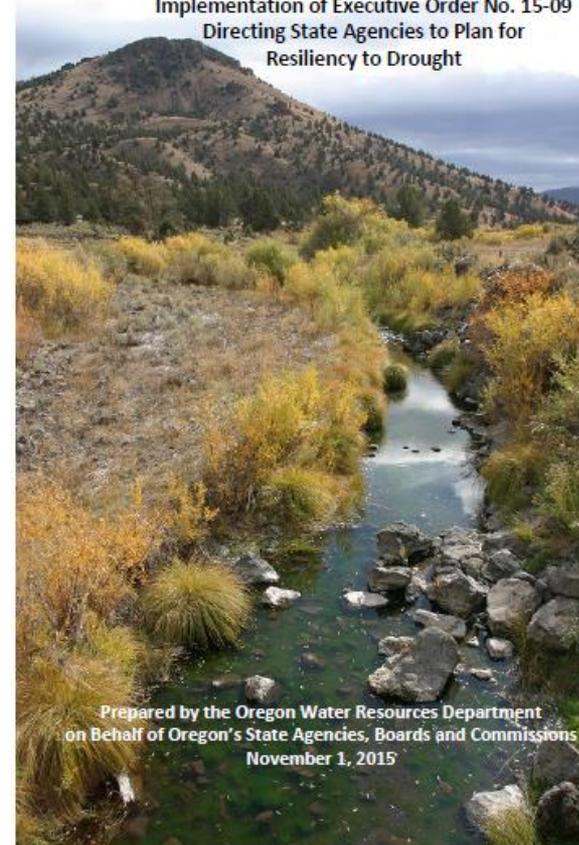




Executive Order 15-09

- Update the state's emergency plan for drought
- Incorporate drought into the 2017 Integrated Water Resources Strategy
- Water conservation messaging
- Agencies that own or manage land to work towards goal to reduce water use by 15 percent by 2020**

REPORT TO GOVERNOR KATE BROWN
Implementation of Executive Order No. 15-09
Directing State Agencies to Plan for
Resiliency to Drought



Prepared by the Oregon Water Resources Department
on Behalf of Oregon's State Agencies, Boards and Commissions
November 1, 2015



Executive Order 15-09 :

- **Establish a baseline use of water**
- **Short-term actions that curtail non-essential exterior water use**
- **Moratorium on installing new non-essential landscape projects that require irrigation at state-owned buildings**
- **Signs and other messaging within state-owned to reduce non-essential inside water use**
- **Leak detection systems**
- **Consider any social and disproportionate effects of water-saving on underserved communities**
- **Report on progress, barriers encountered and future steps to reduce non-essential use of water.**

SB 1529 - 2016

- **Prohibits enforcement of residential irrigation requirements by homeowners association during drought declaration or ordinance that requires conservation or curtailment of water use.**



HB 4113- Task Force on Drought

Research and evaluate potential tools to prepare for or deal with drought:

- **Evaluate existing drought emergency tools; recommend improvements.**
- **Options to minimize impacts on agriculture, municipalities, fish and wildlife, other interests.**
- **Propose tools to assist small water providers.**
- **Identify data and resources needed to anticipate and understand drought impacts.**
- **Recommend improvements to information sharing during drought.**

Water Resources Development Program

Water Resources Department

About Us
Contact Us
Adjudications
Commission
Dam Safety
Drought
File Pickup
Forms
Funding Opportunities
Groundwater
Jobs at WRD
Links
Maps
Publications
Surface Water
Transfers
Water Law
Water Management
Water Rights
Well Construction and Compliance

Drought Watch



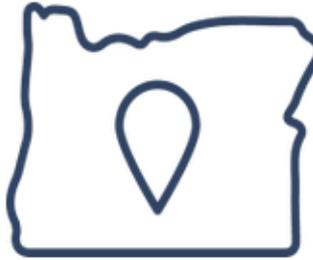
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Resources For:
Wells and Well Const
Exempt Use Water W
Realtors®
Certified Water Right
Water Conservation
Drought Watch
Conservation and Su
Deschutes Basin Mitig
Environmental Justice
Gold Mining: FAQ
Assignments and Ow

Lookup Informa
Lookup Water Rights
Find a Well Log
Well ID Application, Fe
Find a Document (V
Near Real Time Streamflow Data
C... W... D...

Program Components

Place Based Integrated Water Resources Planning



Place-based planning is a voluntary, locally initiated and led effort in which a balanced representation of water interests within a basin or watershed work in partnership with the state to: characterize current water resources and issues (water quantity, water quality, ecosystem health); understand current and future instream and out-of-stream water needs and demands; identify and prioritize strategic solutions to address water needs; and, develop a place-based integrated water resources plan that informs the state-wide strategy.

[Click here](#) for more information.

Feasibility Study Grants



Once potential projects are identified, communities often find it difficult to secure funding to assess their viability. This program component addresses that need by providing grant funding to cover 50% of the cost of conducting feasibility studies for potential water conservation, storage and reuse projects. A feasibility study is an assessment of the practicality of a proposed project or plan and can be used to determine if and how a project should proceed to the implementation phase.

[Click here](#) for more information.

Water Supply Development Grants & Loans



This account provides grants and loans to evaluate, plan and implement instream and out-of-stream water development projects that have economic, environmental and social/cultural benefits. Eligible projects include, but are not limited to projects that: increase water use efficiency; develop new or expanded storage; allocate federally stored water; promote water reuse or conservation; and protect or restore stream flows.

[Click here](#) for more information

Water Mgmt & Conservation Planning

Curtailment Element:

- **Description of water supply deficiencies in past 10 years**
- **Assessment of current capacity limits and the ability to maintain water delivery during long-term supply shortages**
- **At least three stages of alert**
- **Situations which trigger each stage of alert**
- **List of actions to be enacted under each stage of alert.**

WATER MANAGEMENT AND CONSERVATION PLANS

OAR DIVISION 690, CHAPTER 86

A Guidebook for Oregon Municipal Water Suppliers
March 2015 (2nd Edition)

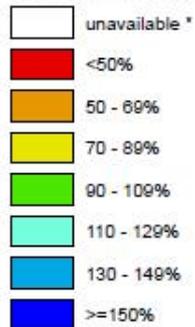


Looking Ahead

Oregon SNOTEL Current Snow Water Equivalent (SWE) % of Normal

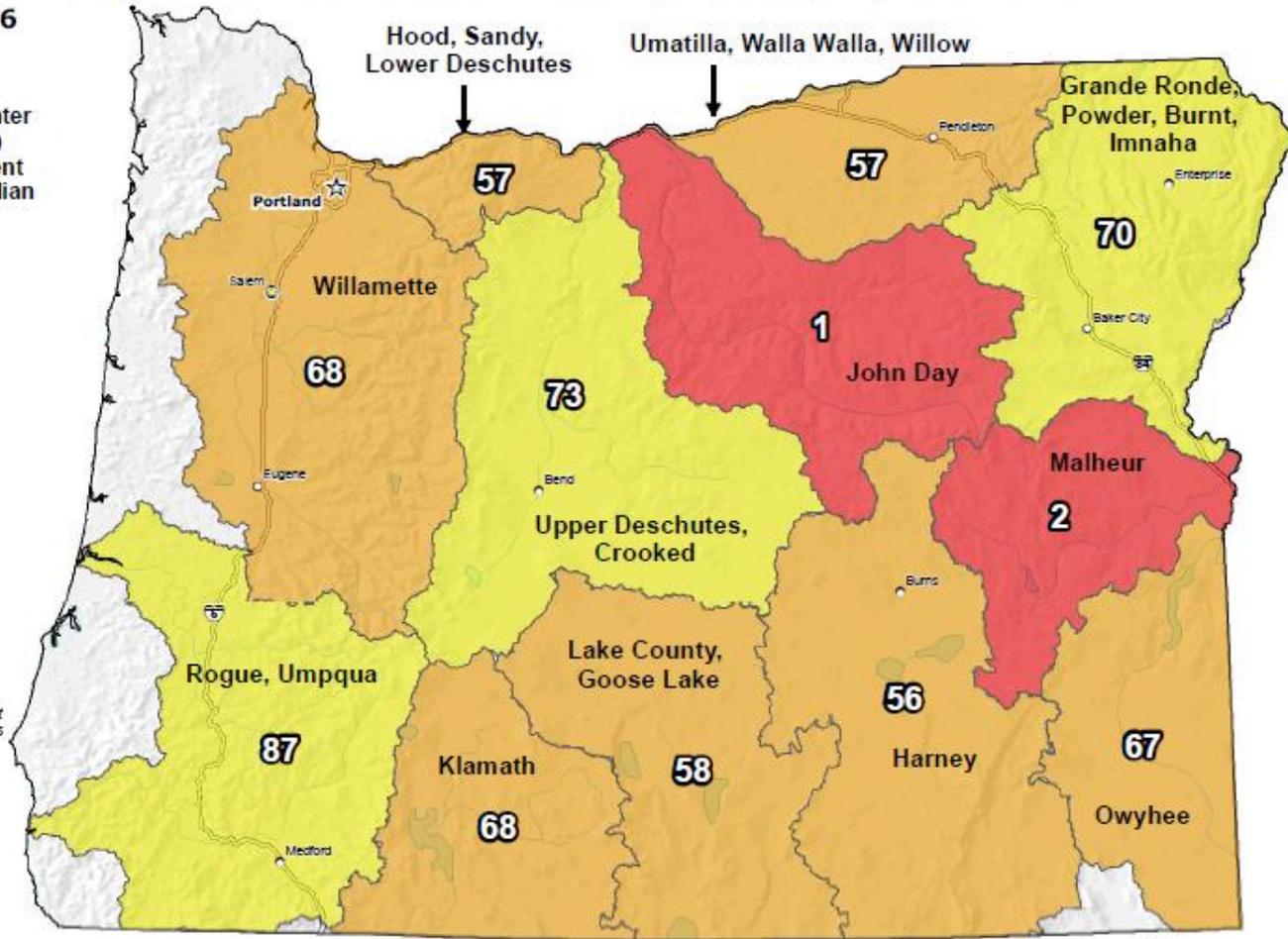
May 01, 2016

Current Snow Water Equivalent (SWE) Basin-wide Percent of 1981-2010 Median

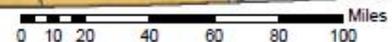


* Data unavailable at time of posting or measurement is not representative at this time of year

Provisional Data
Subject to Revision

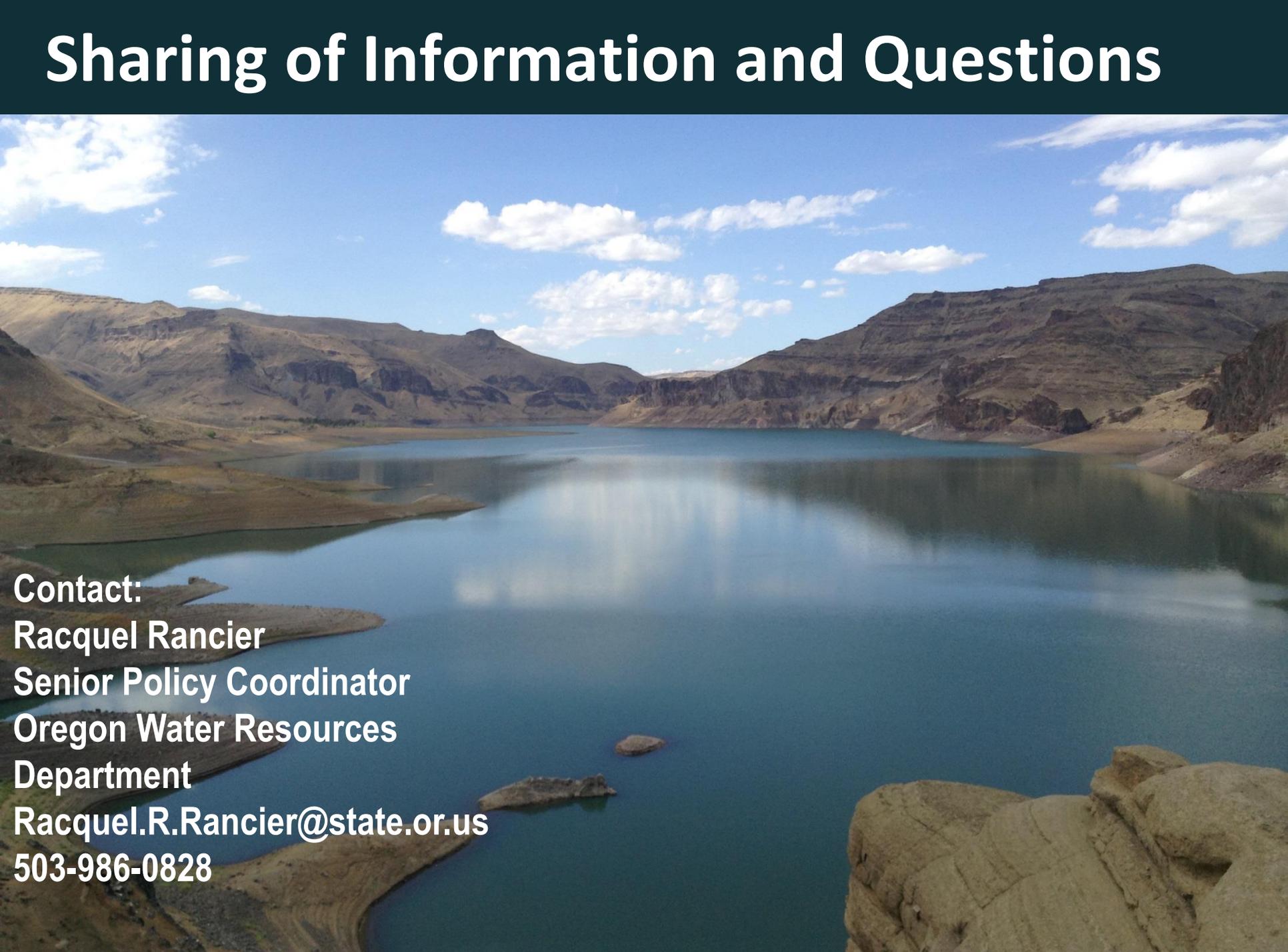


The snow water equivalent percent of normal represents the current snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).



Prepared by:
USDA/NRCS National Water and Climate Center
Portland, Oregon
<http://www.wcc.nrcs.usda.gov>

Sharing of Information and Questions



Contact:
Racquel Rancier
Senior Policy Coordinator
Oregon Water Resources
Department
Racquel.R.Rancier@state.or.us
503-986-0828

Water Supply Committee

- **Oregon Department of Agriculture**
- **Oregon Department of Forestry**
- **Oregon Office of Emergency Management**
- **Oregon Water Resources Department (Chair)**
- **NOAA-National Weather Service and Northwest
River Forecast Center**
- **USDA-NRCS Snow Survey Program**
- **U.S. Army Corps of Engineers**
- **U.S. Geological Survey**

Indicators of Drought

- **Precipitation**
- **Temperature anomalies**
- **Storage in key reservoirs**
- **Long-range temperature outlook**
- **Long-range precipitation outlook**
- **Snowpack**
- **Current streamflows and behavior**
- **Spring and summer streamflow forecasts**
- **Ocean surface temperature anomalies (El Nino, La Nina)**
- **Soil and fuel moisture conditions**
- **NRCS Surface Water Supply Index**

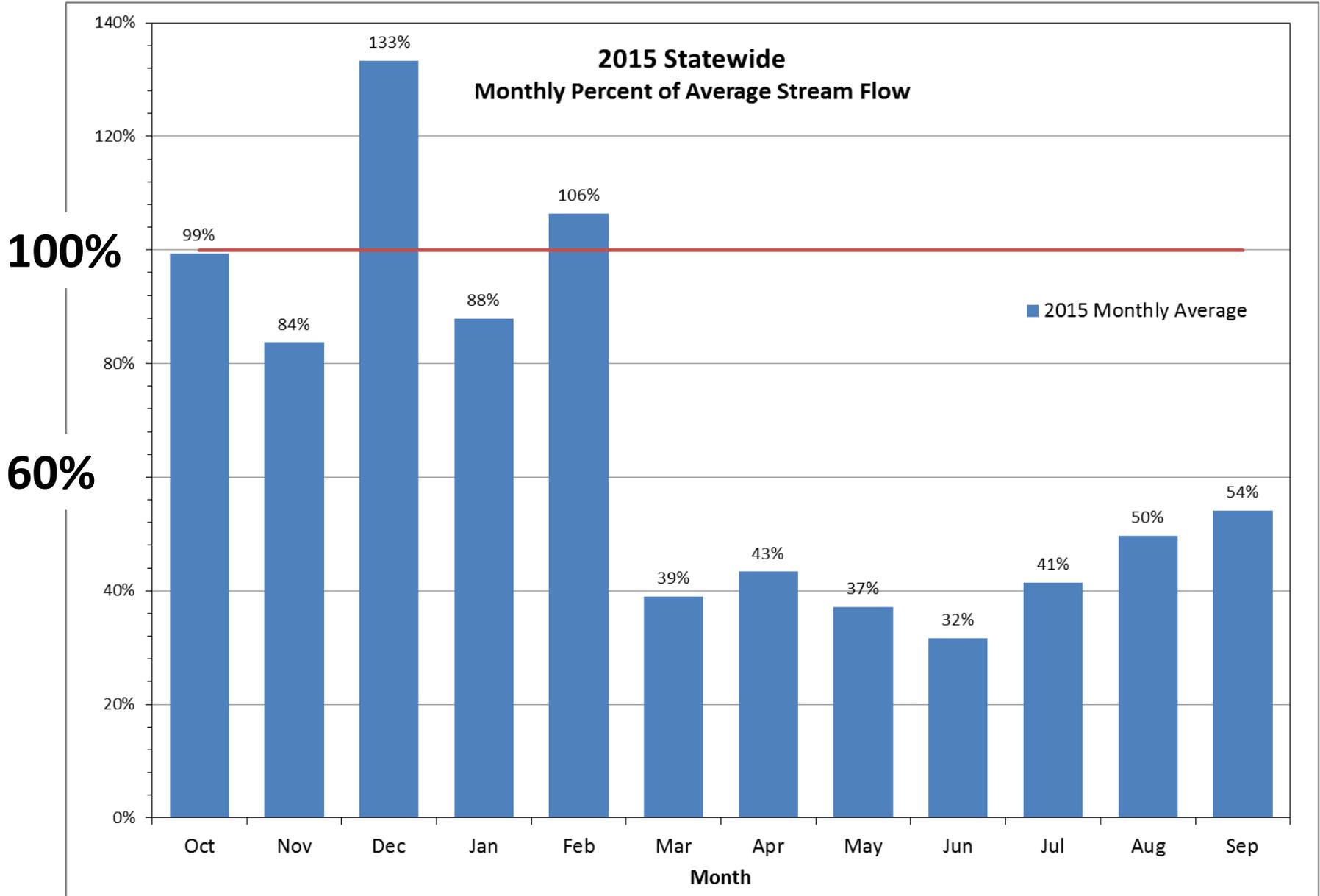


Malheur Reservoir in 2014

Drought Readiness Council

- **Oregon Climate Change Research Institute**
- **Oregon Department of Agriculture**
- **Oregon Department of Energy**
- **Oregon Department of Environmental Quality**
- **Oregon Department of Fish and Wildlife**
- **Oregon Department of Forestry**
- **Oregon Health Authority's Drinking Water Program**
- **Oregon Office of Emergency Management (co-chair)**
- **Oregon Water Resources Department (co-chair)**

2015 Monthly % of Average Streamflow



Oregon's Drought Declaration Process

**REVAMPED AT END OF 2015
DUE TO LESSONS LEARNED**

