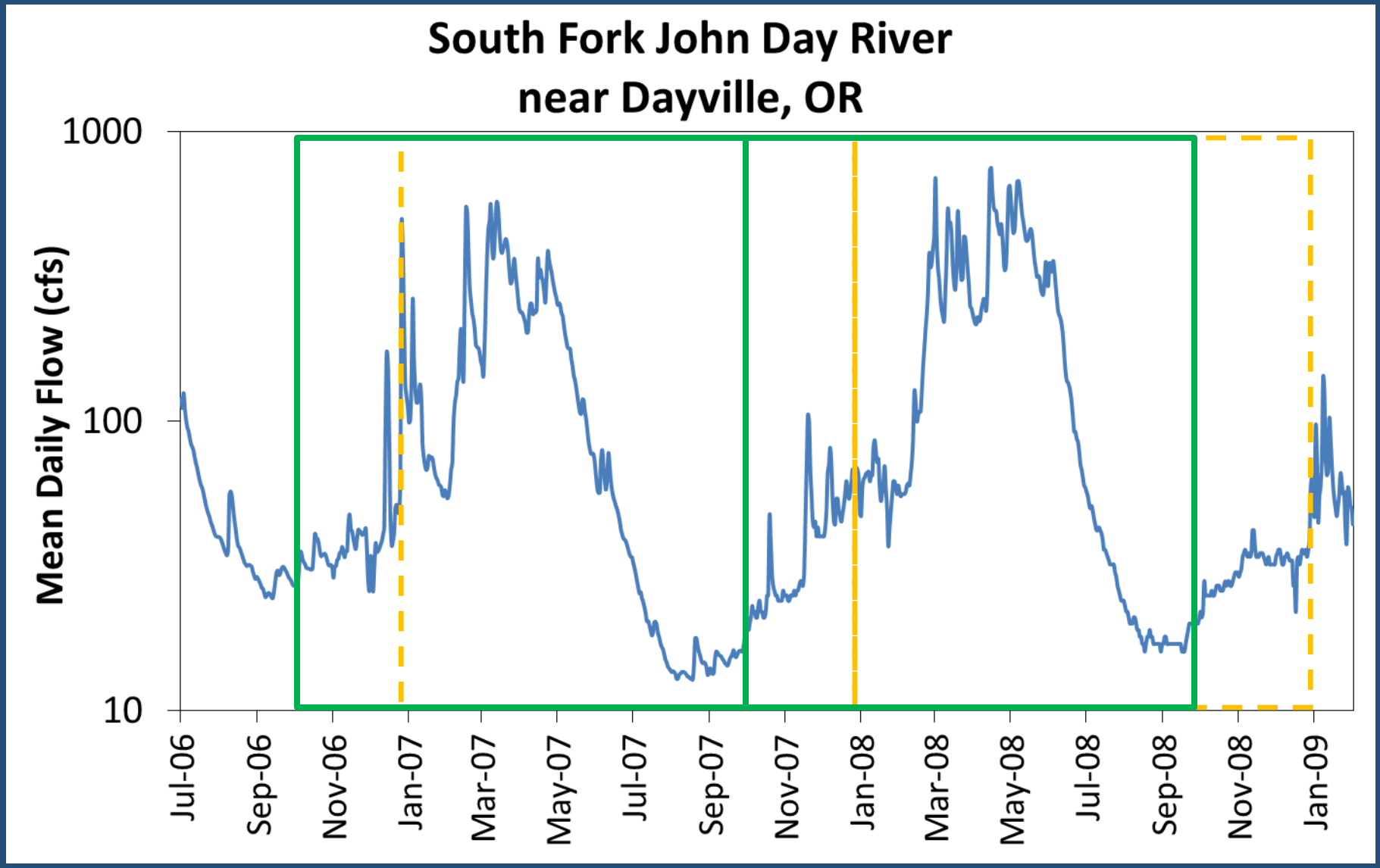
Surface Water Supply Conditions and Drought Declaration Process

February 2014

Ken Stahr,
Hydrographics Section Manager

Keith Mills,
Acting State Engineer

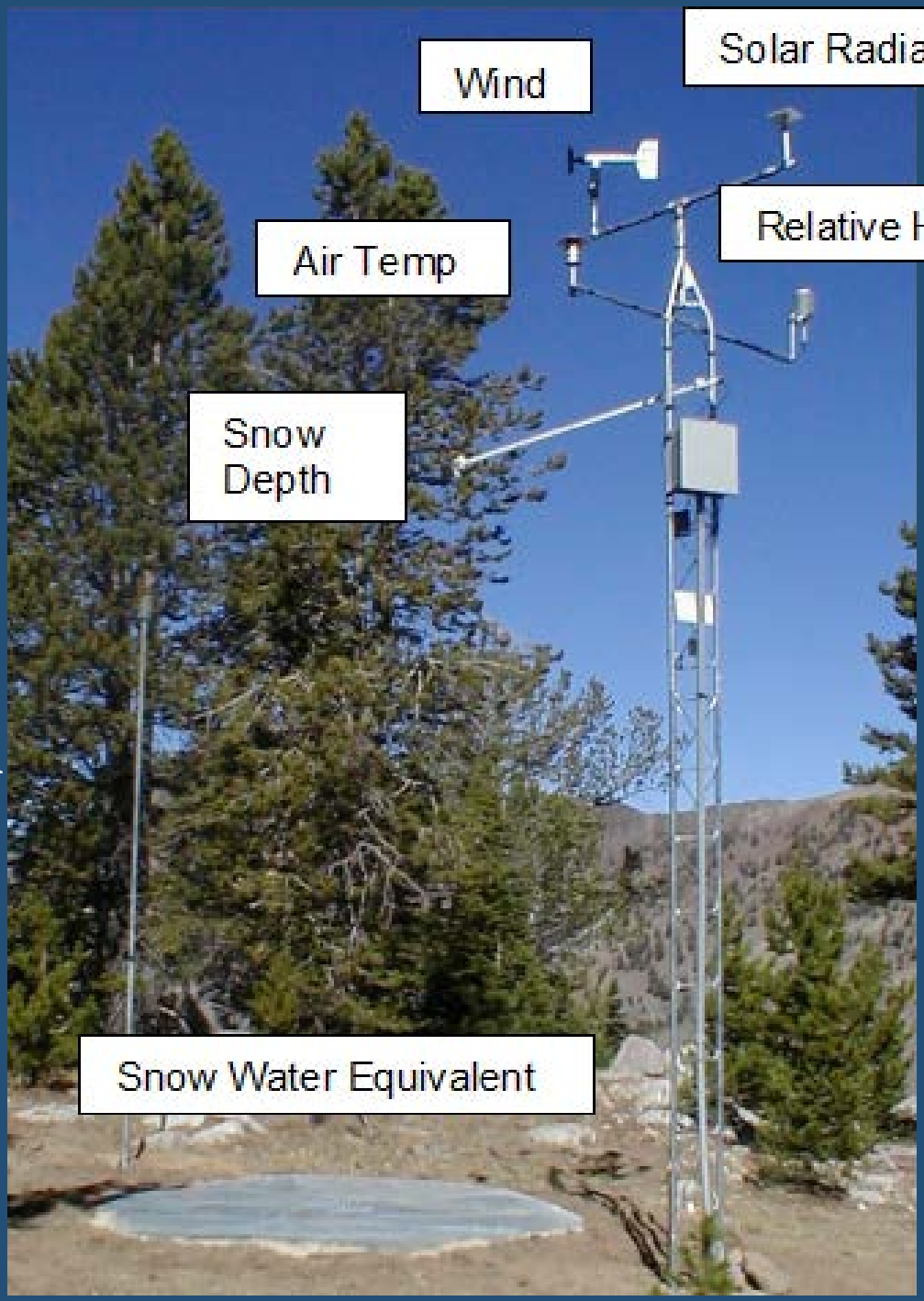
Water Year


South Fork John Day River
near Dayville, OR
Mean Daily Flow (cfs)
1000
100
10
Jul-06
Sep-06
Nov-06
Jan-07
Mar-07
May-07
Jul-07
Sep-07
Nov-07
Jan-08
Mar-08
May-08
Jul-08
Sep-08
Nov-08
Jan-09

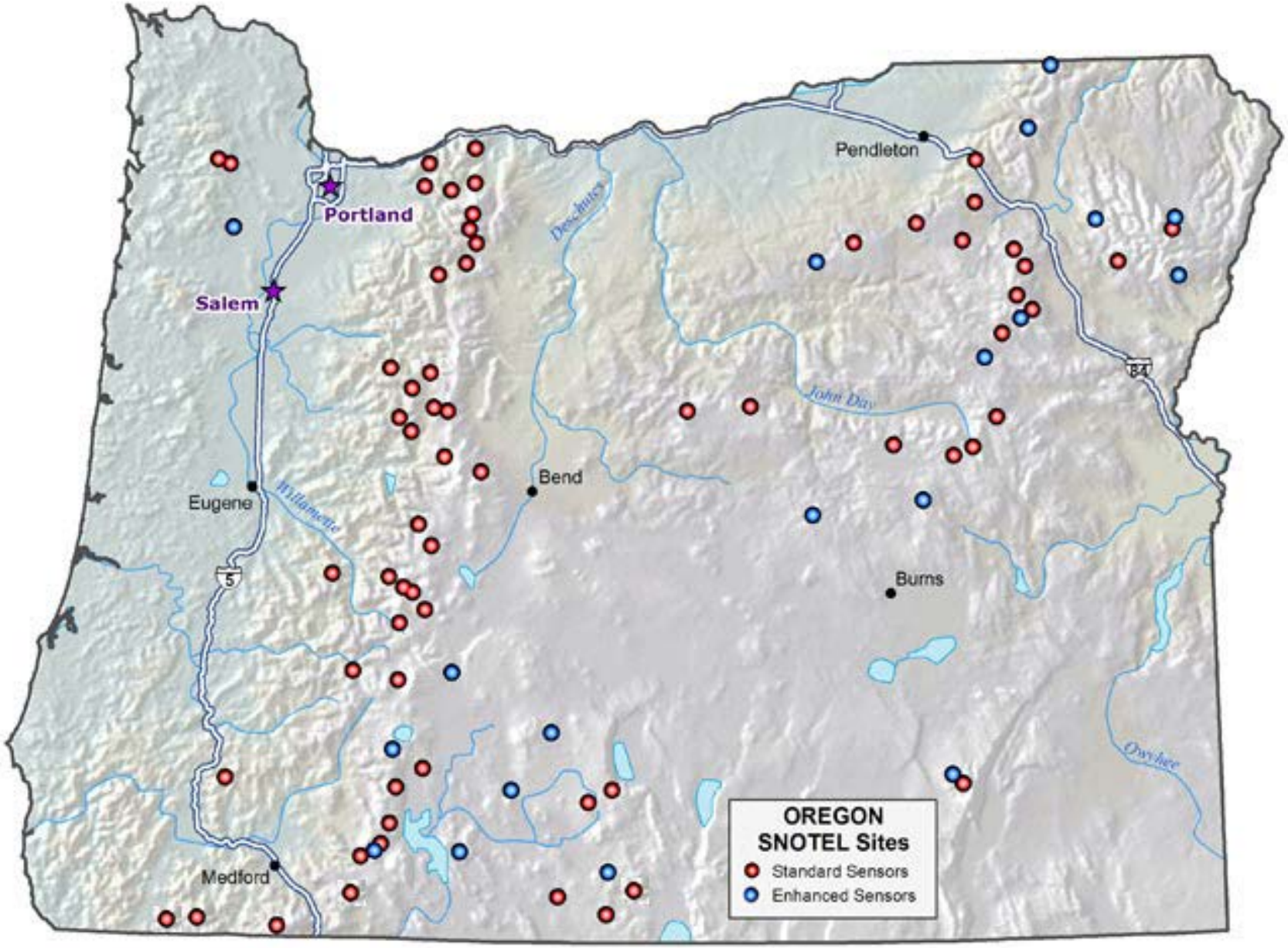
NRCS* Snow Telemetry (SNOTEL) Site

SWE:
Snow Water Equivalent; amount of water melted snow would produce

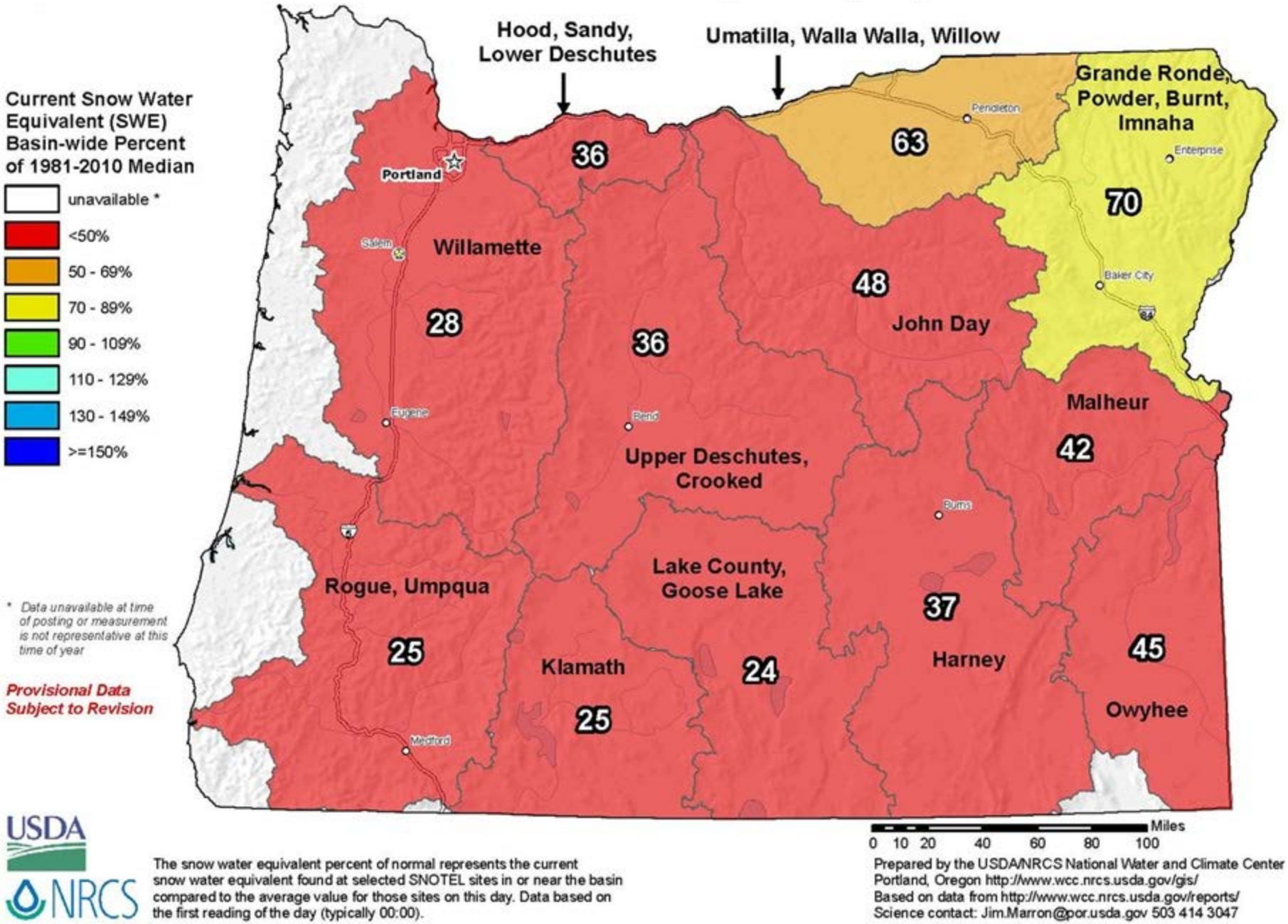
NRCS – National Resource Conservation Service



Oregon SNOTEL Sites



January 21, 2014 SNOTEL Snow Water Equivalent % Normal

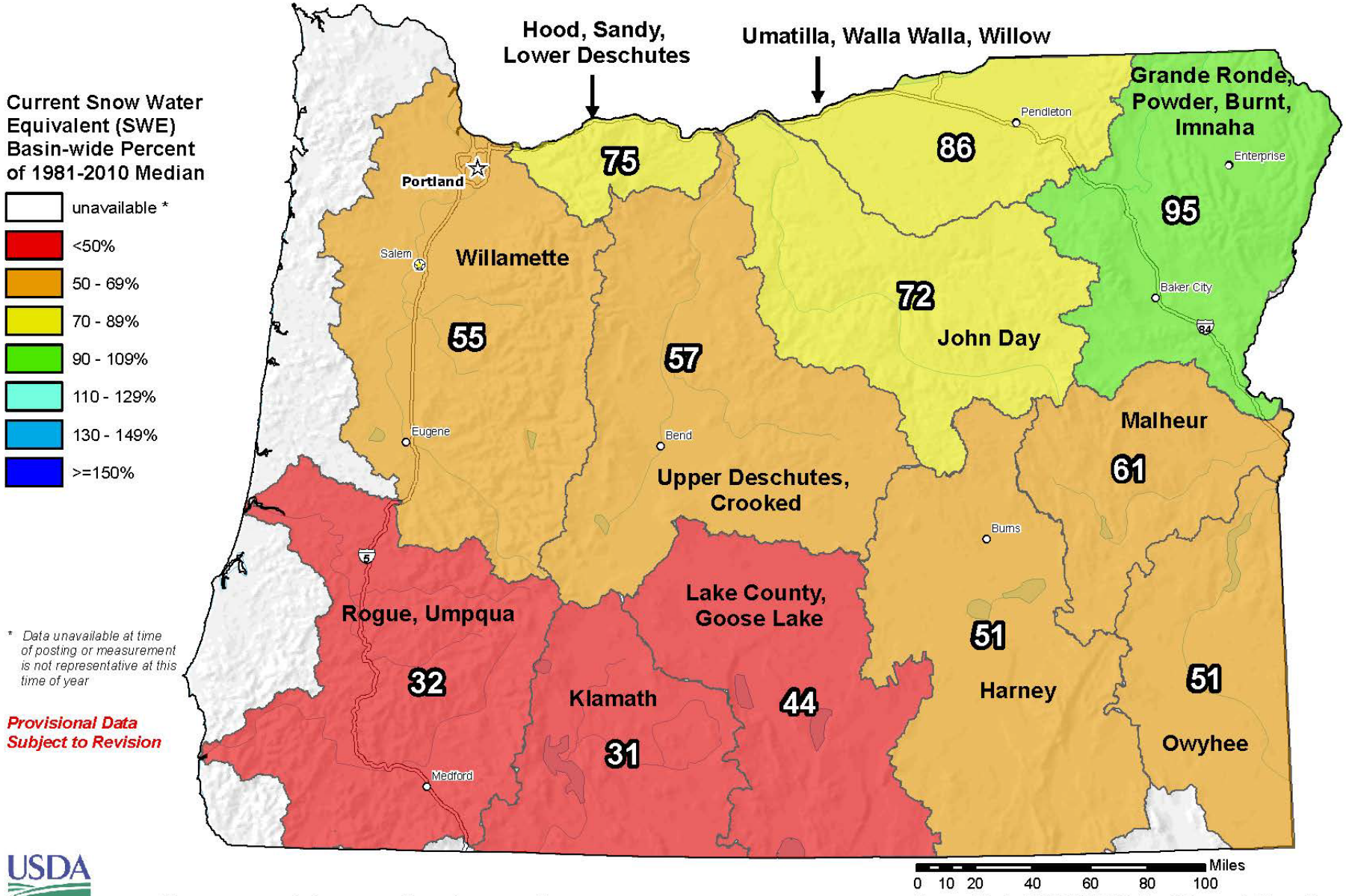


USDA NRCS

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 the USDA/NRCS National Water and Climate Center
Portland, Oregon http://www.wcc.nrcs.usda.gov/gis/
Based on data from http://www.wcc.nrcs.usda.gov/reports/
Science contact: Jim.Marron@por.usda.gov 503 414 3047

March 4, 2014 SNOTEL Snow Water Equivalent % Normal



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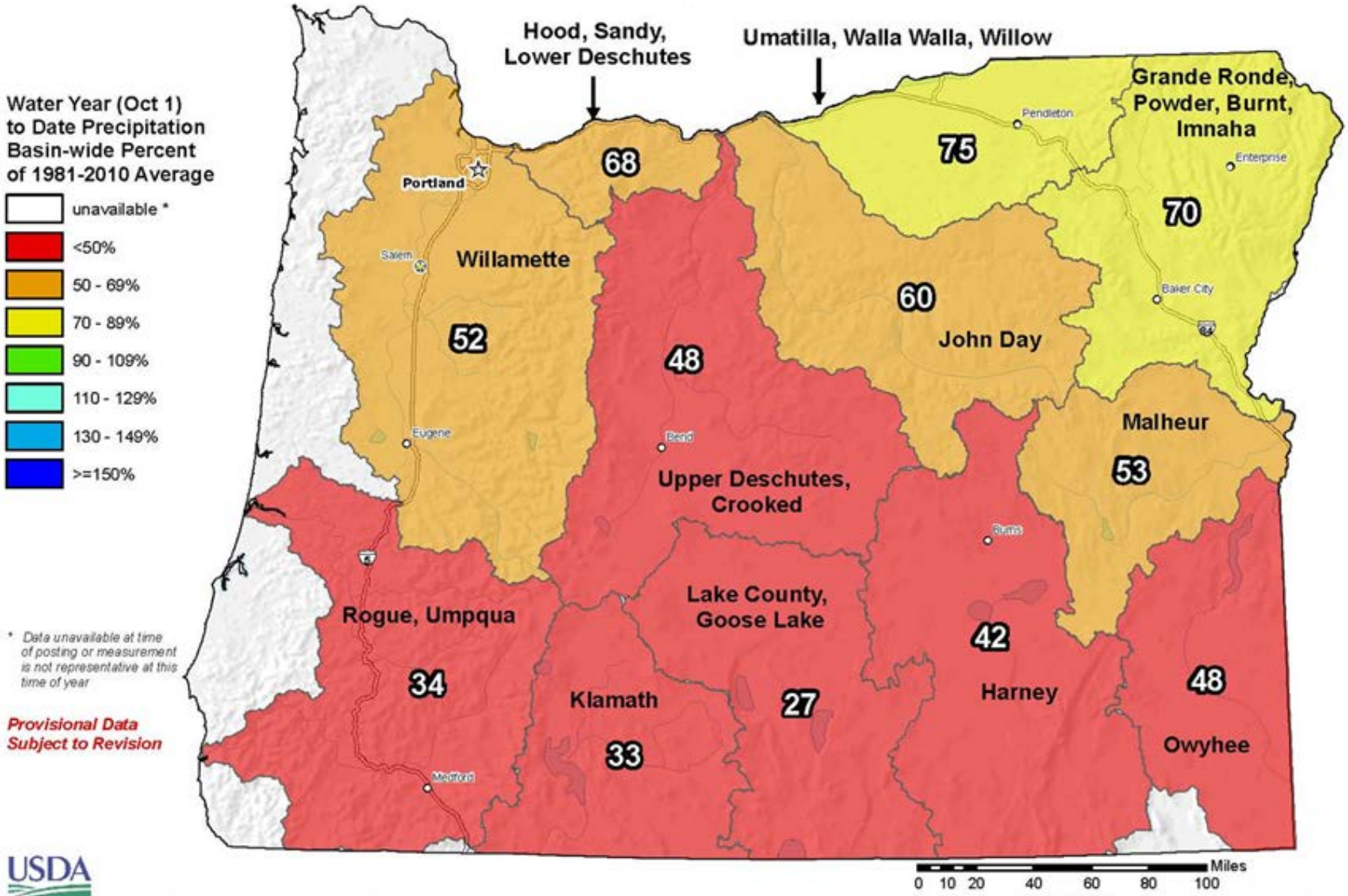
January 21, 2014 Cumulative Precipitation, % Normal



USDA NRCS

The water year to date precipitation percent of normal represents the accumulated precipitation 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).

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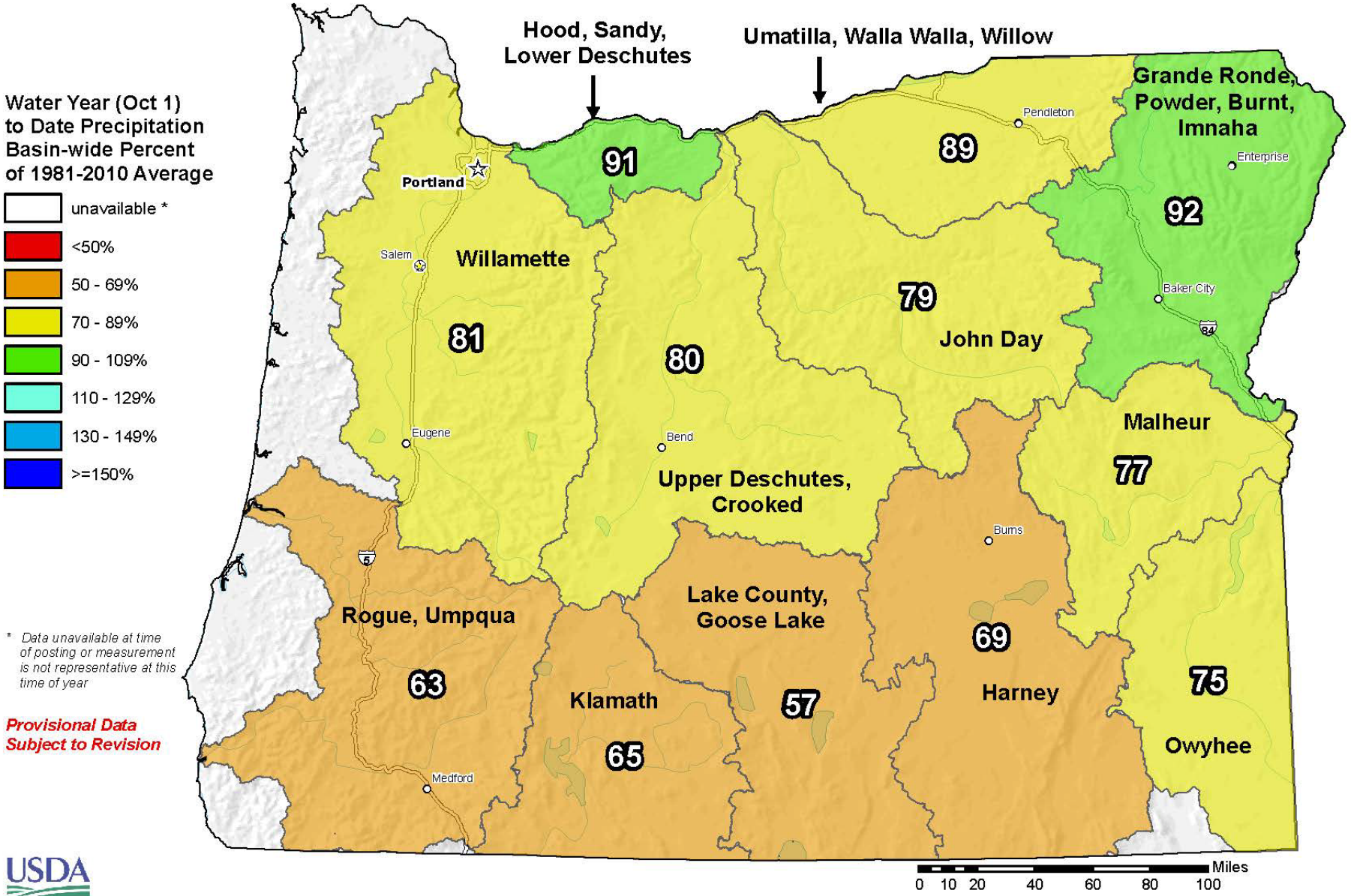

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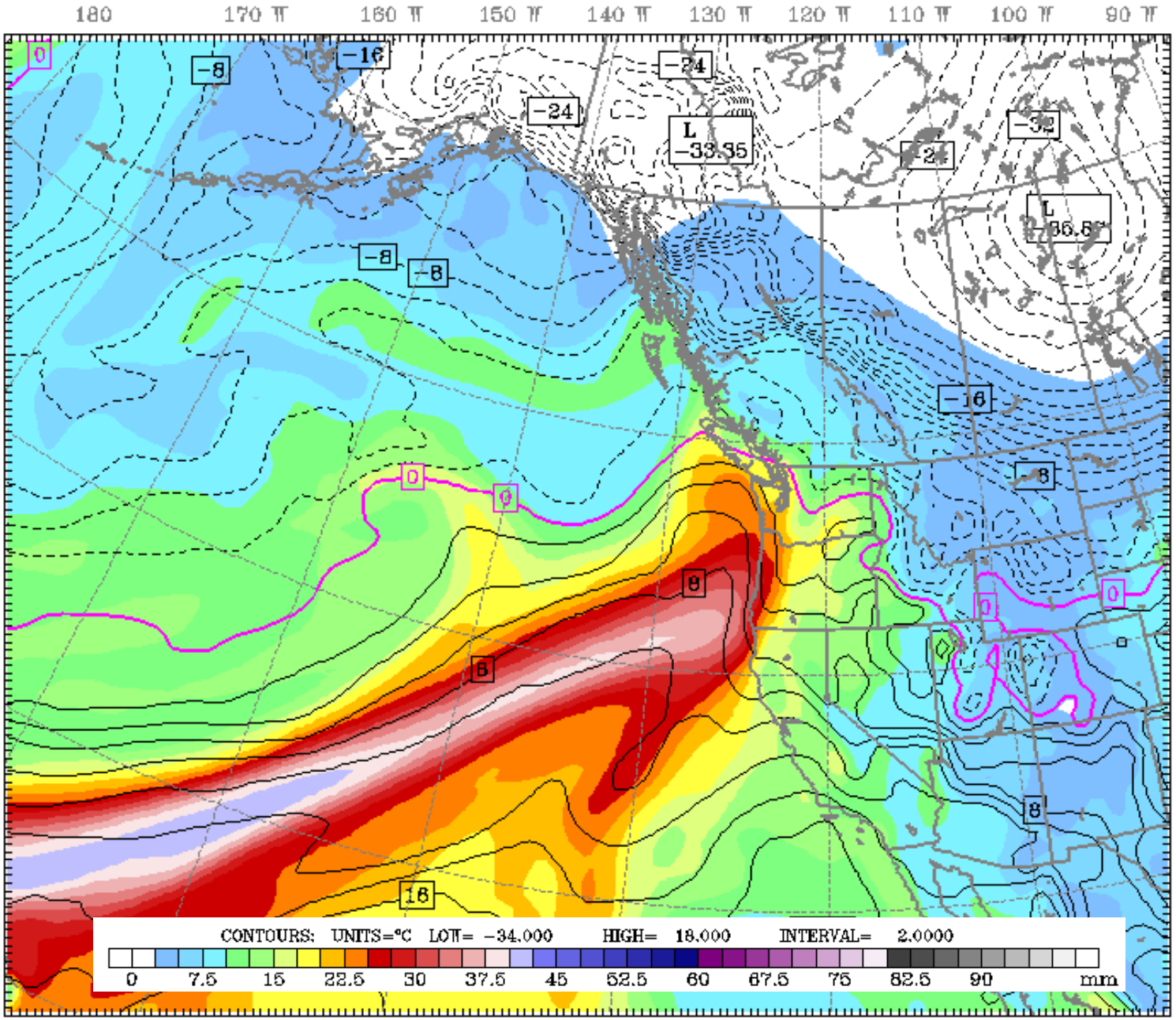
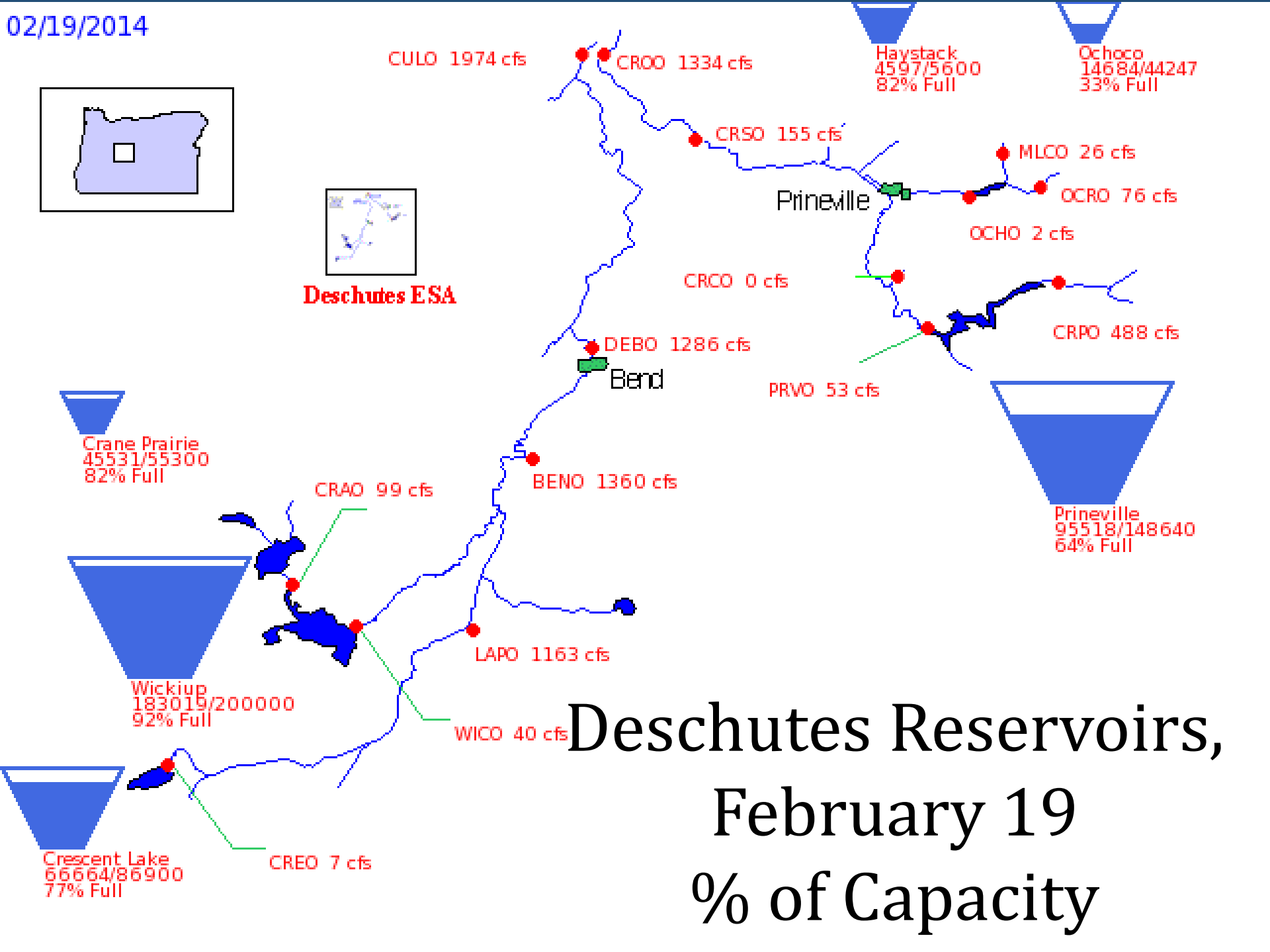
Based on data from http://www.wcc.nrcs.usda.gov/reports/
Science contact: Jim.Marron@por.usda.gov 503 414 3047

Atmospheric River

February 14th

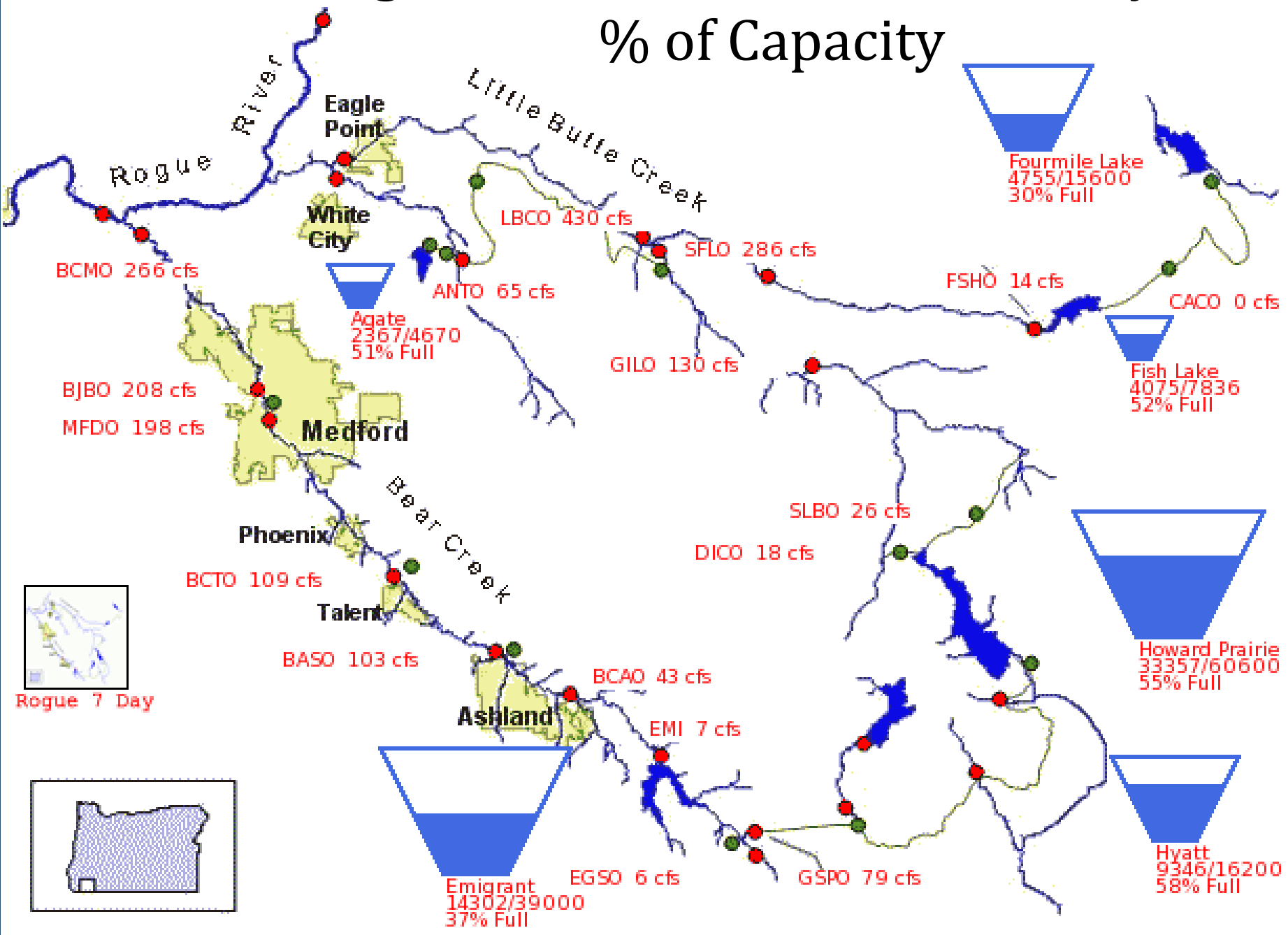
-Water vapor (mm; color): How much water can precipitate.

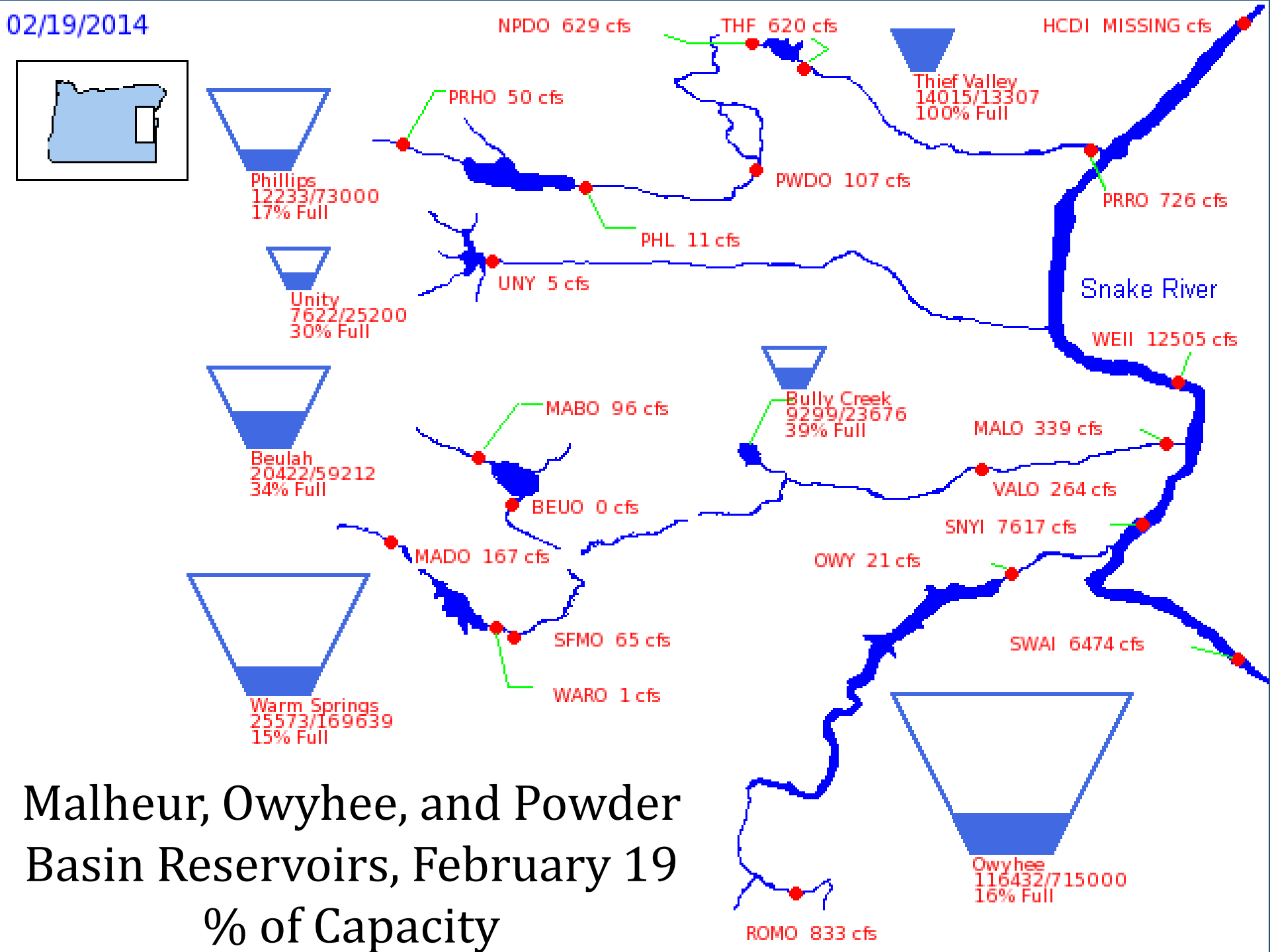



02/19/2014
CULO 1974 cfs
CROO 1334 cfs
Haystack
4597/5600
82% Full
Ochoco
14684/44247
33% Full
CRSO 155 cfs
MLCO 26 cfs
Prineville
OCRO 76 cfs
OCHO 2 cfs
Deschutes ESA
CRCO 0 cfs
CRPO 488 cfs
DEBO 1286 cfs
Bend
PRVO 53 cfs
Crane Prairie
45531/55300
82% Full
BENO 1360 cfs
CRAO 99 cfs
Prineville
95518/148640
64% Full
LAPO 1163 cfs
Wickiup
183019/200000
92% Full
WICO 40 cfs
Deschutes Reservoirs,
February 19
% of Capacity
Crescent Lake
66664/86900
77% Full
CREO 7 cfs

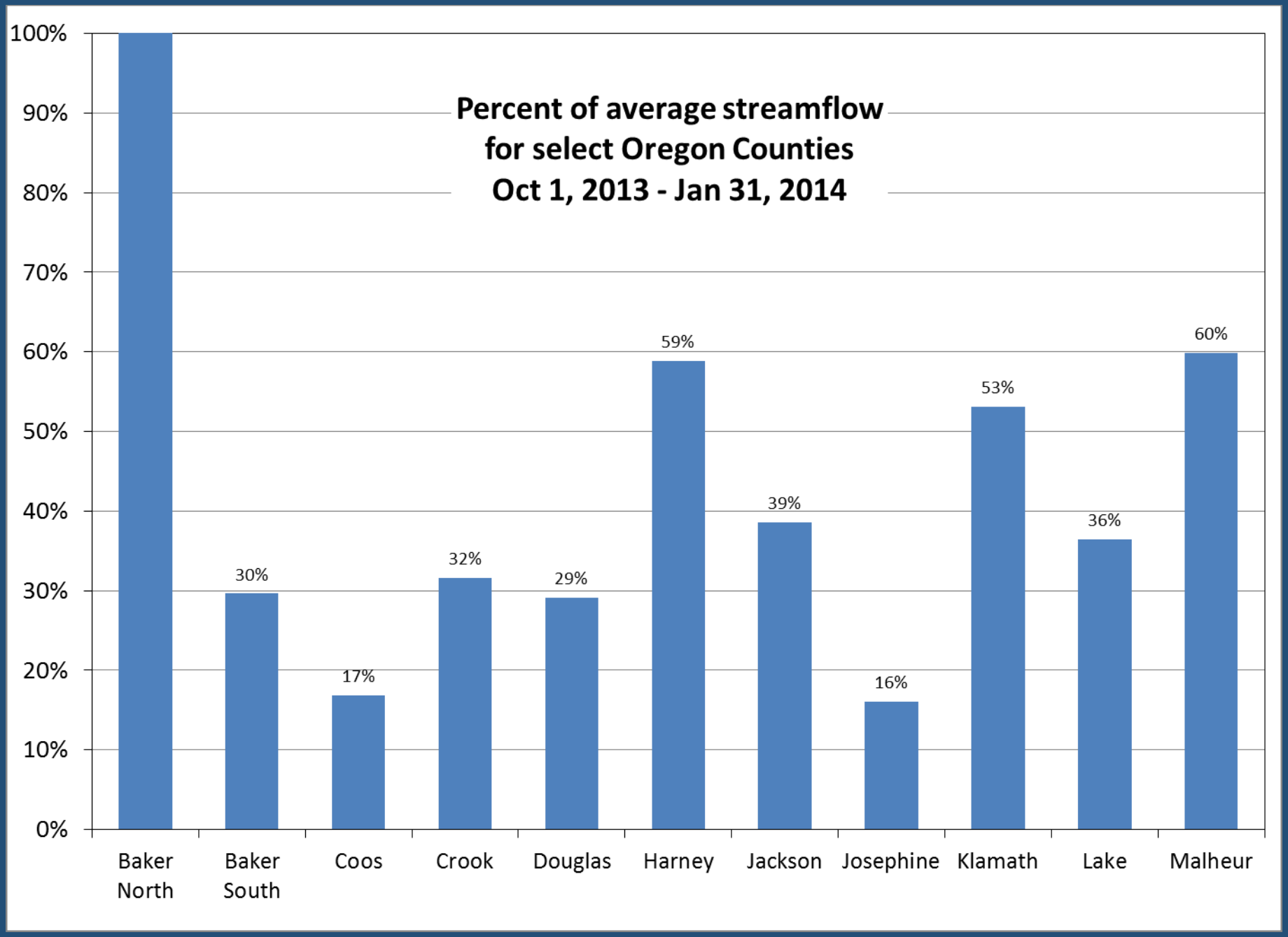
02/19/2014

Rogue Basin Reservoirs, February 19
% of Capacity



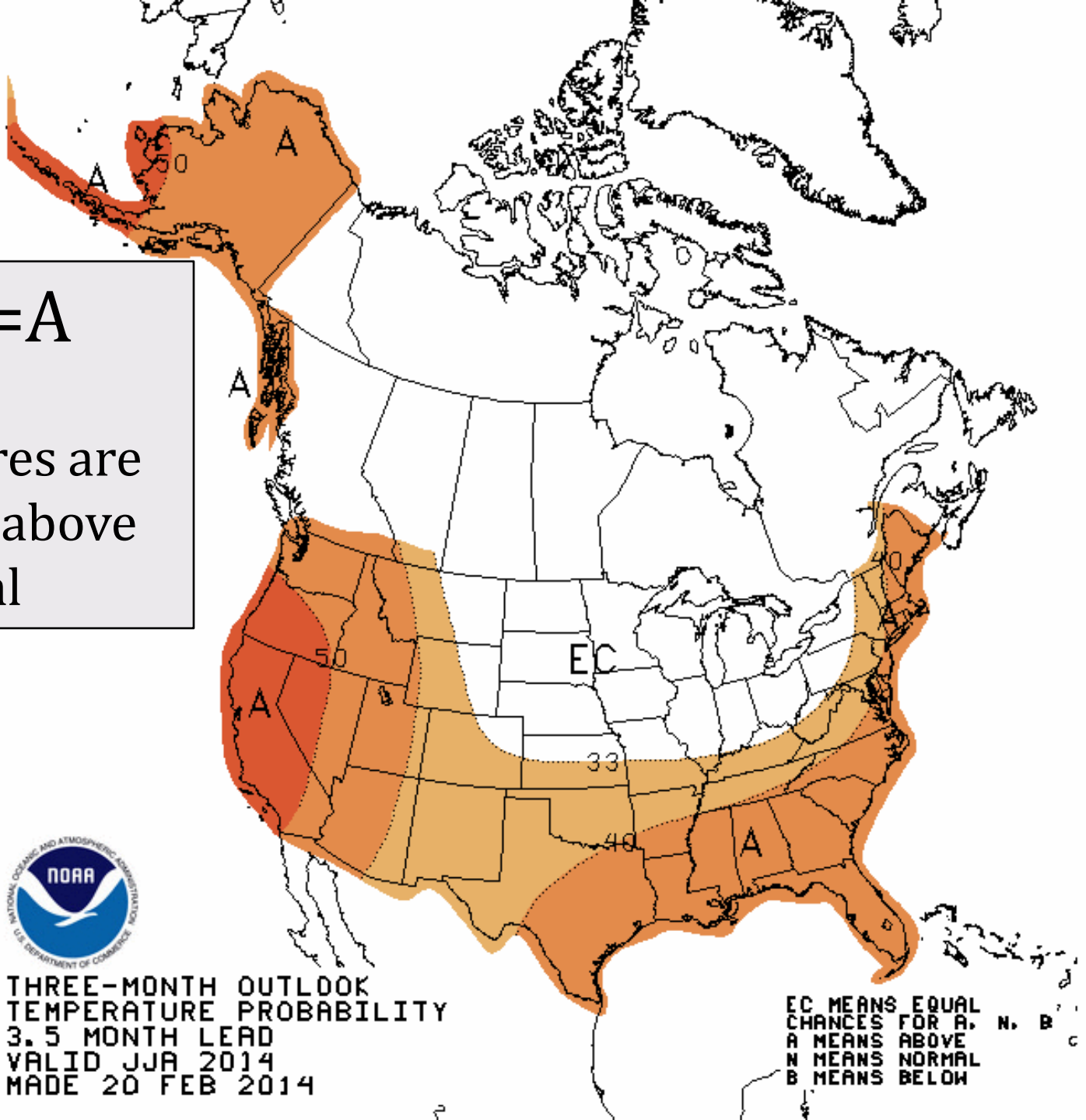


Malheur, Owyhee, and Powder Basin Reservoirs, February 19 % of Capacity


Percent of average streamflow
for select Oregon Counties
Oct 1, 2013 - Jan 31, 2014
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
30%
17%
32%
29%
59%
39%
16%
53%
36%
60%
Baker North
Baker South
Coos
Crook
Douglas
Harney
Jackson
Josephine
Klamath
Lake
Malheur

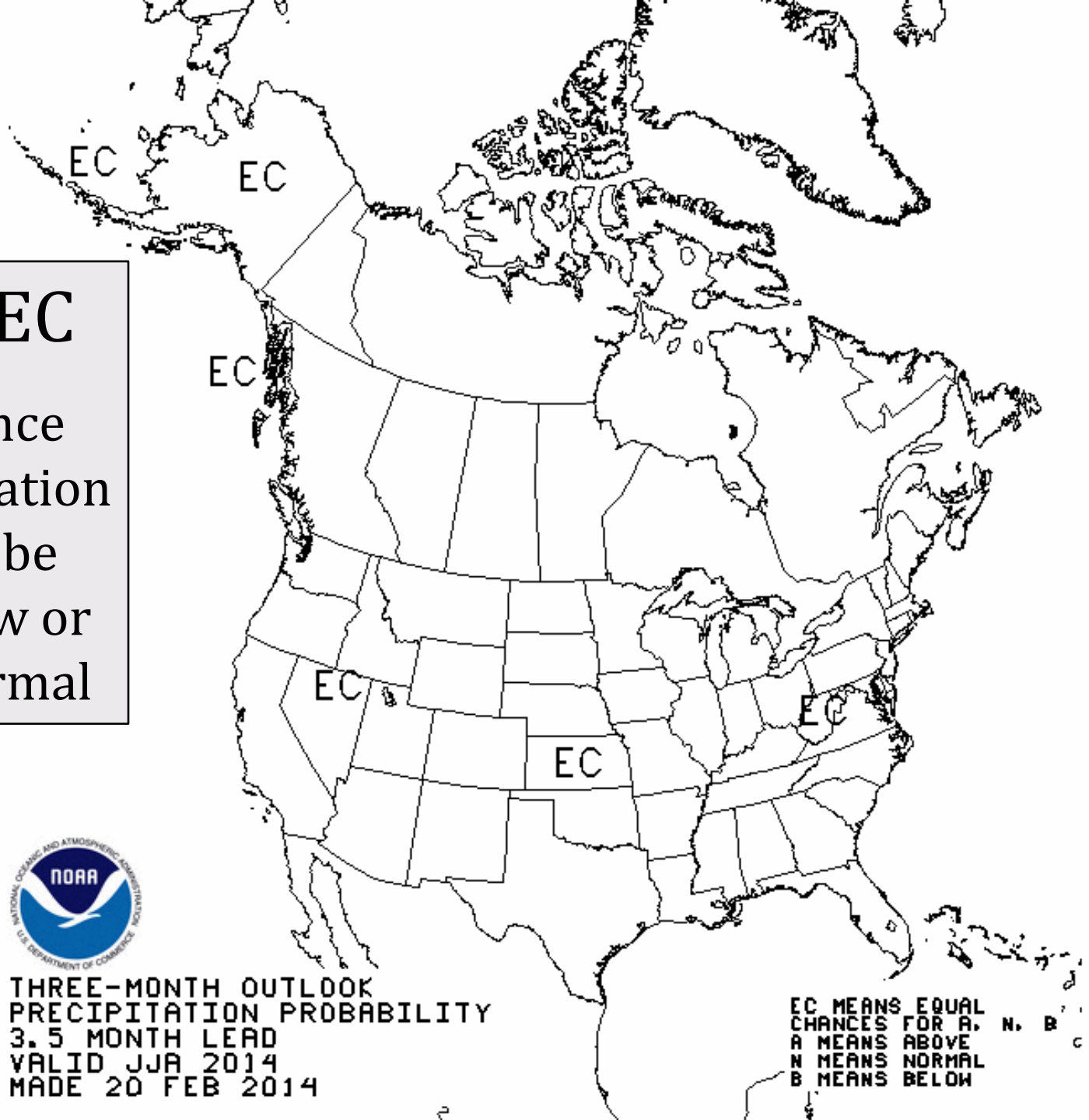
Temp=A

Temperatures are likely to be above normal



Precip=EC

Equal Chance that precipitation levels will be above, below or equal to normal



February Forecast Summary

- Snowpack well below normal
- Record snowfall required for normal
- Streamflow well below normal in southern Oregon
- Near normal streamflows in the Willamette, Umatilla and Grande Ronde Basins

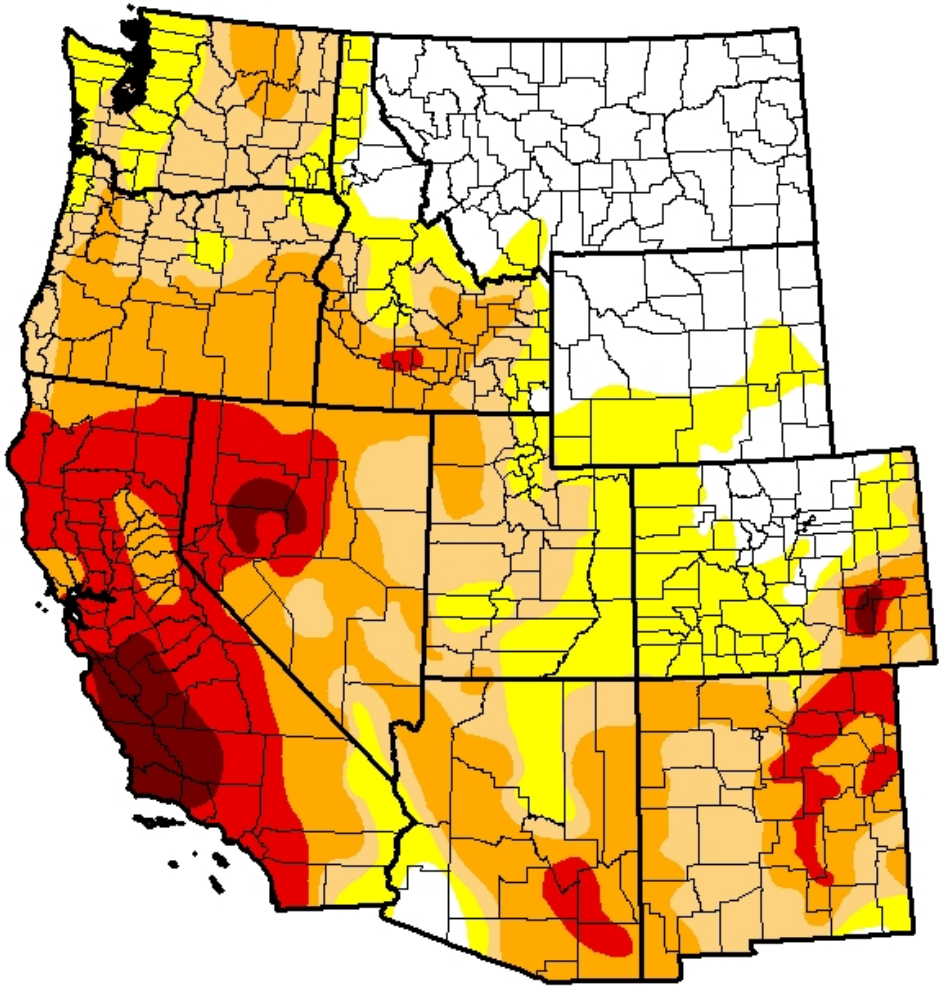
Regional Context

- The governor of California declared a drought emergency for the entire State on January 17, 2014

Current Drought Monitor

U.S. Drought Monitor

West



February 18, 2014

(Released Thursday, Feb. 20, 2014)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	21.76	78.24	59.88	40.17	14.89	2.58
Last Week *2/11/2014*	17.62	82.38	64.47	41.04	13.94	1.94
3 Months Ago *11/19/2013*	27.36	72.64	53.20	32.23	7.56	0.63
Start of Calendar Year *12/31/2013*	22.20	77.80	51.44	31.11	7.75	0.63
Start of Water Year *10/1/2013*	25.25	74.75	58.96	34.18	5.57	0.63
One Year Ago *2/19/2013*	23.76	76.24	64.34	41.81	15.89	3.15

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

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

Author:
David Miskus
NOAA/NWS/NCEP/CPC

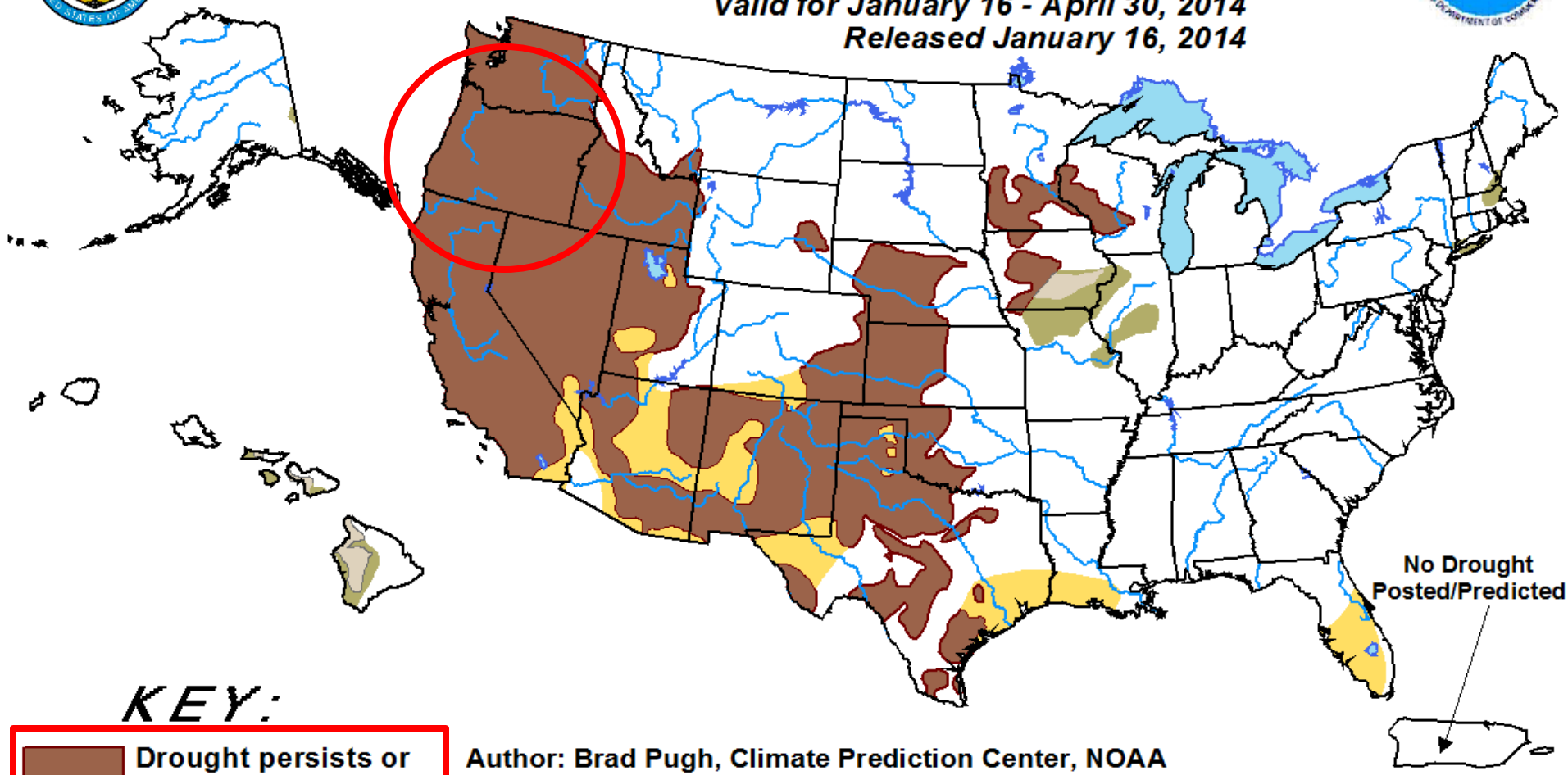
http://droughtmonitor.unl.edu/

U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for January 16 - April 30, 2014

Released January 16, 2014



KEY:

- **Drought persists or intensifies**
- **Drought remains but improves**
- **Drought removal likely**
- **Drought development likely**

Author: Brad Pugh, Climate Prediction Center, NOAA

http://www.cpc.ncep.noaa.gov/products/expert_assessment/season_drought.html

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance. Use caution for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity).

For weekly drought updates, see the latest U.S. Drought Monitor.

NOTE: The tan area areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period although drought will remain.

The Green areas imply drought removal by the end of the period (D0 or none)

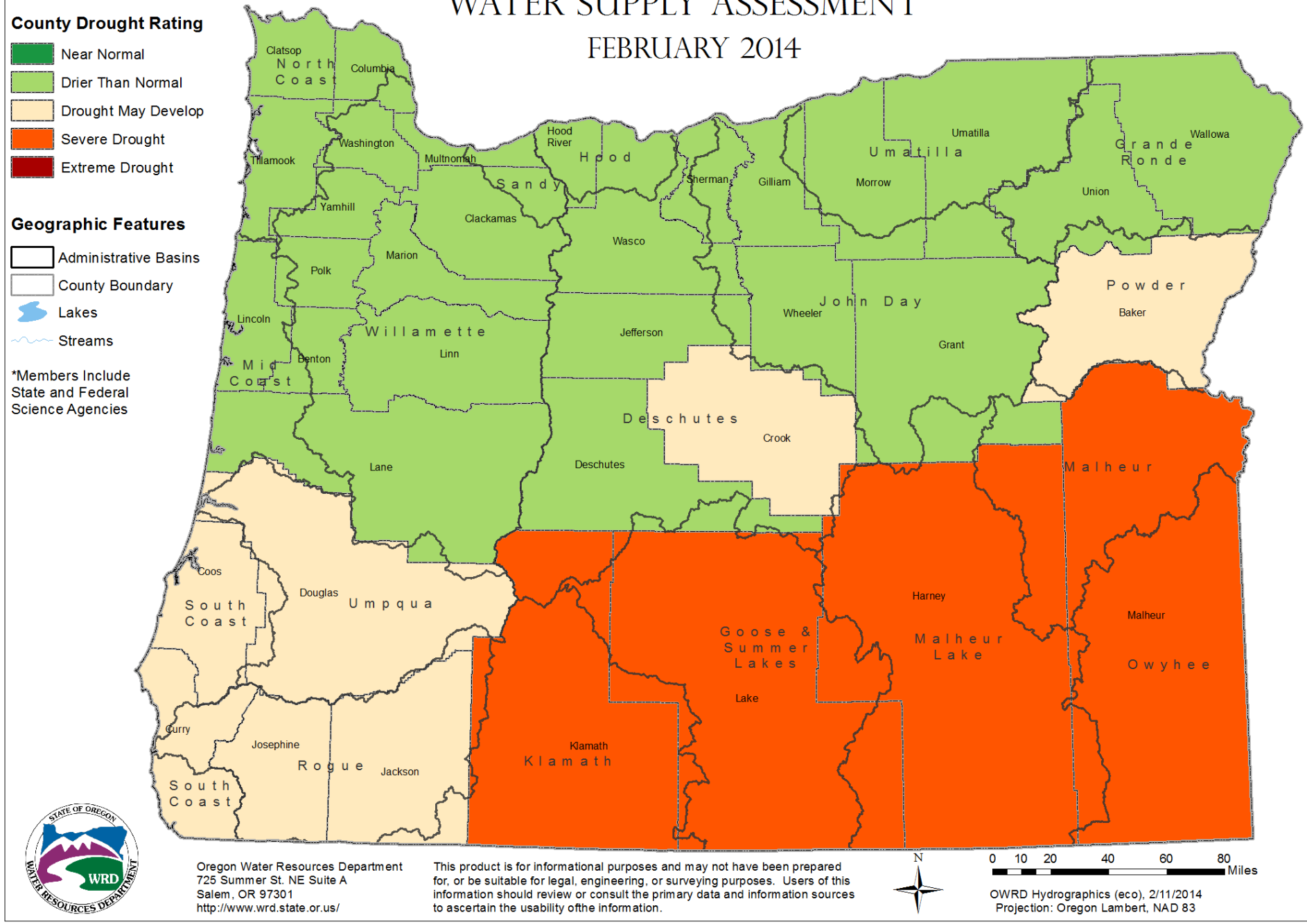
Drought Declaration Process

- Water Availability Committee
- Drought Council
- Governor’s Declaration

Water Availability Committee

- Subcommittee of the Drought Council
- Representatives
  - NRCS Snow Survey
  - NWS River Forecast Center
  - NWS Warning Office
  - Oregon Climate Service
  - ODF
  - USGS
  - OWRD

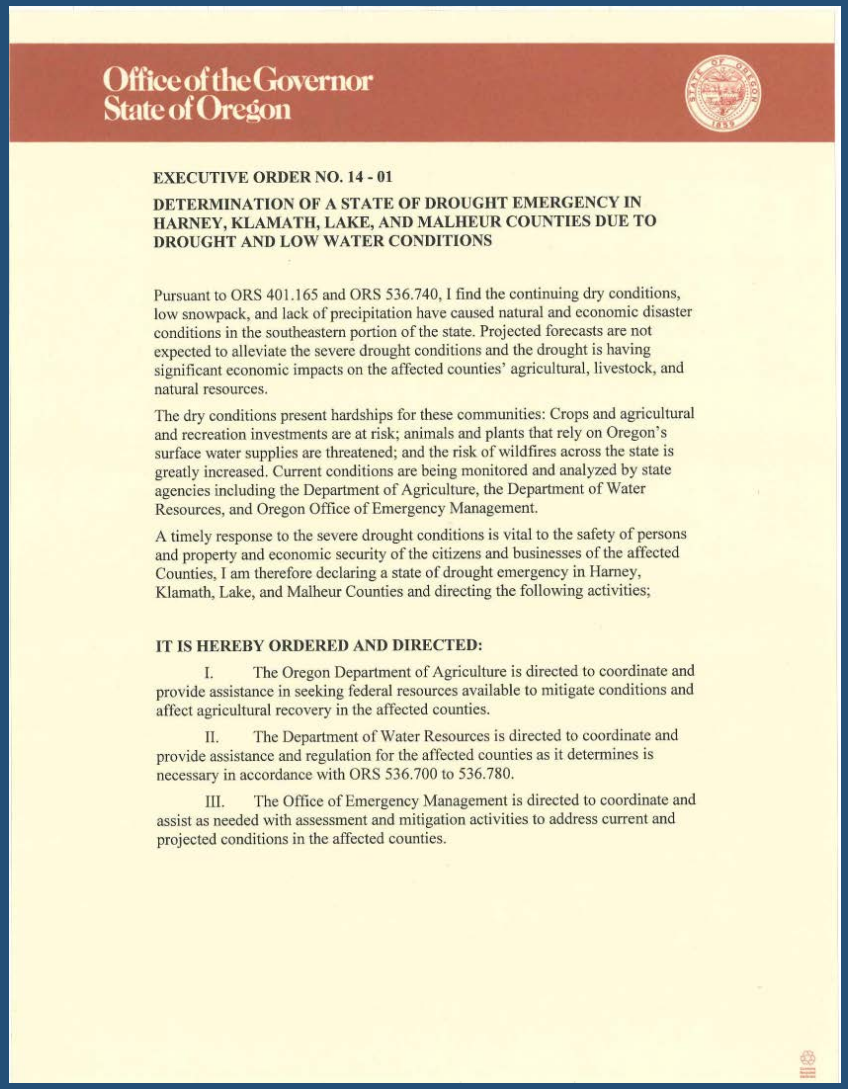
OREGON'S WATER AVAILABILITY COMMITTEE*
WATER SUPPLY ASSESSMENT
FEBRUARY 2014



Oregon Water Resources Department
725 Summer St. NE Suite A
Salem, OR 97301
http://www.wrd.state.or.us/

OWRD Hydrographics (eco), 2/11/2014
Projection: Oregon Lambert, NAD 83

Drought Declaration



Office of the Governor
State of Oregon

EXECUTIVE ORDER NO. 14 - 01

DETERMINATION OF A STATE OF DROUGHT EMERGENCY IN HARNEY, KLAMATH, LAKE, AND MALHEUR COUNTIES DUE TO DROUGHT AND LOW WATER CONDITIONS

Pursuant to ORS 401.165 and ORS 536.740, I find the continuing dry conditions, low snowpack, and lack of precipitation have caused natural and economic disaster conditions in the southeastern portion of the state. Projected forecasts are not expected to alleviate the severe drought conditions and the drought is having significant economic impacts on the affected counties' agricultural, livestock, and natural resources.

The dry conditions present hardships for these communities: Crops and agricultural and recreation investments are at risk; animals and plants that rely on Oregon's surface water supplies are threatened; and the risk of wildfires across the state is greatly increased. Current conditions are being monitored and analyzed by state agencies including the Department of Agriculture, the Department of Water Resources, and Oregon Office of Emergency Management.

A timely response to the severe drought conditions is vital to the safety of persons and property and economic security of the citizens and businesses of the affected Counties, I am therefore declaring a state of drought emergency in Harney, Klamath, Lake, and Malheur Counties and directing the following activities;

IT IS HEREBY ORDERED AND DIRECTED:

I. The Oregon Department of Agriculture is directed to coordinate and provide assistance in seeking federal resources available to mitigate conditions and affect agricultural recovery in the affected counties.

II. The Department of Water Resources is directed to coordinate and provide assistance and regulation for the affected counties as it determines is necessary in accordance with ORS 536.700 to 536.780.

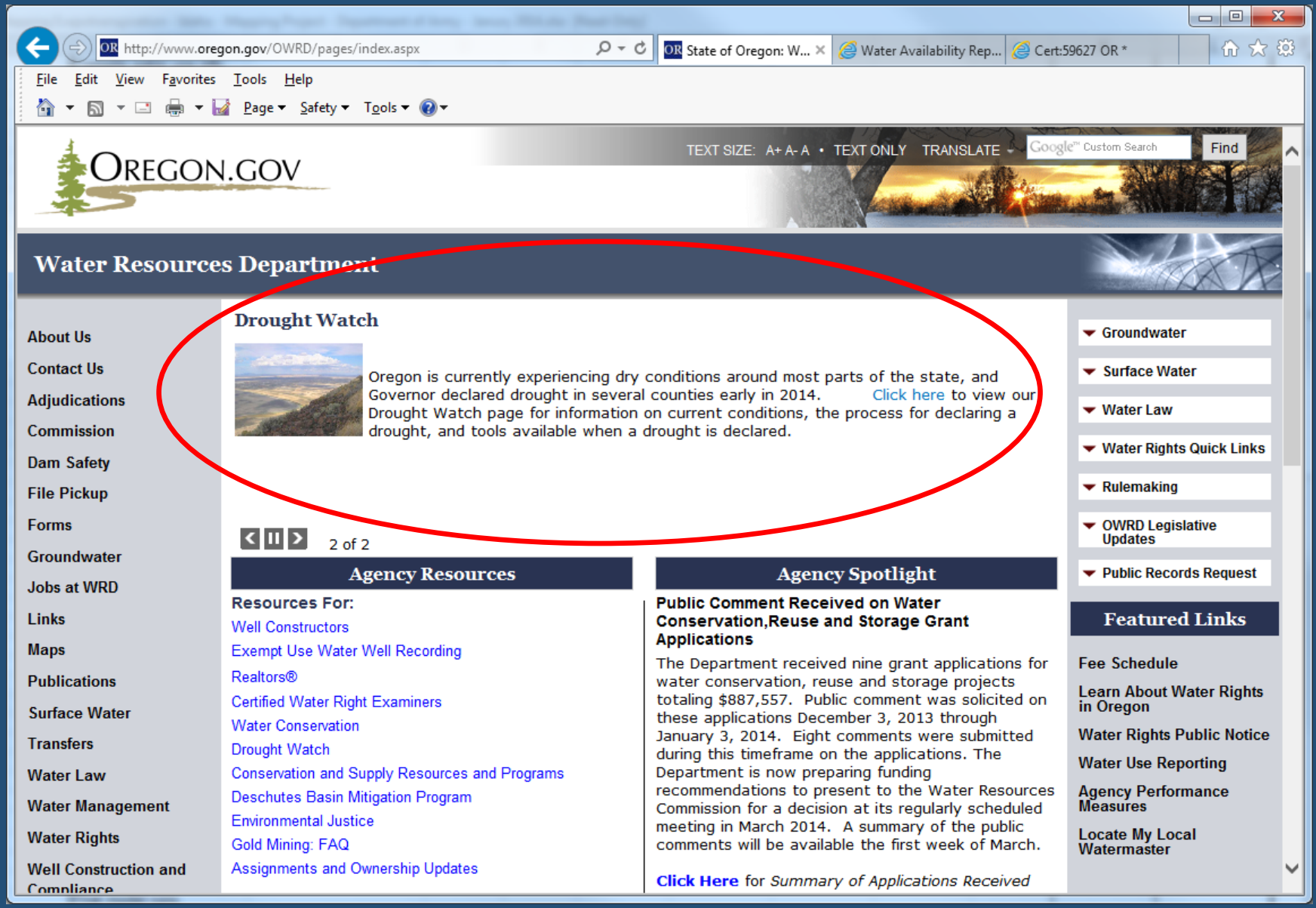
III. The Office of Emergency Management is directed to coordinate and assist as needed with assessment and mitigation activities to address current and projected conditions in the affected counties.

- First 2014 Executive Order
- Four Southeast Oregon Counties
- ODA, OWRD and OEM direction

Next Steps

- March 10, 2014 WAC meeting
  - Crook County declaration
- Conditions somewhat improved
- Monthly WAC meetings through at least June

OWRD Drought Watch Home Page



OWRD Drought Response Tools

- Preference of water rights use for human or livestock consumption
- Temporary supplemental groundwater right
- Temporary emergency permits, transfers and in-stream leases
- Special option agreements
- Temporary exchange of water source

Action Item

Preference to human and livestock use for Klamath County

Four Alternatives

1. **Adopt draft temporary rules (Attachment 5)**
2. **Hold teleconference meeting in April**
3. **Find temporary rules are not needed**
4. **Direct staff to explore other options**

Recommendation

The Director Recommends alternative 1; Adopt draft temporary rules OAR 690, Division 22