







Vinited States Department of Agriculture NRCS Natural Resources Conservation Service

### **Snowpack Change from April 1**





Aug 01 Sep 01



John Day



#### Grande Ronde/Powder/Burnt



#### **Owyhee/Malheur**





OREGON SURFACE WATER SUPPLY INDEX (SWSI)





OREGON SURFACE WATER SUPPLY INDEX (SWSI)





----- Without Upper Klamath Lake storage

**O**NRCS

Natural Resources Conservation Service



#### Comparison of Klamath SWSI (with and without UKL Storage) for the Past 16 Water Years



### Spring and Summer Streamflow Forecasts as of April 1, 2016



### April thru September Streamflow Forecasts:

• Generally near normal to above normal statewide



#### SUMMARY OF STREAMFLOW FORECASTS for WY2016

	% of AVERAGE of APR-SEPT FORECASTS					
	IN THE BASIN					
BASIN	1-Jan	1-Feb	1-Mar	1-Apr		
OWYHEE AND MALHEUR BASINS	129	141	104	96		
GRANDE RONDE, POWDER, BURNT AND IMNAHA BASINS	111	110	104	111		
UMATILLA, WALLA WALLA AND WILLOW BASINS	118	107	98	104		
JOHN DAY BASIN	122	123	102	104		
UPPER DESCHUTES AND CROOKED BASINS	125	133	116	116		
HOOD, SANDY AND LOWER DESCHUTES BASINS	111	102	99	102		
WILLAMETTE BASIN	114	108	100	103		
ROGUE AND UMPQUA BASINS	121	125	106	121		
KLAMATH BASIN	110	108	84	89		
LAKE COUNTY AND GOOSE LAKE BASINS	115	131	100	102		
HARNEY BASIN	130	152	109	91		







#### Billie Creek, 5280' elevation

**2016:** As of April 1<sup>st</sup>, snowpack at this site is at 123% of median. Fall precipitation was able to satiate the soil moisture deficit left by last year's drought and raise soil moisture to normal levels by November 18<sup>th</sup> (before the snowpack was deep enough to impede water infiltrating the soil surface). Since then soil moisture has been exhibiting normal patterns for this site.



Billie Creek SNOTEL site sits on volcanic soils formed from residuum weathered from volcanic rock and/or tephra. The soil series is Oatman, which consists of very deep, moderately well drained soils that formed in glacial deposits. The site has a slope of 5 percent. Mean annual precipitation is approximately 53 inches, with roughly 43% falling as snow. The overstory vegetation consists of white fir, Shasta red fir, western white pine, ponderosa pine; understory vegetation is mountain brome, western prince's pine and sedge. Soil moisture probes have been installed here since 2004. The data used in this product is collected at depths of 2, 4, and 20 inches. The silt equation is currently being applied to all probes.

### Thank you!

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# **OBSERVED TEMPERATURES**

NOAA NORTHWEST RIVER FORECAST CENTER



# OBSERVED TEMPERATURES

#### NOAA NORTHWEST RIVER FORECAST CENTER

	April 1 -11	Oct	Nov	Dec	Jan	Feb	Mar
Malheur-Owyhee-Boise River Basins	6.4	5.4	-3.5	-0.1	0.6	4.1	1.6
Grande Ronde River Basin	7.0	5.6	-2.5	1.3	2.2	5.5	1.4
Middle Columbia Lower Tribs	7.1	5.1	-3.0	0.4	0.7	4.7	1.1
Coastal River Basins	6.3	4.9	-1.5	1.7	2.5	4.7	1.6
Clackamas River Basin	5.9	4.3	-2.7	0.9	1.0	4.2	1.1
Willamette River Basin abv Harrisburg	5.8	4.2	-2.4	1.0	1.0	4.0	0.9
Santiam River Basin	6.1	4.6	-2.2	1.1	1.1	4.2	1.0
Coquille River Basin	6.1	4.6	-2.2	1.2	1.5	4.2	1.5
Umpqua River Basin	6.6	4.9	-2.2	0.7	1.4	4.4	1.4
Rogue-Illinois River Basins	6.6	4.7	-2.4	0.5	1.2	4.1	1.2

### **OBSERVED PRECIPITATION**

NOAA NORTHWEST RIVER FORECAST CENTER & WESTERN REGIONAL CLIMATE CENTER

#### WATER YEAR PERCENT OF AVERAGE



#### 6 MONTH STANDARDIZED PRECIPITATION INDEX THROUGH THE END OF MARCH



# **OBSERVED PRECIPITATION**

NOAA NORTHWEST RIVER FORECAST CENTER & WESTERN REGIONAL CLIMATE CENTER

#### MARCH



#### APRIL 1 - 11



### WATER SUPPLY FORECASTS

#### NOAA NORTHWEST RFC & CALIFORNIA-NEVADA RFC



### WATER SUPPLY FORECASTS

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### WATER SUPPLY FORECASTS

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### **RESERVOIRS - WEST**





# TOTAL PRECIP NEXT 7 DAYS

#### NOAA NWS WEATHER PREDICTION CENTER



1 - 2 INCHES IN SOUTHWEST OREGON
LESS THAN 1 INCH FOR REST OF STATE
MOST OF THIS OCCURS IN FIRST 2 DAYS, WITH MAINLY DRY WEATHER THEREAFTER.

#### SOURCE: WWW.WCP.NCEP.NOAA.GOV

# 6 TO 10 DAY OUTLOOKS

NOAA CLIMATE PREDICTION CENTER



# 8 TO 14 DAY OUTLOOKS

NOAA CLIMATE PREDICTION CENTER



# MAY-JUNE-JULY OUTLOOKS

NOAA CLIMATE PREDICTION CENTER



## SUMMER TEMPERATURES

#### NOAA CLIMATE PREDICTION CENTER

#### JULY – AUGUST – SEPTEMBER



# Streamflow Conditions

April 13, 2016 Ken Stahr Oregon-Water Resources Department





























# Thank You