United States Department of Agriculture

Natural Resources Conservation Service

Oregon Water Supply Outlook Report

March 1, 2023

Julianne Robinson and Andrew Neary, NRCS Redmond, prepare a snow core sample at the New Dutchman snow course. Snowpack at the site is 83% of median as of March 1st.

Photo taken by Anna Burton, NRCS Engineer (February 23, 2023)

Contents

Contact for Report

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Conditions Overview

Summary

Climate conditions in February show a growing contrast between snowpack and water-year precipitation across much of the state. Snowpack is generally near normal, with southeastern basins moderately above normal. In contrast, water-year precipitation is generally below normal except in southeastern Oregon where basins are near to slightly above normal. This contrast, notable along the Cascades and in north-eastern Oregon, is partly attributed to a relatively dry January in these areas and colder-than-normal temperatures starting early in November and persisting through February such that most precipitation has fallen and is remaining as snow. This is also contributing to well-below normal streamflow across much of the state as of March 1. Streamflow forecasts for March 1 remain relatively stable since February 1, with notably moderate declines in the Upper Deschutes Basin and the Middle Snake-Powder Basin.

With the historic peak of snow accumulation occurring between mid-March and early April, this month leading into early April will impact both late spring/summer water supplies and potential drought conditions in 2023.

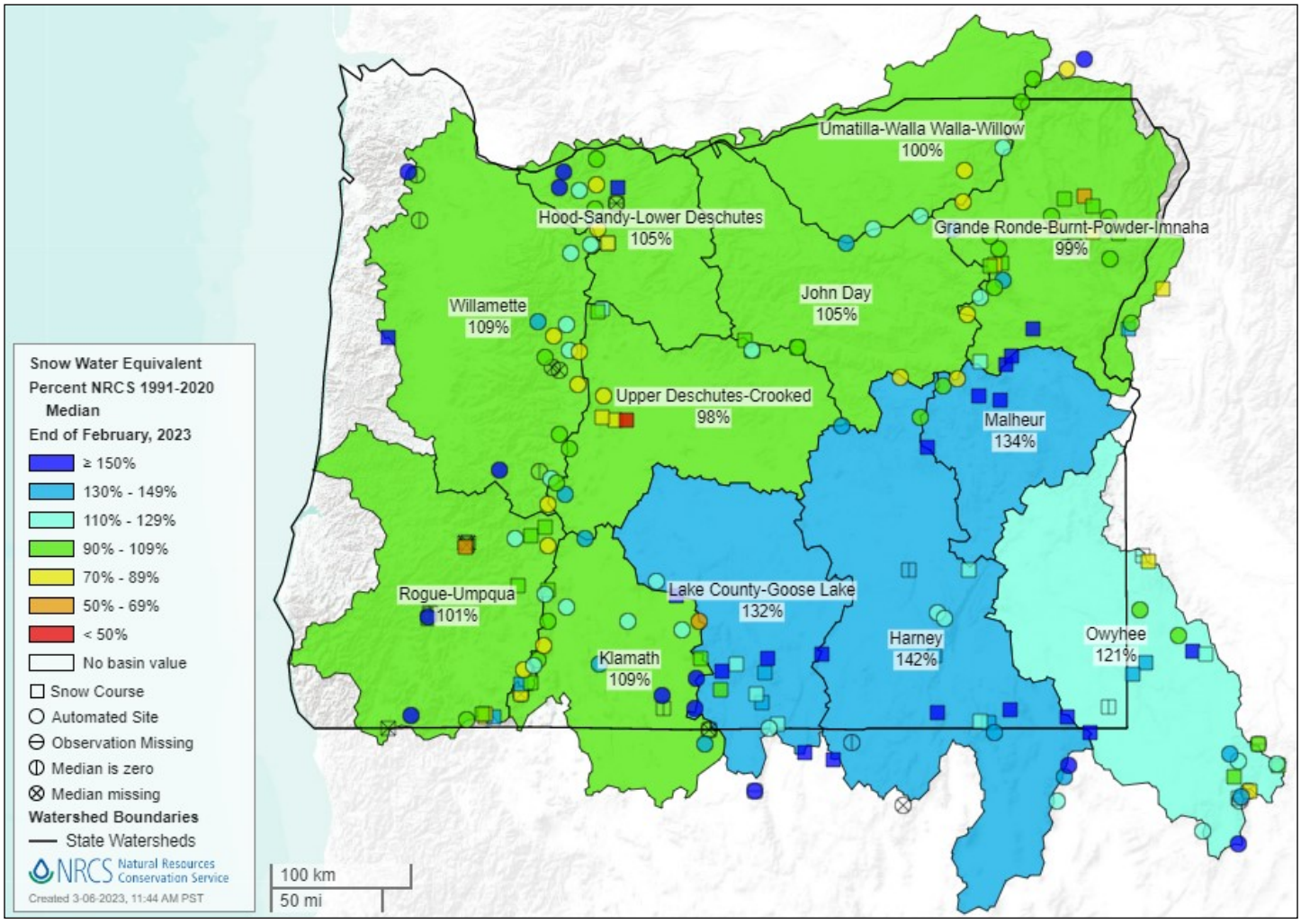
**Note that basin conditions described in this report include data from stations within the SNOTEL ,SNOLITE, snow course and aerial marker network, and/or co-op weather stations.*

Austin Patch, OWRD Assistant Watermaster, takes a snow-core sample at the Ski Bowl Road snow course in southern Oregon. Snowpack at the site is 88% of median as of March 1st.
Photo taken by Shavon Haynes, Oregon Water Resources Department (February 27th, 2023)

Snowpack

Snowpack across the state is near to moderately above normal. Substantial storm impacts in February provided relief to snowpack in the Cascades and northeastern Oregon, where snow accumulation declined in January. Several sites near or below 4,000 ft in the Cascades have exceeded normal peak snow accumulation, which is near the normal timing for peak snow accumulation at these elevations.

Central and southern Oregon received minimal to moderate storm impacts, with cold temperatures in part maintaining near to above normal snowpack at most sites. Basins in southeastern Oregon have already exceeded normal peak snowpack accumulation, occurring near or slightly before normal peak snow accumulation in these basins.

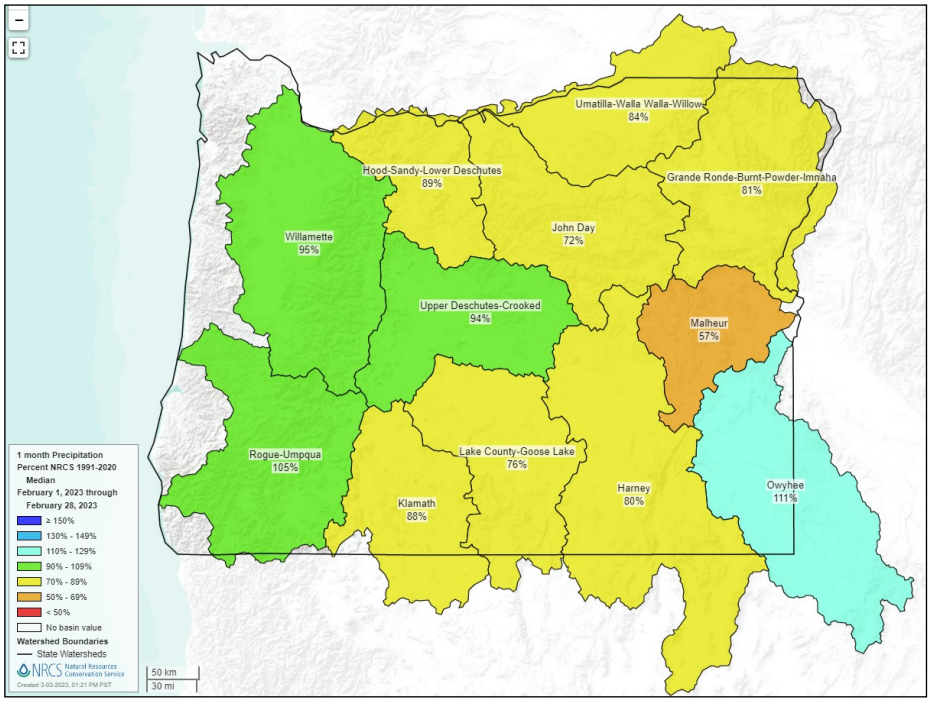


Basin snowpack (% median) as of March 1st.

Precipitation

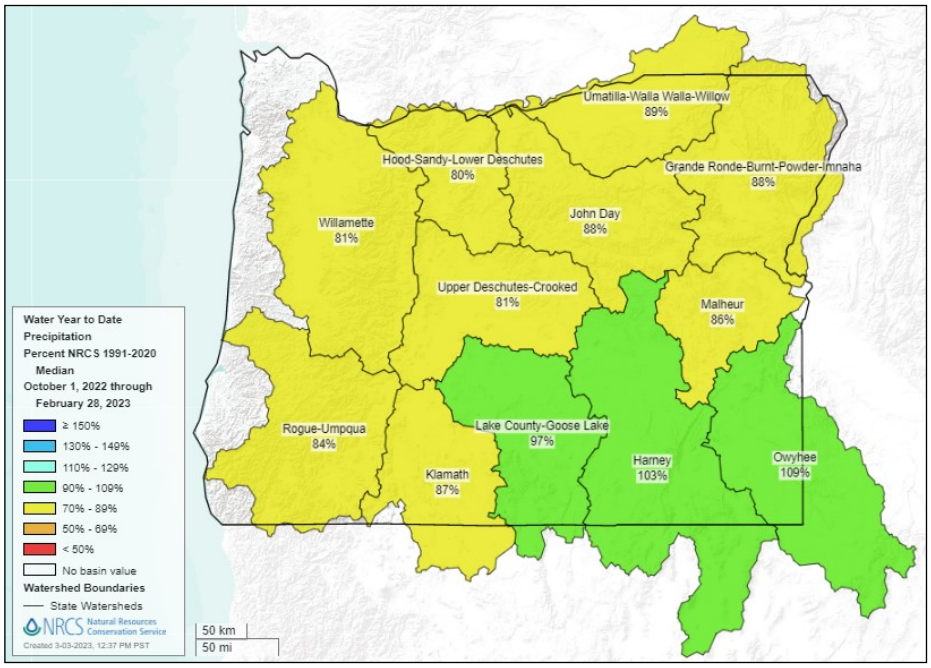
Monthly precipitation was mostly near to below normal across the state, except for the Owyhee with slightly above normal precipitation. Precipitation deficits across the Cascades generally remain unchanged since February 1, while deficits have increased for basins in central and northeastern Oregon. Water-year precipitation is below normal for these regions. In southeastern Oregon, basins are still near to slightly above normal for water-year precipitation despite a modest decline in % normal since February 1.

Monthly



Basin monthly precipitation (% median) as of March 1st

Water Year

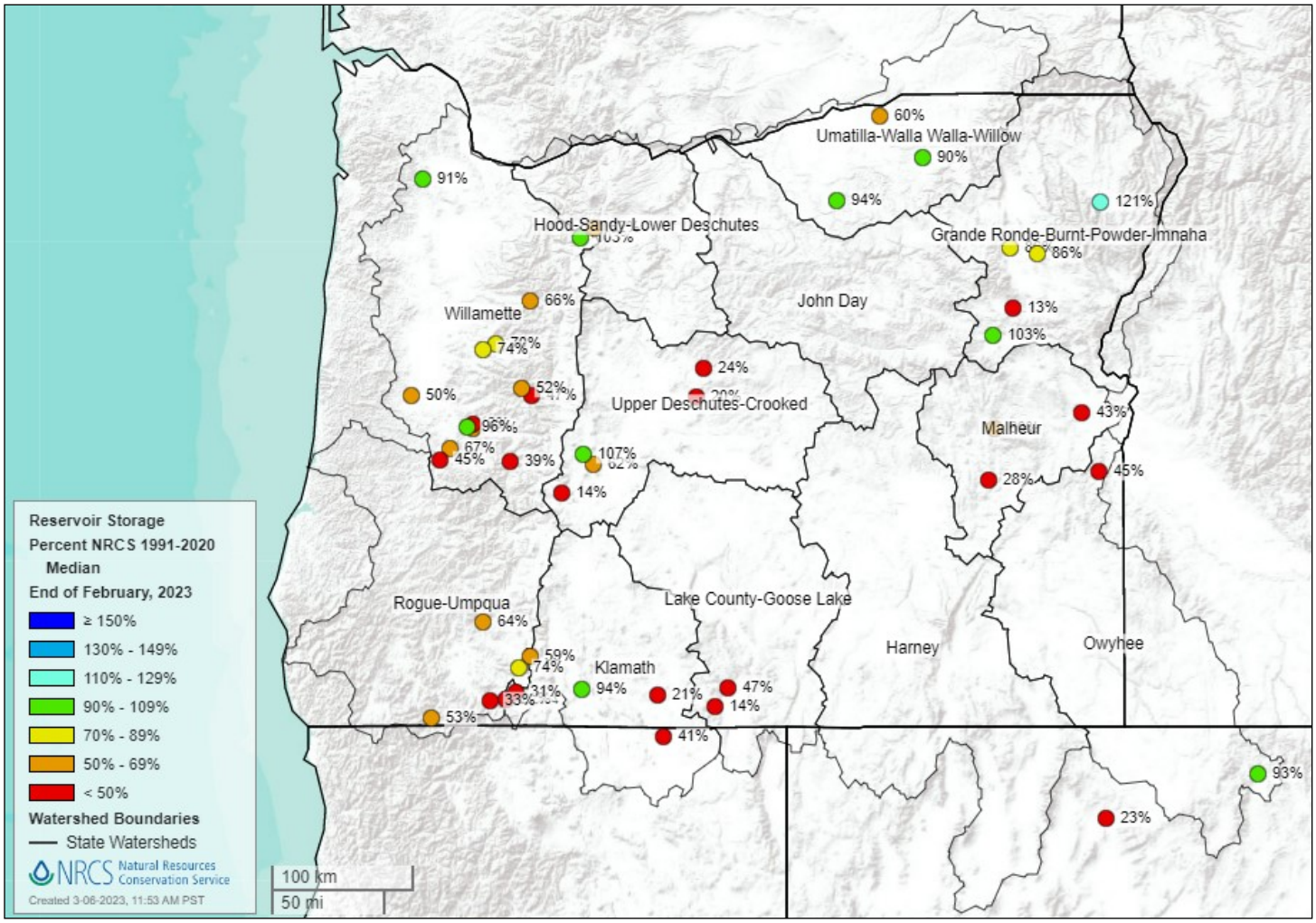


Basin water-year precipitation (% median) as of March 1st

Reservoirs

Reservoir storage volumes across the state are mostly below to well-below normal, with a few reservoirs storing volumes near normal. Several reservoirs east of the Cascade crest are storing volumes below 30%.

Reservoir operators control for a variety of factors when choosing to store or release water, including flooding, irrigation, fisheries, and other water needs. These management needs may impact % normal values for a reservoir.



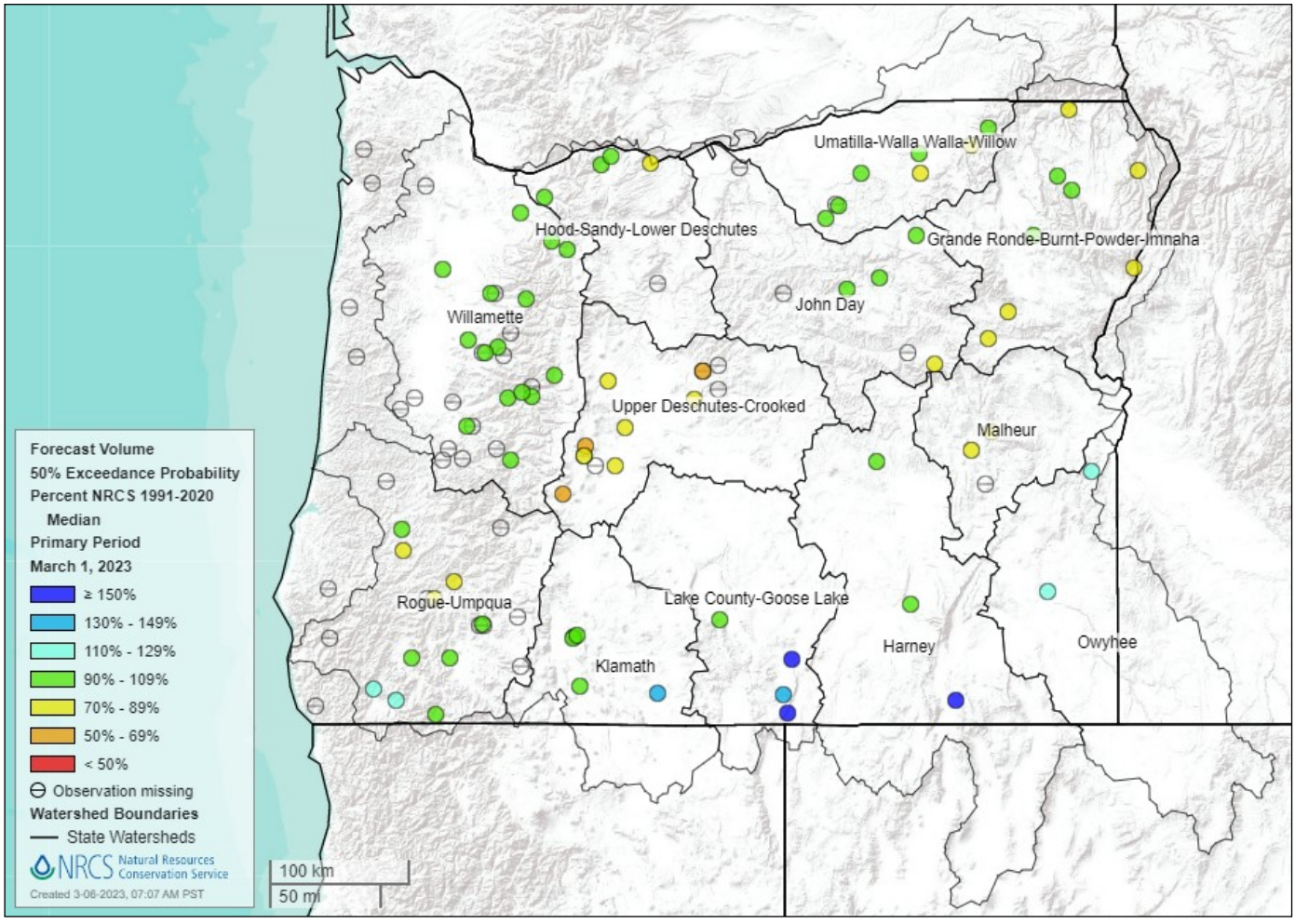
Reservoir storage (% median) as of March 1st.

Streamflow

Volumetric streamflow across the state declined substantially in many areas, with streamflow at several stream gage sites well-below normal and most below 45% of normal. This is in part due to colder than normal winter temperatures and a higher proportion of precipitation falling and remaining as snow, such that less water than normal is available for runoff.

Water supply forecasts throughout the state have either slightly declined or remain little changed since February 1. Streamflow forecasts west of the Cascade crest are mostly near normal, except for slightly below normal forecasts for the South Umpqua Basin. In southern Oregon east of the Cascade crest, streamflow forecasts range from near to well-above normal. Conversely, streamflow forecasts for the Crooked River and Upper Deschutes Basins are below normal, partly reflective of low antecedent stream-flow. In northeastern Oregon and Malheur Basin, forecasts range from near to below normal.

View the map for February observed streamflow **here.**



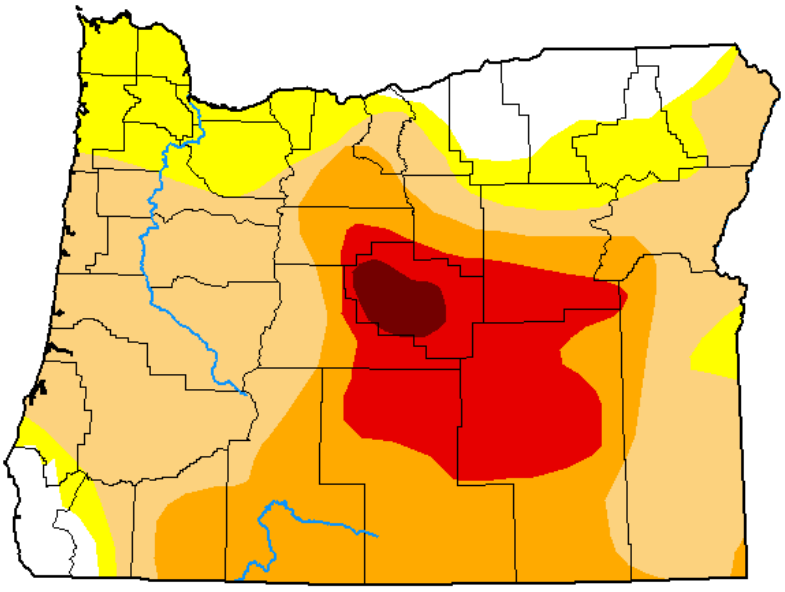
Streamflow forecast (% median) for the primary period as of March 1st.

Drought

Drought has expanded in some areas of the state since early February, with nearly 77% of the state in some category of drought (D1-D4) and nearly 14% of the state in extreme to exceptional drought (D3-D4). Moderate drought (D2) epxanded across much of the Willamette Valley and Coastal Range, while abnormally dry conditions expanded in the northwest corner of the state.

U.S. Drought Monitor

Oregon



February 28, 2023

(Released Thursday, Mar. 2, 2023)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	7.93	92.07	77.18	38.84	14.48	1.40
Last Week *02-21-2023*	7.93	92.07	77.18	38.84	14.48	1.40
3 Months Ago *11-29-2022*	5.38	94.62	59.76	46.04	26.18	1.40
Start of Calendar Year *01-03-2023*	13.46	86.54	59.75	46.03	26.18	1.40
Start of Water Year *09-27-2022*	0.42	99.58	68.05	52.42	30.73	1.40
One Year Ago *03-01-2022*	4.97	95.03	90.65	77.27	45.61	16.22

Intensity:

- None
- 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. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

Author:

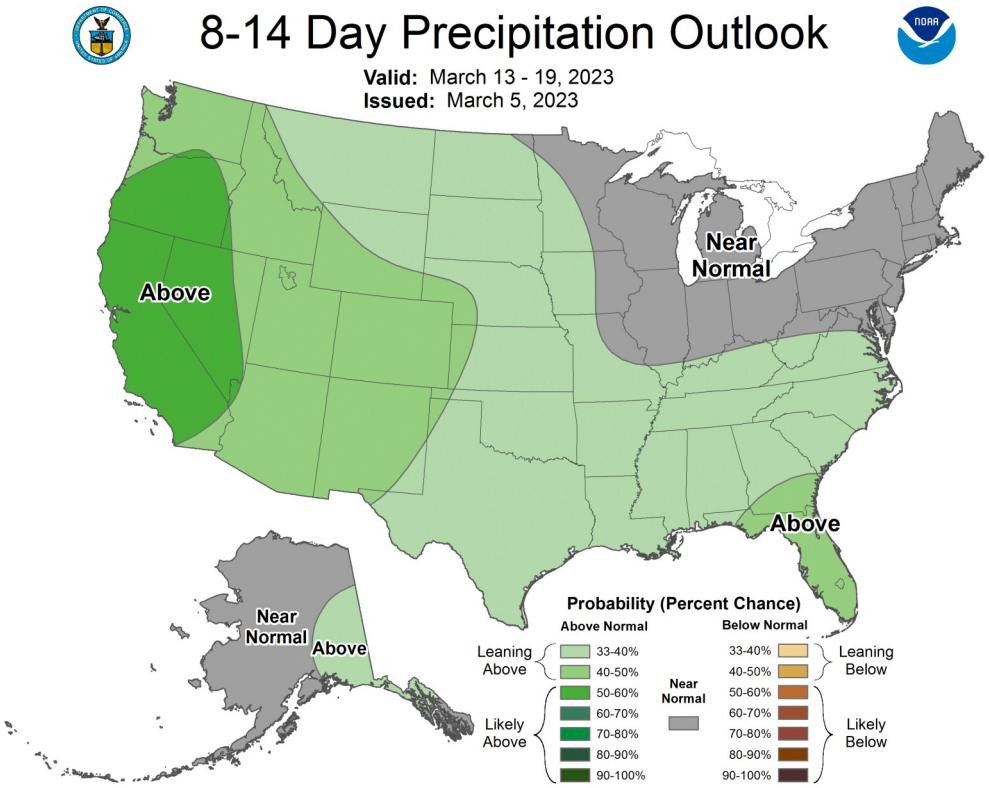
Richard Heim

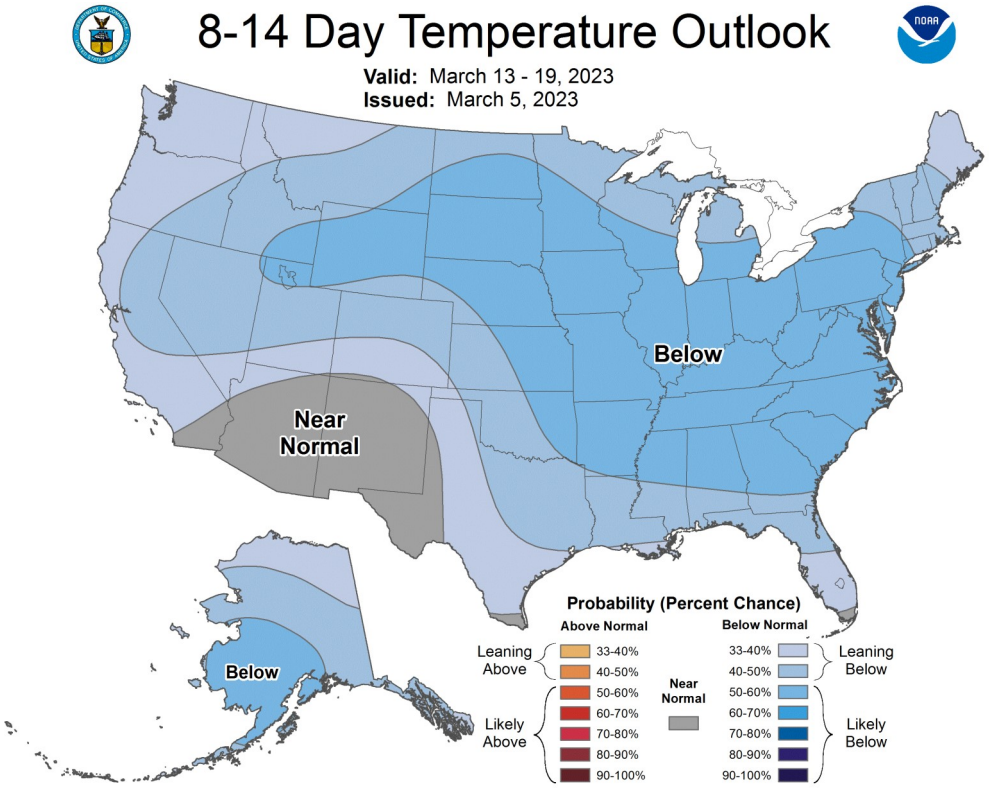
NCEI/NOAA

droughtmonitor.unl.edu

8-14 Day Outlook

The Climate Prediction Center's 8-14 Day Outlook calls for a probability leaning to below normal temperatures and a probability leaning to likely above normal precipitation across the state.

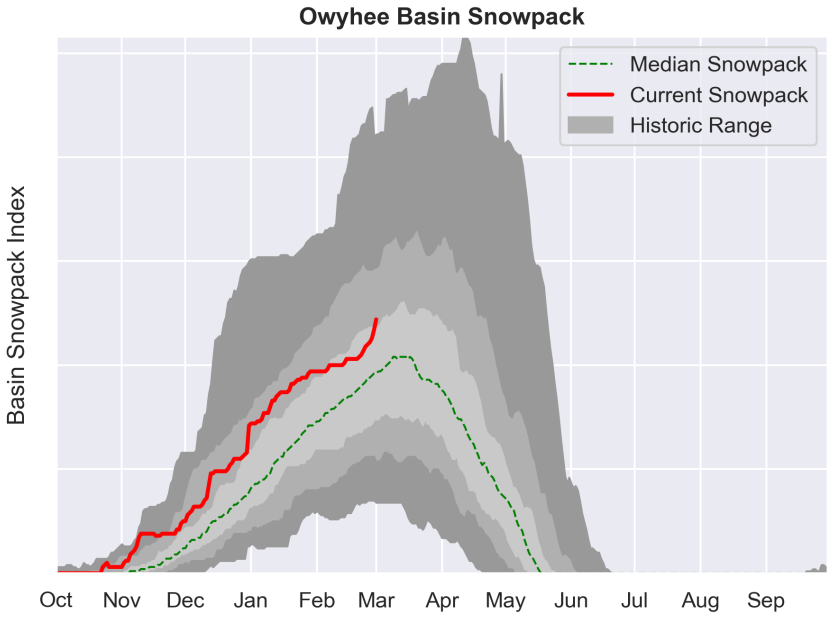




https://www.cpc.ncep.noaa.gov/

Owyhee Basin Summary

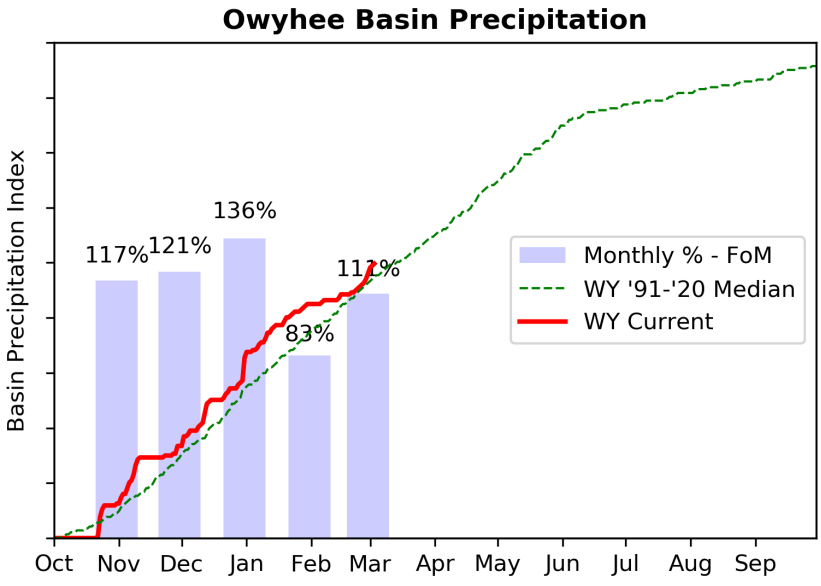
SNOWPACK



► *View snowpack for individual sites by accessing the basin data report* **here**.

As of March 1, the basin snowpack is 121% of median, slightly lower than Feb. 1 when the basin snowpack was 129% of median. Snow accumulation in the basin has already exceeded the normal peak, nearly 1 week before normal peak snow accumulation.

PRECIPITATION



► *View precipitation for individual sites by accessing the basin data report* **here**.

FoM = First of Month

February precipitation is above normal at 111% of median. Precipitation since the beginning of the water year (October 1 - March 1) is 109% of median.

RESERVOIR STORAGE

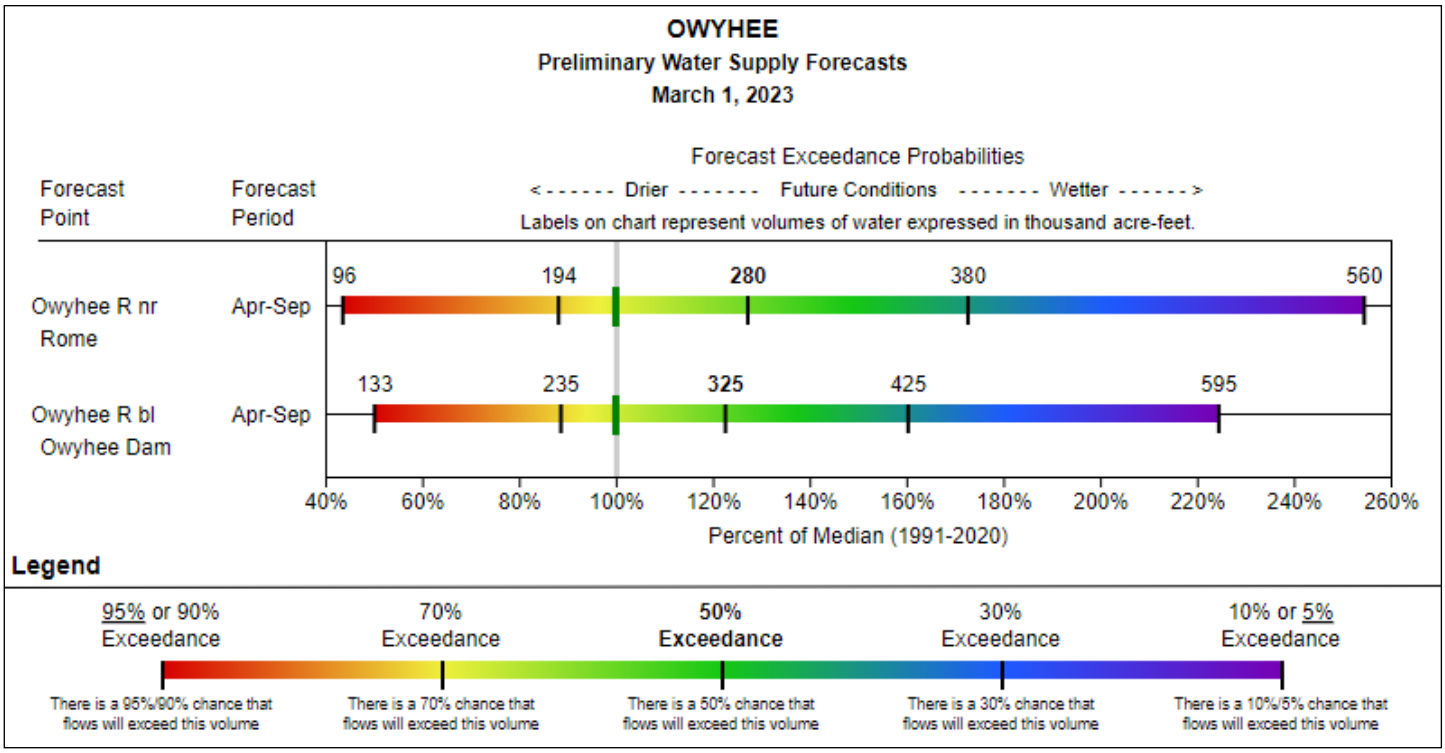
Reservoir storage across the basin is currently below normal. As of March 1, storage at Lake Owyhee Reservoir is 45% of median and 93% of median at Wild Horse Reservoir .

Owyhee	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Median % Capacity	Current % Median	Last Year % Median
Wild Horse Reservoir	29.3	35.5	31.6	71.5	41%	50%	44%	93%	112%
Lake Owyhee	137.2	164.4	304.5	715.0	19%	23%	43%	45%	54%
Basin Index					**21%**	**25%**	**43%**	**50%**	**59%**
# of reservoirs					2	2	2	2	2

STREAMFLOW FORECAST

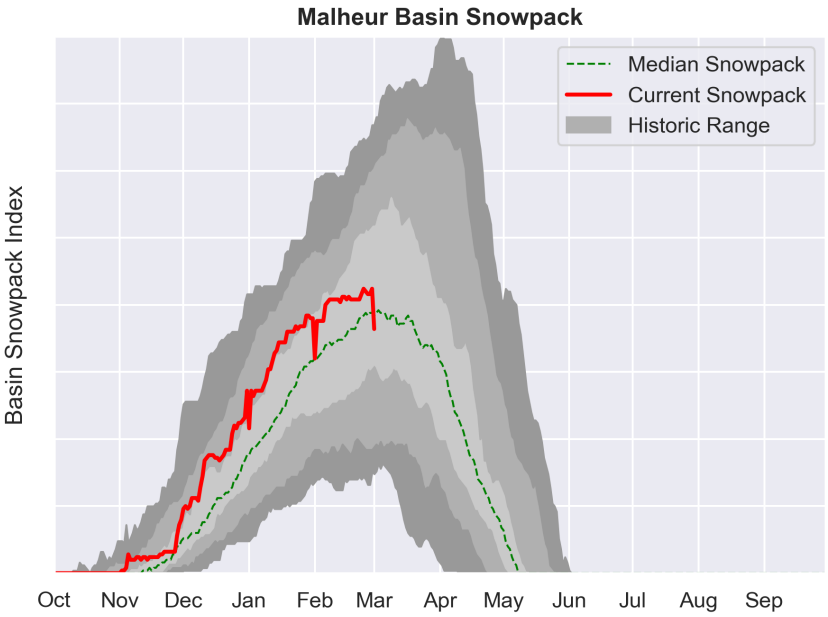
The April through September streamflow forecasts in the basin range from 123% to 127% of median.

For data in tabular format, in addition to non-primary period data, please view the basin data reports **here**.



Malheur Basin Summary

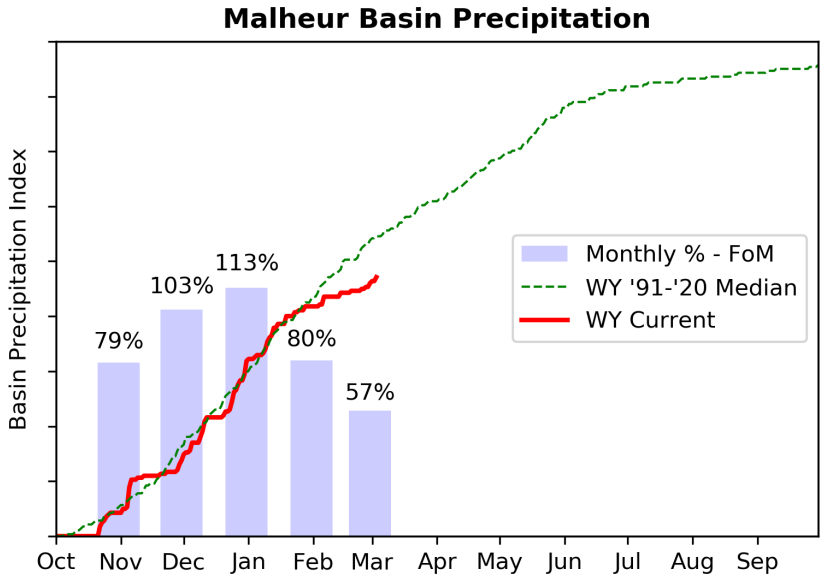
SNOWPACK



► *View snowpack for individual sites by accessing the basin data report* **here**.

As of March 1, the basin snowpack is 134% of median slightly higher than Feb. 1 when the basin snowpack was 128% of median. *Note: absent site data between the 1st of each months results in some chart noise.*

PRECIPITATION



► *View precipitation for individual sites by accessing the basin data report* **here**.

FoM = First of Month

February precipitation is well below normal at 57% of median. Precipitation since the beginning of the water year (October 1 - March 1) is 86% of median.

RESERVOIR STORAGE

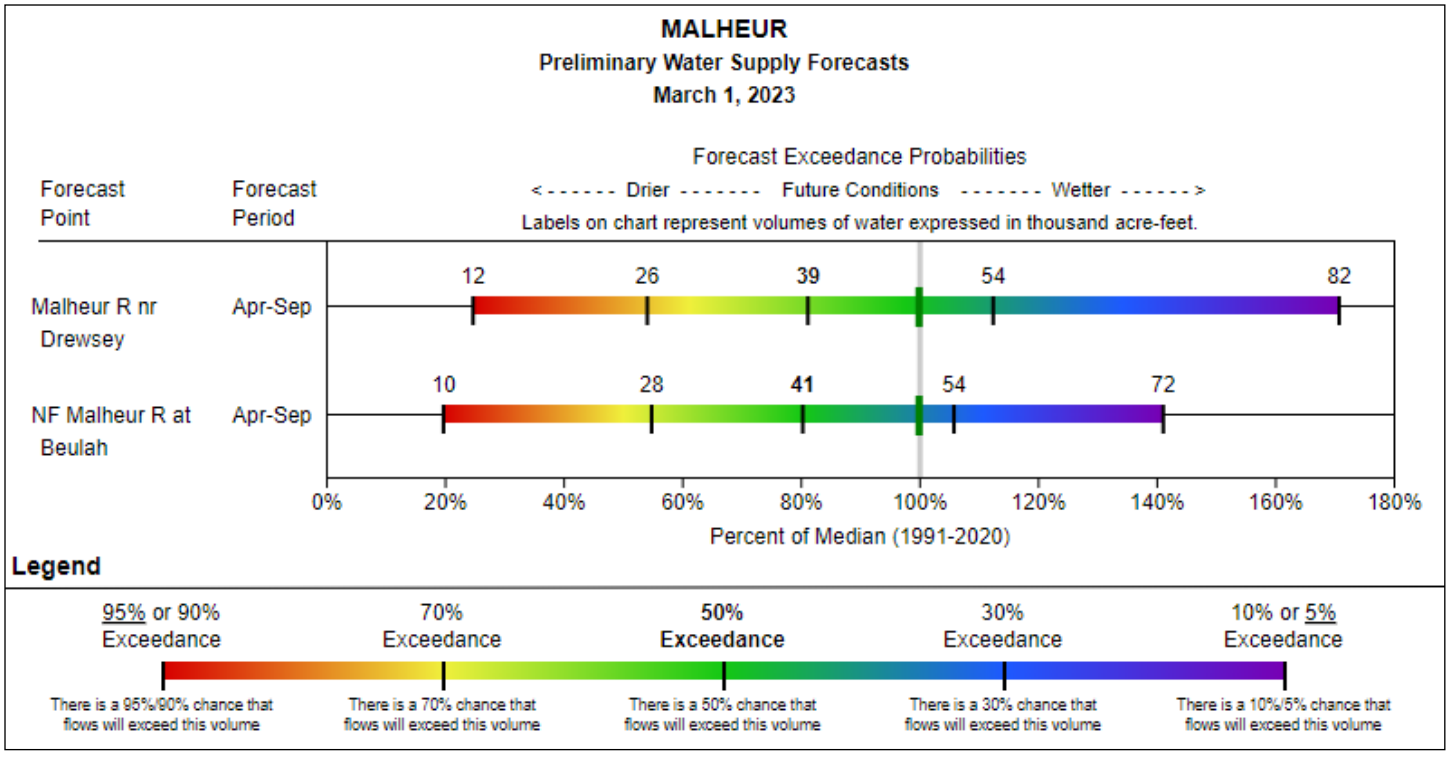
Reservoir storage across the basin is currently below normal. As of March 1, storage ranges from 28% at Warm Springs Reservoir to 60% of median at Beulah Reservoir.

Malheur	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Median % Capacity	Current % Median	Last Year % Median
Warm Springs	14.0	17.5	50.8	169.6	8%	10%	30%	28%	34%
Bully Creek	6.4	9.8	14.9	23.7	27%	41%	63%	43%	66%
Beulah	15.8	15.8	26.2	59.2	27%	27%	44%	60%	60%
Basin Index					**14%**	**17%**	**36%**	**39%**	**47%**
# of reservoirs					3	3	3	3	3

STREAMFLOW FORECAST

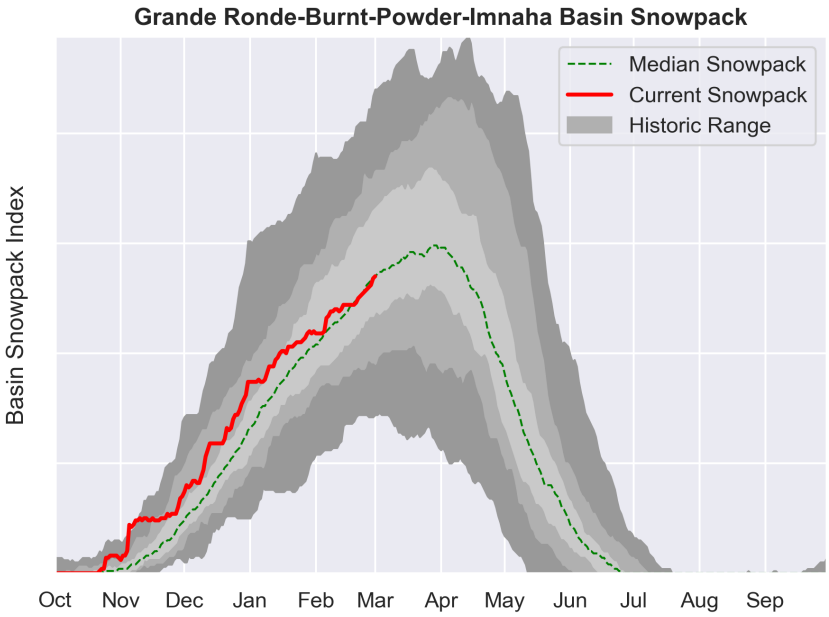
Volumetric streamflow forecasts are below normal and range from 80% to 81% as of March 1.

For data in tabular format, in addition to non-primary period data, please view the basin data reports **here**.



Grand Ronde, Burnt, Powder, Imnaha Basin Summary

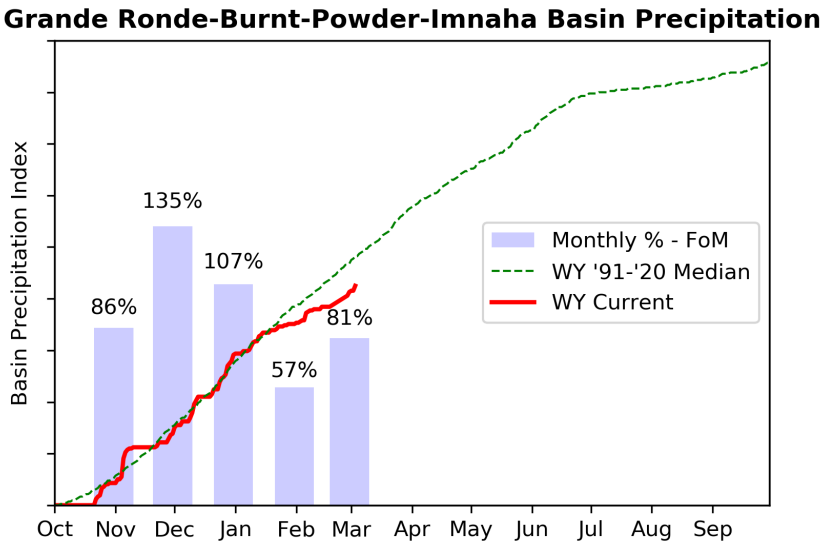
SNOWPACK



► *View snowpack for individual sites by accessing the basin data report* **here**.

As of March 1, the basin snowpack is 99% of median, slightly lower than Feb. 1 when the basin snowpack was 107% of median.

PRECIPITATION



► *View precipitation for individual sites by accessing the basin data report* **here**.

FoM = First of Month

February precipitation is below normal at 81% of median. Precipitation since the beginning of the water year (October 1 - March 1) is 88% of median.

RESERVOIR STORAGE

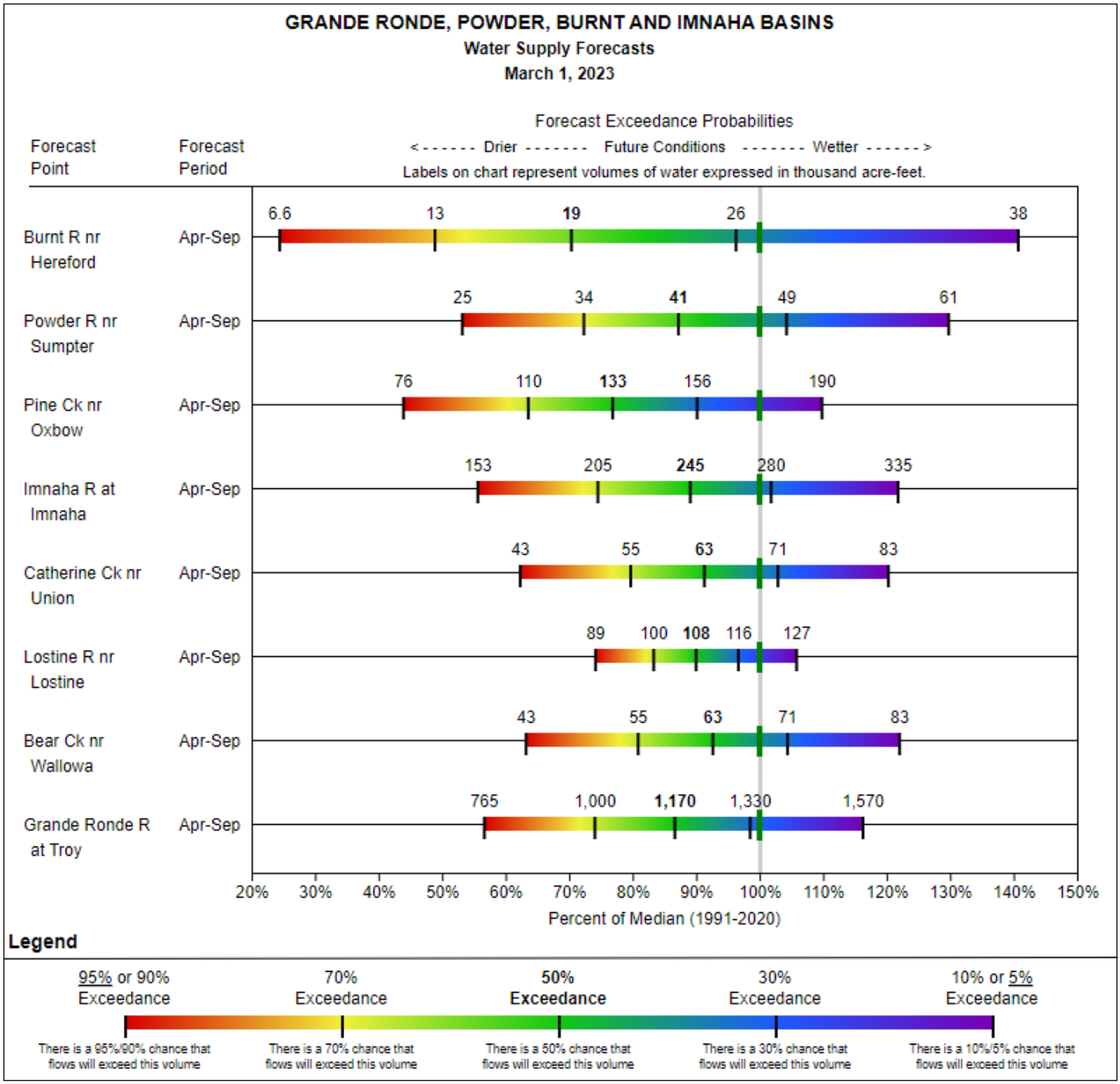
As of March 1, storage at major reservoirs in the basin ranges from 13% of median at Phillips Lake to 121% of median at Wallowa Lake.

Grande Ronde-Burnt-Powder-Imnaha	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Median % Capacity	Current % Median	Last Year % Median
Unity	13.0	8.5	12.6	25.5	51%	33%	49%	103%	68%
Phillips Lake	3.4	2.5	26.7	73.5	5%	3%	36%	13%	9%
Thief Valley	11.7	7.0	13.7	13.3	88%	52%	103%	86%	51%
Wolf Creek	2.7	1.7	3.1	11.1	24%	16%	28%	86%	56%
Brownlee Reservoir	899.5	955.3	1109.0	1420.0	63%	67%	78%	81%	86%
Wallowa Lake	21.4	15.4	17.6	37.5	57%	41%	47%	121%	87%
Basin Index					**60%**	**63%**	**75%**	**80%**	**84%**
# of reservoirs					6	6	6	6	6

STREAMFLOW FORECAST

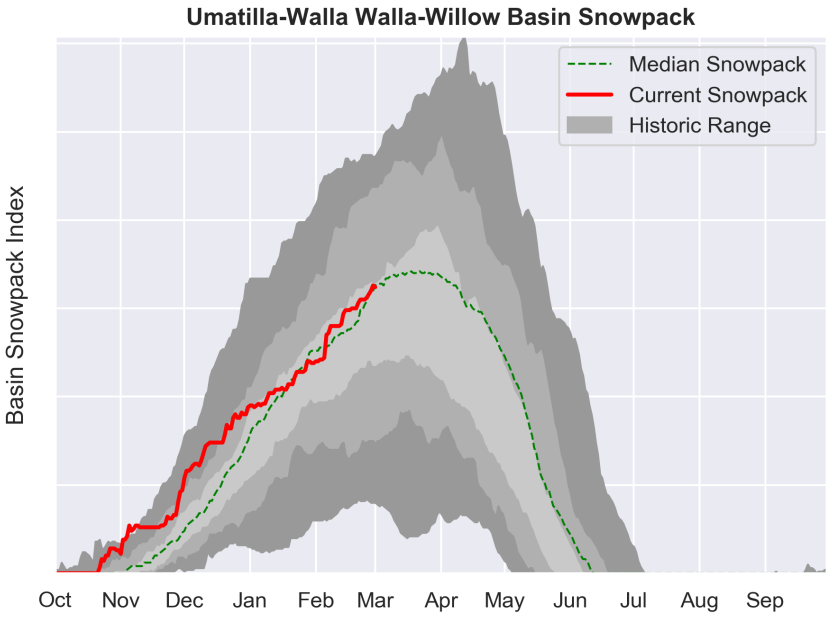
The April through September streamflow forecasts in the basin range from 70% to 93% of median.

For data in tabular format, in addition to non-primary period data, please view the basin data reports **here**.


GRANDE RONDE, POWDER, BURNT AND IMNAHA BASINS
Water Supply Forecasts
March 1, 2023
Forecast Exceedance Probabilities
Forecast Point
Forecast Period
< - - - - - - Drier - - - - - - - Future Conditions - - - - - - - Wetter - - - - - - >
Labels on chart represent volumes of water expressed in thousand acre-feet.
Burnt R nr Hereford
Apr-Sep
6.6
13
19
26
38
Powder R nr Sumpter
Apr-Sep
25
34
41
49
61
Pine Ck nr Oxbow
Apr-Sep
76
110
133
156
190
Imnaha R at Imnaha
Apr-Sep
153
205
245
280
335
Catherine Ck nr Union
Apr-Sep
43
55
63
71
83
Lostine R nr Lostine
Apr-Sep
89
100
108
116
127
Bear Ck nr Wallowa
Apr-Sep
43
55
63
71
83
Grande Ronde R at Troy
Apr-Sep
765
1,000
1,170
1,330
1,570
20%
30%
40%
50%
60%
70%
80%
90%
100%
110%
120%
130%
140%
150%
Percent of Median (1991-2020)
Legend
95% or 90% Exceedance
There is a 95%/90% chance that flows will exceed this volume
70% Exceedance
There is a 70% chance that flows will exceed this volume
50% Exceedance
There is a 50% chance that flows will exceed this volume
30% Exceedance
There is a 30% chance that flows will exceed this volume
10% or 5% Exceedance
There is a 10%/5% chance that flows will exceed this volume

Umatilla, Walla Walla, Willow Basin Summary

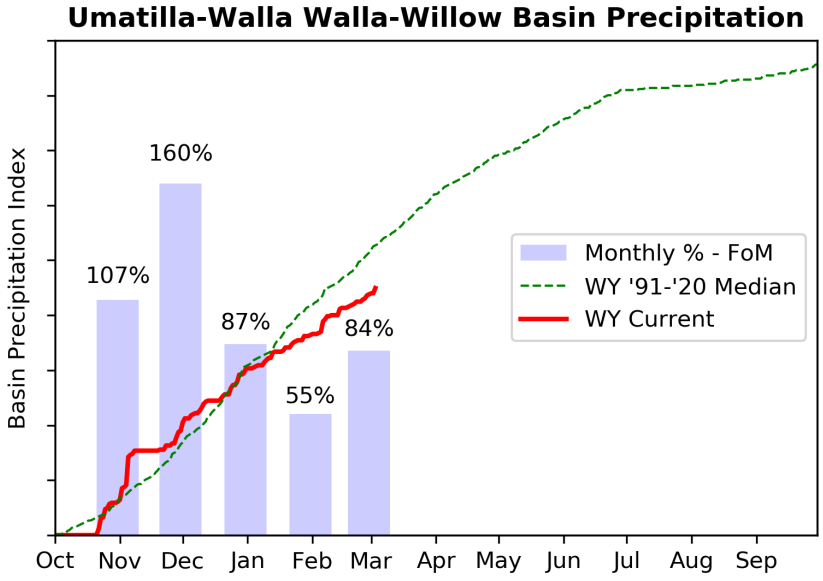
SNOWPACK



► *View snowpack for individual sites by accessing the basin data report* **here**.

As of March 1, the basin snowpack is 100% of median, slightly higher than Feb. 1 when the basin snowpack was 97% of median.

PRECIPITATION



► *View precipitation for individual sites by accessing the basin data report* **here**.

FoM = First of Month

February precipitation is below normal at 84% of median. Precipitation since the beginning of the water year (October 1 - March 1) is 89% of median.

RESERVOIR STORAGE

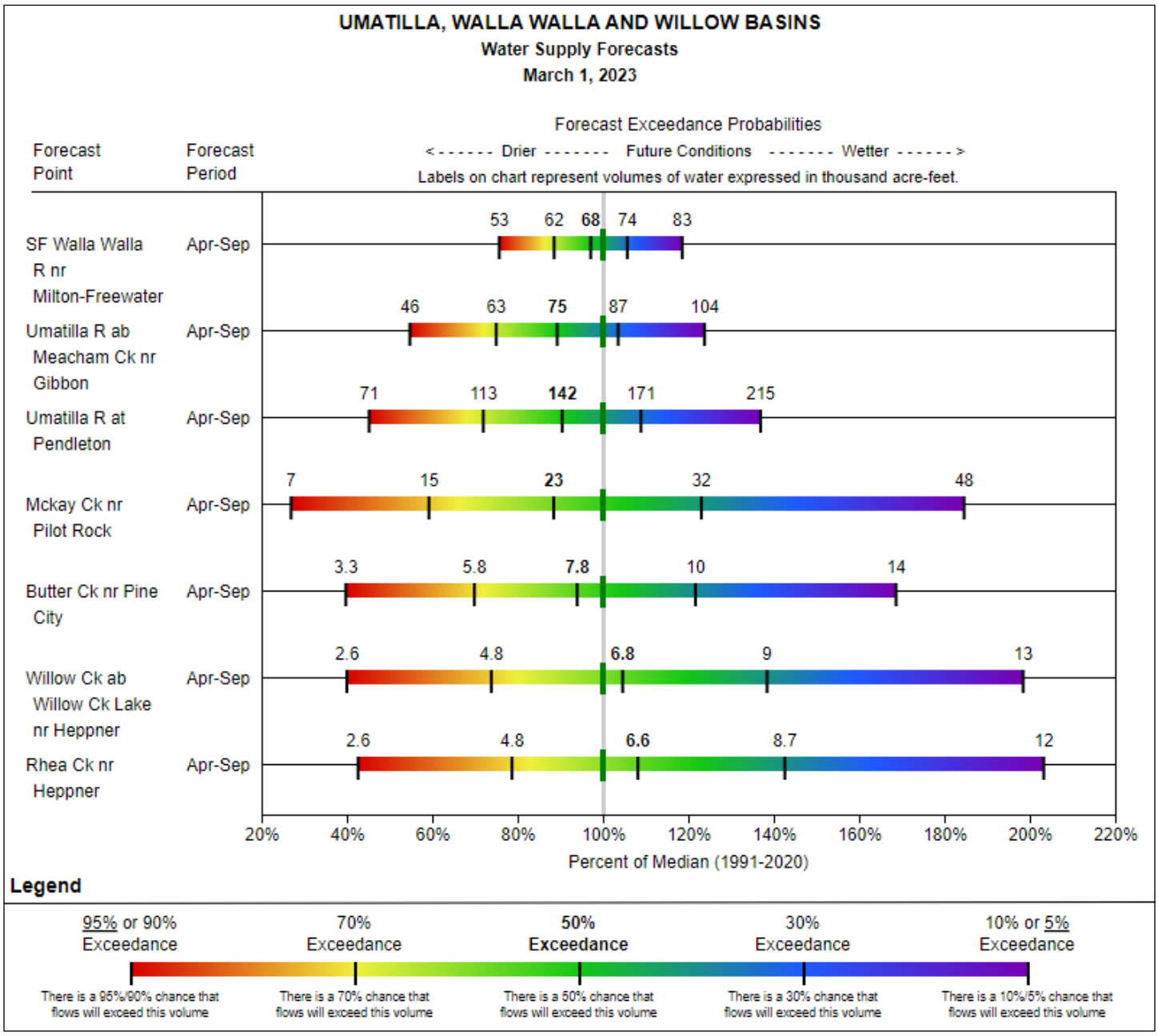
As of March 1, storage at major reservoirs in the basin ranges from 60% of median at Cold Springs Reservoir to 94% of median at Willow Creek Reservoir.

Umatilla-Walla Walla-Willow	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Median % Capacity	Current % Median	Last Year % Median
Cold Springs	10.6	13.5	17.7	38.6	27%	35%	46%	60%	76%
Mckay	33.2	28.4	36.9	71.5	46%	40%	52%	90%	77%
Willow Creek	4.4	4.8	4.7	9.8	45%	50%	48%	94%	103%
Basin Index					**40%**	**39%**	**49%**	**81%**	**79%**
# of reservoirs					3	3	3	3	3

STREAMFLOW FORECAST

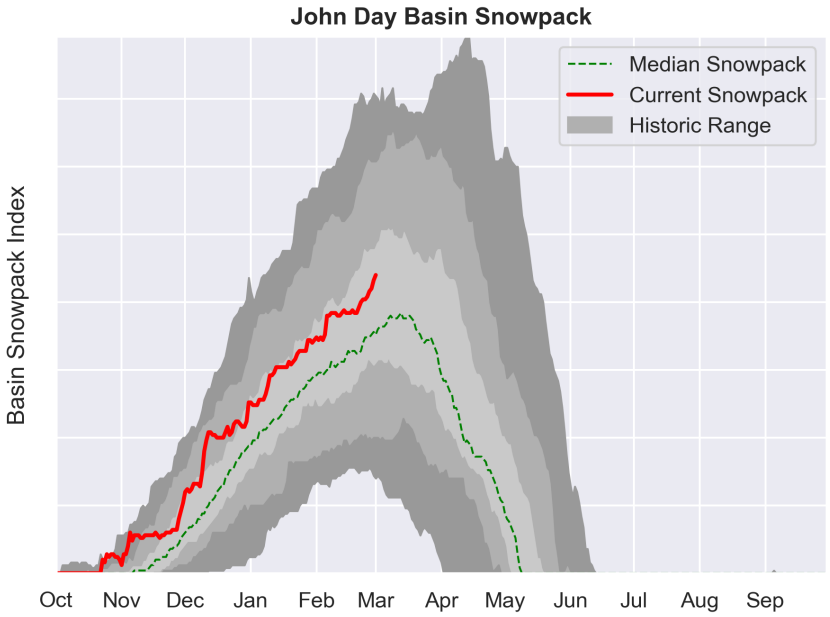
The April through September streamflow forecasts in the basin range from 88% to 108% of median.

For data in tabular format, in addition to non-primary period data, please view the basin data reports **here**.


UMATILLA, WALLA WALLA AND WILLOW BASINS
Water Supply Forecasts
March 1, 2023
Forecast Exceedance Probabilities
Forecast Point
Forecast Period
< ------- Drier ------- Future Conditions ------- Wetter ------- >
Labels on chart represent volumes of water expressed in thousand acre-feet.
SF Walla Walla R nr Milton-Freewater
Apr-Sep
53 62 68 74 83
Umatilla R ab Meacham Ck nr Gibbon
Apr-Sep
46 63 75 87 104
Umatilla R at Pendleton
Apr-Sep
71 113 142 171 215
Mckay Ck nr Pilot Rock
Apr-Sep
7 15 23 32 48
Butter Ck nr Pine City
Apr-Sep
3.3 5.8 7.8 10 14
Willow Ck ab Willow Ck Lake nr Heppner
Apr-Sep
2.6 4.8 6.8 9 13
Rhea Ck nr Heppner
Apr-Sep
2.6 4.8 6.6 8.7 12
20% 40% 60% 80% 100% 120% 140% 160% 180% 200% 220%
Percent of Median (1991-2020)
Legend
95% or 90% Exceedance
There is a 95%/90% chance that flows will exceed this volume
70% Exceedance
There is a 70% chance that flows will exceed this volume
50% Exceedance
There is a 50% chance that flows will exceed this volume
30% Exceedance
There is a 30% chance that flows will exceed this volume
10% or 5% Exceedance
There is a 10%/5% chance that flows will exceed this volume

John Day Basin Summary

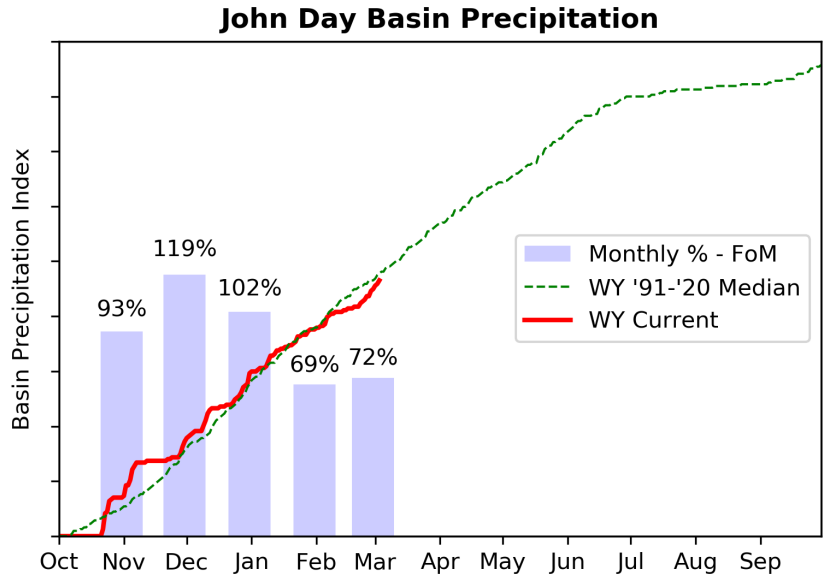
SNOWPACK



► *View snowpack for individual sites by accessing the basin data report* **here**.

As of March 1, the basin snowpack is 105% of median, slightly lower than last month when the basin snowpack was 110% of median. Snow accumulation in the basin has already exceeded the normal peak, near the normal timing for peak snow accumulation.

PRECIPITATION



► *View precipitation for individual sites by accessing the basin data report* **here**.

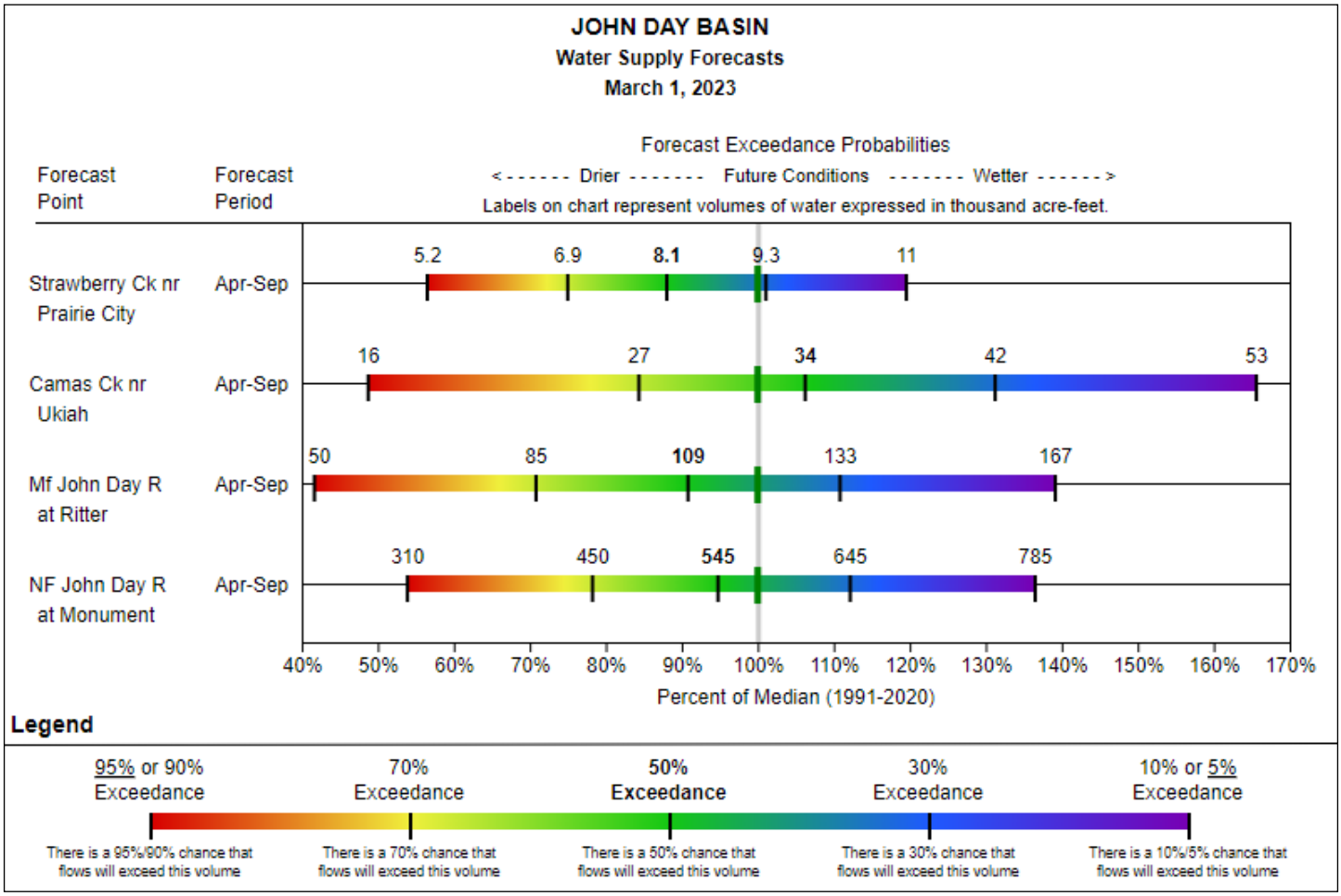
FoM = First of Month

February precipitation is below normal at 72% of median. Precipitation since the beginning of the water year (October 1 - March 1) is 88% of median.

STREAMFLOW FORECAST

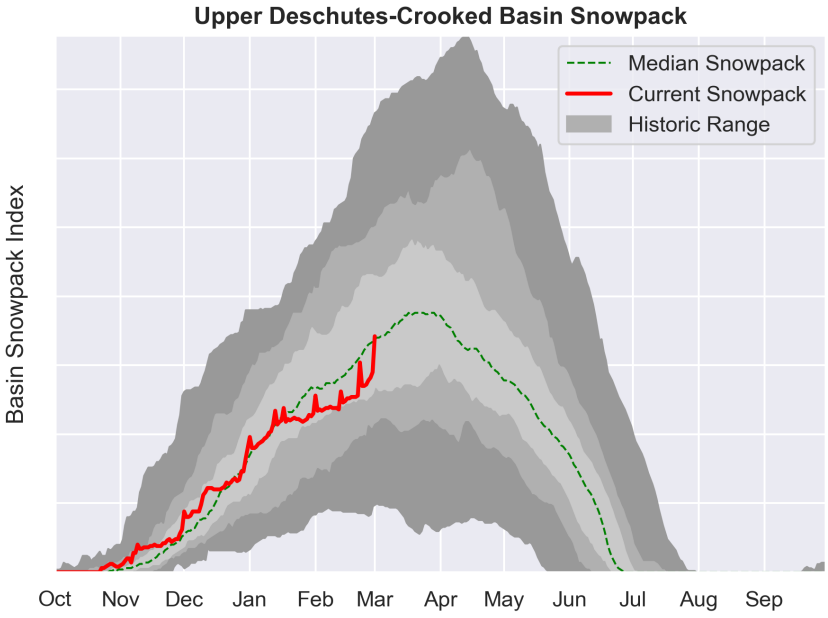
The April through September streamflow forecasts in the basin range from 88% to 106% of median.

For data in tabular format, in addition to non-primary period data, please view the basin data reports **here**.



Upper Deschutes, Crooked Basin Summary

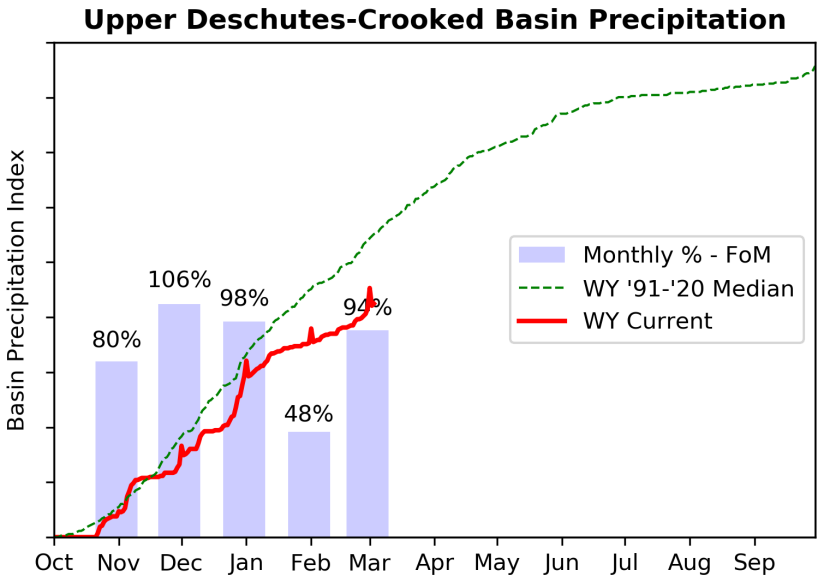
SNOWPACK



► *View snowpack for individual sites by accessing the basin data report* **here**.

As of March 1, the basin snowpack is 98% of median, modestly higher than last month when the basin snowpack was 92% of median. *Note: absent site data between the 1st of each months results in some chart noise.*

PRECIPITATION



► *View precipitation for individual sites by accessing the basin data report* **here**.

FoM = First of Month

February precipitation is below normal at 94% of median. Precipitation since the beginning of the water year (October 1 - March 1) is 81% of median. *Note: absent site data between the 1st of each months results in some chart noise.*

RESERVOIR STORAGE

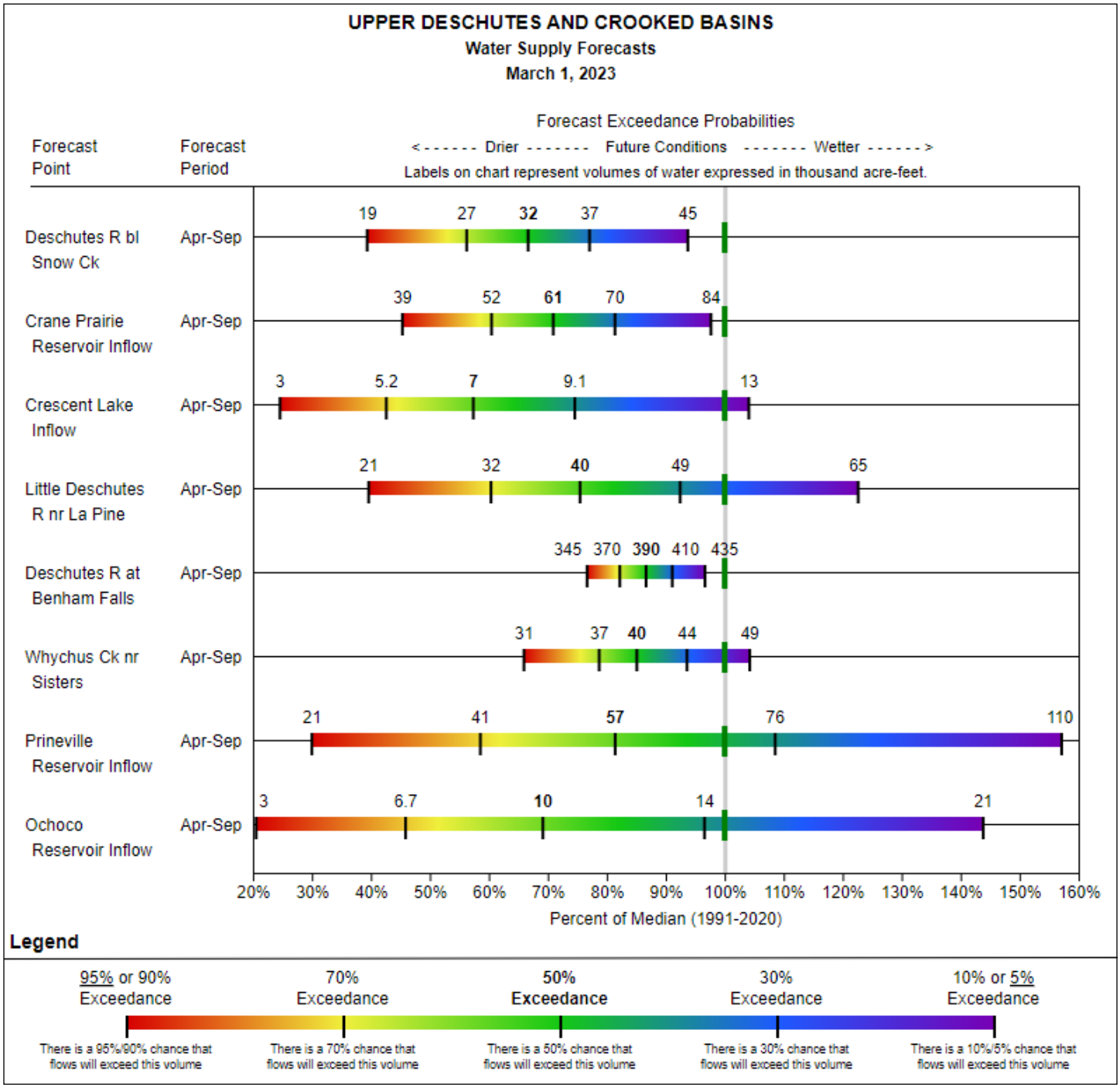
As of March 1, storage at major reservoirs in the basin ranges from 14% of median at Crescent Lake to 107% of median at Crane Prairie Reservoir.

Upper Deschutes-Crooked	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Median % Capacity	Current % Median	Last Year % Median
Crescent Lake	7.8	7.6	54.8	86.9	9%	9%	63%	14%	14%
Ochoco	5.4	4.1	23.1	44.2	12%	9%	52%	24%	18%
Crane Prairie	46.1	45.4	43.2	55.3	83%	82%	78%	107%	105%
Prineville	19.5	28.6	96.2	148.6	13%	19%	65%	20%	30%
Wickiup	115.8	95.8	185.5	200.0	58%	48%	93%	62%	52%
Basin Index					**36%**	**34%**	**75%**	**48%**	**45%**
# of reservoirs					5	5	5	5	5

STREAMFLOW FORECAST

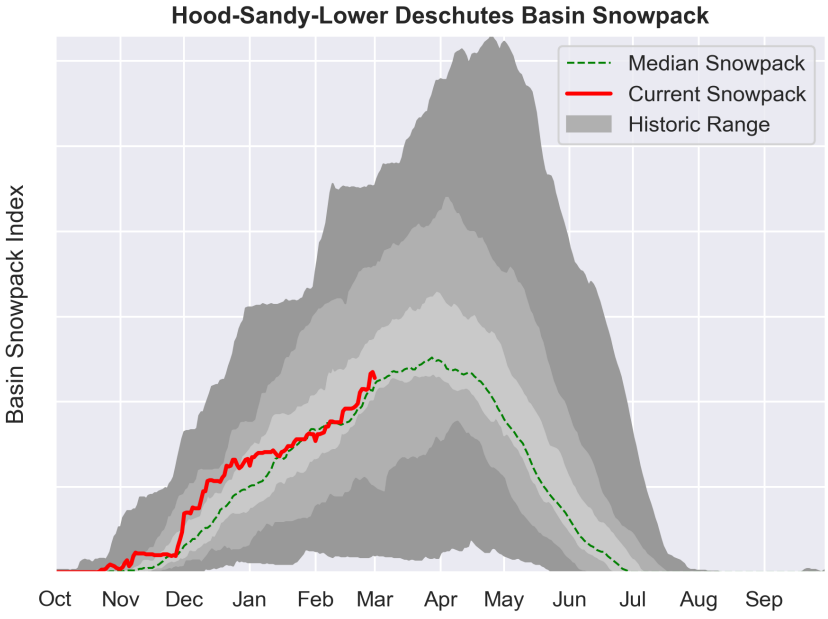
The April through September streamflow forecasts in the basin range from 57% to 87% of median.

For data in tabular format, in addition to non-primary period data, please view the basin data reports **here**.


UPPER DESCHUTES AND CROOKED BASINS
Water Supply Forecasts
March 1, 2023
Forecast Exceedance Probabilities
< - - - - - - Drier - - - - - - - Future Conditions - - - - - - - Wetter - - - - - - >
Labels on chart represent volumes of water expressed in thousand acre-feet.
Forecast Point
Forecast Period
Deschutes R bl Snow Ck Apr-Sep 19 27 32 37 45
Crane Prairie Reservoir Inflow Apr-Sep 39 52 61 70 84
Crescent Lake Inflow Apr-Sep 3 5.2 7 9.1 13
Little Deschutes R nr La Pine Apr-Sep 21 32 40 49 65
Deschutes R at Benham Falls Apr-Sep 345 370 390 410 435
Whychus Ck nr Sisters Apr-Sep 31 37 40 44 49
Prineville Reservoir Inflow Apr-Sep 21 41 57 76 110
Ochoco Reservoir Inflow Apr-Sep 3 6.7 10 14 21
20% 30% 40% 50% 60% 70% 80% 90% 100% 110% 120% 130% 140% 150% 160%
Percent of Median (1991-2020)
Legend
95% or 90% Exceedance
There is a 95%/90% chance that flows will exceed this volume
70% Exceedance
There is a 70% chance that flows will exceed this volume
50% Exceedance
There is a 50% chance that flows will exceed this volume
30% Exceedance
There is a 30% chance that flows will exceed this volume
10% or 5% Exceedance
There is a 10%/5% chance that flows will exceed this volume

Hood, Sandy, Lower Deschutes Basin Summary

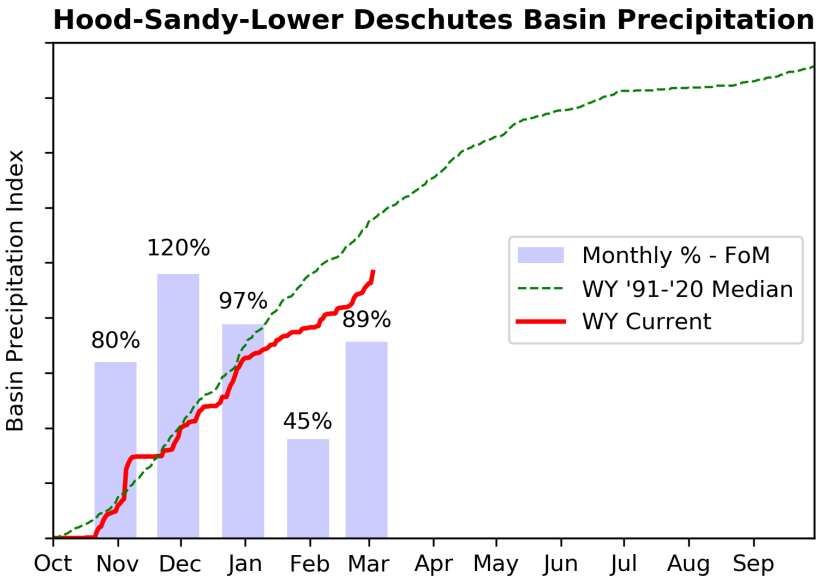
SNOWPACK



► *View snowpack for individual sites by accessing the basin data report* **here**.

As of March 1, the basin snowpack is 105% of median, modestly higher than last month when the basin snowpack was 92% of median.

PRECIPITATION



► *View precipitation for individual sites by accessing the basin data report* **here**.

FoM = First of Month

February precipitation is below normal at 89% of median. Precipitation since the beginning of the water year (October 1 - March 1) is 80% of median.

RESERVOIR STORAGE

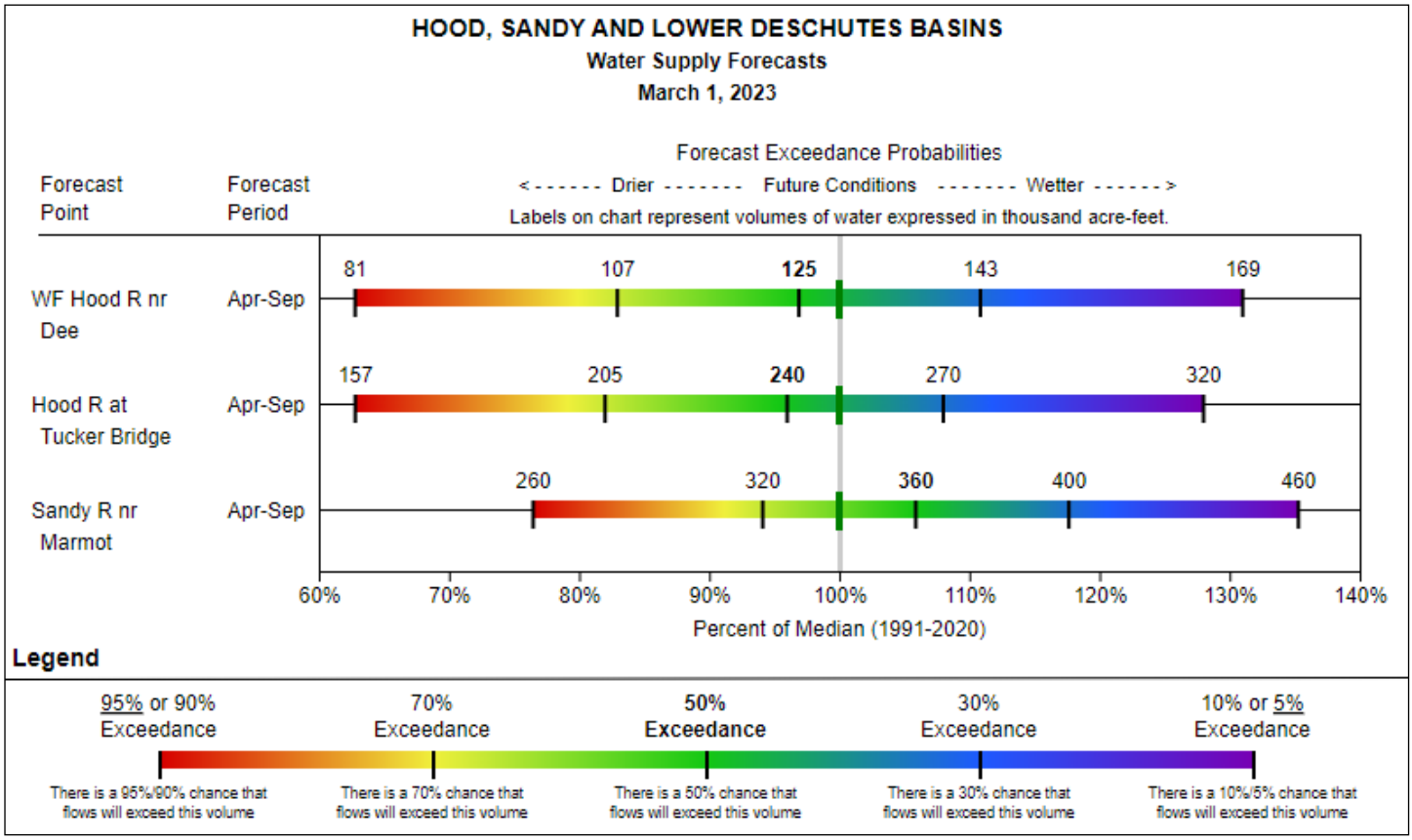
As of March 1, volumetric storage for Clear Lake is below normal at 62% of median.

Hood-Sandy-Lower Deschutes	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Median % Capacity	Current % Median	Last Year % Median
Clear Lake	2.2	1.2	3.5	13.1	17%	9%	27%	62%	33%
Basin Index					**17%**	**9%**	**27%**	**62%**	**33%**
# of reservoirs					1	1	1	1	1

STREAMFLOW FORECAST

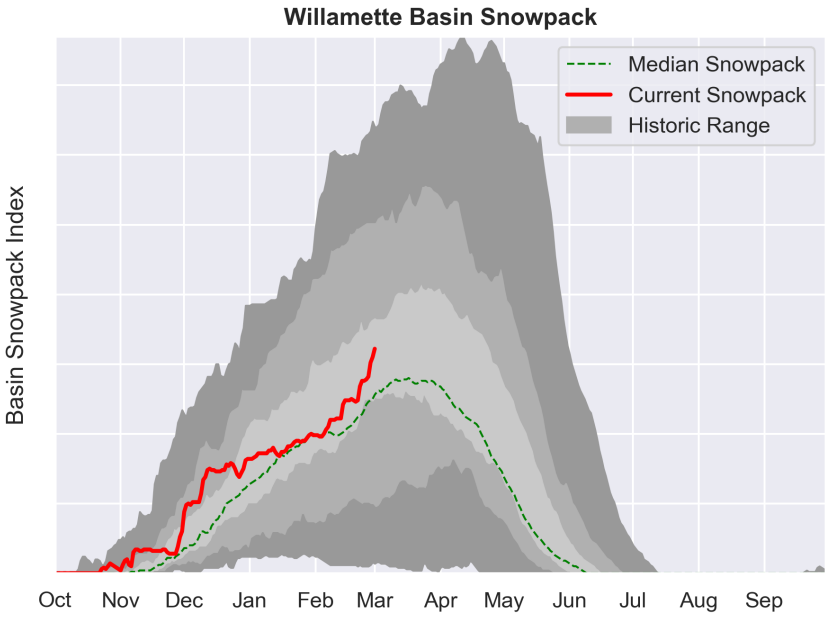
The April through September streamflow forecasts in the basin range from 86% to 106% of median.

For data in tabular format, in addition to non-primary period data, please view the basin data reports **here**.



Willamette Basin Summary

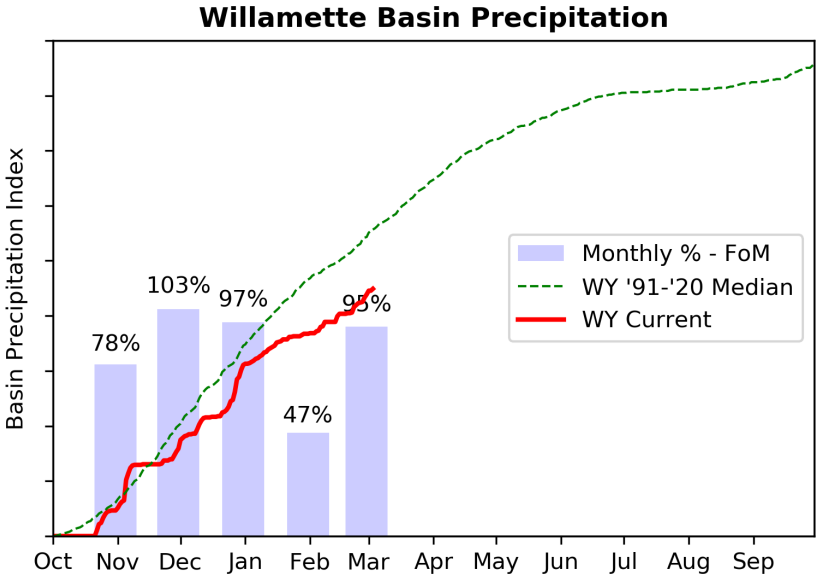
SNOWPACK



► *View snowpack for individual sites by accessing the basin data report* **here**.

As of March 1, the basin snowpack is 109% of median, higher than last month when the basin snowpack was 88% of median. Snow accumulation in the basin has already exceeded the normal peak, nearly 3 weeks before normal peak snow accumulation.

PRECIPITATION



► *View precipitation for individual sites by accessing the basin data report* **here**.

FoM = First of Month

February precipitation is below normal at 95% of median. Precipitation since the beginning of the water year (October 1 - March 1) is 81% of median.

RESERVOIR STORAGE

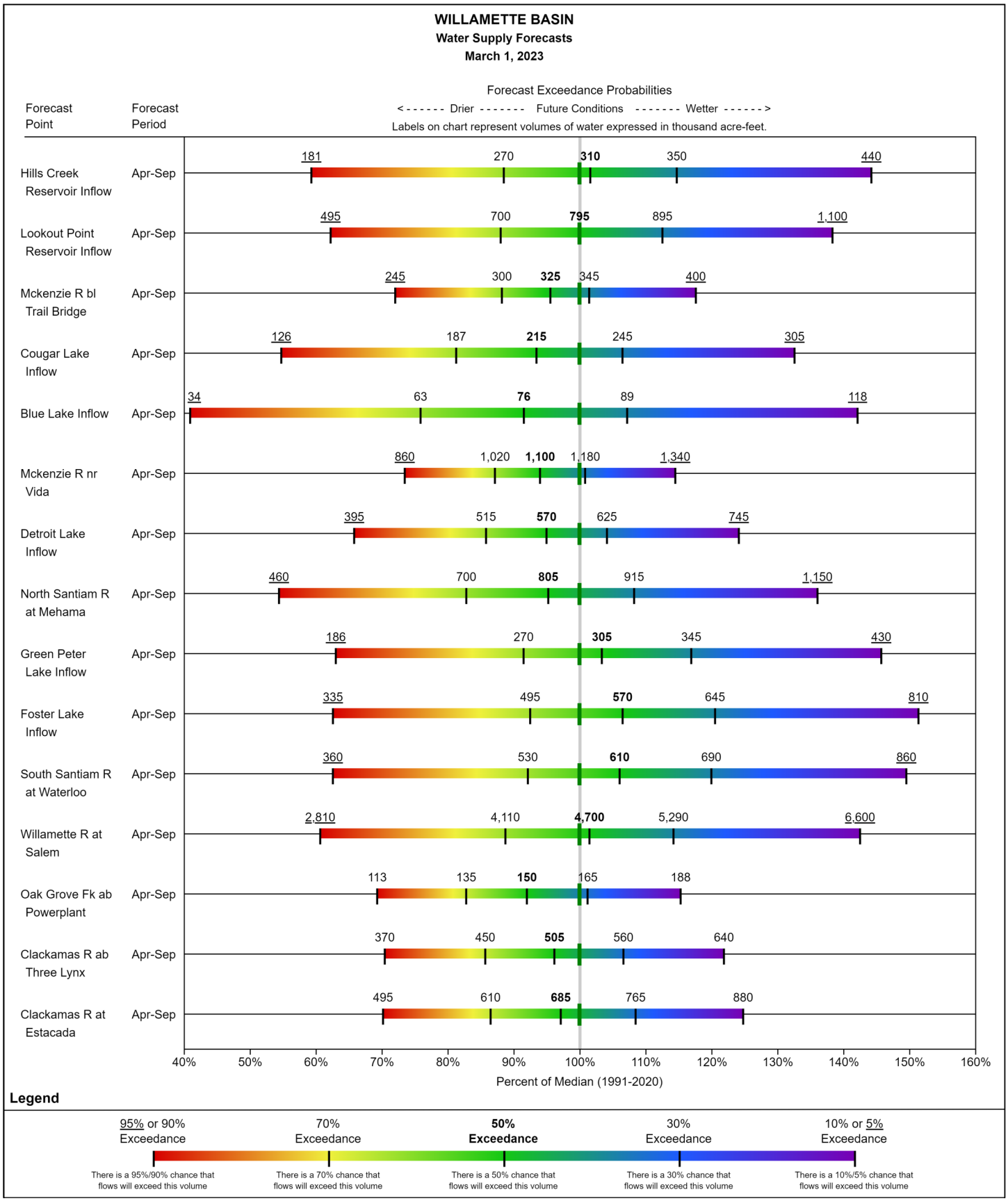
As of March 1, storage at major reservoirs in the basin ranges from 3% of median at Fall Creek Reservoir to 103% of median at Timothy Lake.

Willamette	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Median % Capacity	Current % Median	Last Year % Median
Green Peter	185.1	198.9	265.0	402.8	46%	49%	66%	70%	75%
Dexter	24.3	25.0	25.4					96%	98%
Foster	20.5	22.6	27.8	46.2	44%	49%	60%	74%	81%
Fall Creek	1.5	1.8	44.0	116.0	1%	2%	38%	3%	4%
Henry Hagg Lake	42.4	41.9	46.6	53.3	80%	78%	87%	91%	90%
Lookout Point	117.4	113.2	201.8	433.2	27%	26%	47%	58%	56%
Hills Creek	57.8	106.9	149.8	279.2	21%	38%	54%	39%	71%
Cougar	38.1	36.8	80.7	174.9	22%	21%	46%	47%	46%
Blue River	17.2	26.8	33.2	82.3	21%	33%	40%	52%	81%
Detroit	168.3	202.2	253.2	426.8	39%	47%	59%	66%	80%
Timothy Lake	56.4	54.5	54.6	63.6	89%	86%	86%	103%	100%
Fern Ridge	20.1	13.8	40.6	97.3	21%	14%	42%	50%	34%
Cottage Grove	5.0	3.9	11.2	31.8	16%	12%	35%	45%	35%
Dorena	16.3	11.2	24.4	72.1	23%	16%	34%	67%	46%
Basin Index					**33%**	**37%**	**54%**	**61%**	**68%**
# of reservoirs					13	13	13	14	14

STREAMFLOW FORECAST

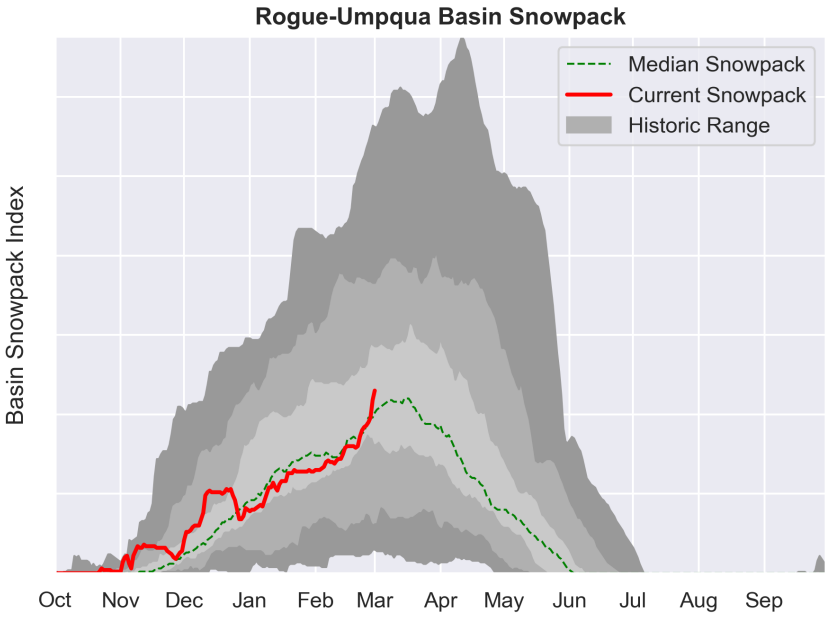
The April through September streamflow forecasts in the basin range from 92% to 107% of median.

For data in tabular format, in addition to non-primary period data, please view the basin data reports **here**.


WILLAMETTE BASIN
Water Supply Forecasts
March 1, 2023
Forecast Exceedance Probabilities
<------- Drier ------- Future Conditions ------- Wetter ------->
Labels on chart represent volumes of water expressed in thousand acre-feet.
Forecast Point
Forecast Period
Hills Creek Reservoir Inflow Apr-Sep 181 270 310 350 440
Lookout Point Reservoir Inflow Apr-Sep 495 700 795 895 1,100
Mckenzie R bl Trail Bridge Apr-Sep 245 300 325 345 400
Cougar Lake Inflow Apr-Sep 126 187 215 245 305
Blue Lake Inflow Apr-Sep 34 63 76 89 118
Mckenzie R nr Vida Apr-Sep 860 1,020 1,100 1,180 1,340
Detroit Lake Inflow Apr-Sep 395 515 570 625 745
North Santiam R at Mehama Apr-Sep 460 700 805 915 1,150
Green Peter Lake Inflow Apr-Sep 186 270 305 345 430
Foster Lake Inflow Apr-Sep 335 495 570 645 810
South Santiam R at Waterloo Apr-Sep 360 530 610 690 860
Willamette R at Salem Apr-Sep 2,810 4,110 4,700 5,290 6,600
Oak Grove Fk ab Powerplant Apr-Sep 113 135 150 165 188
Clackamas R ab Three Lynx Apr-Sep 370 450 505 560 640
Clackamas R at Estacada Apr-Sep 495 610 685 765 880
40% 50% 60% 70% 80% 90% 100% 110% 120% 130% 140% 150% 160%
Percent of Median (1991-2020)
Legend
95% or 90% Exceedance
There is a 95%/90% chance that flows will exceed this volume
70% Exceedance
There is a 70% chance that flows will exceed this volume
50% Exceedance
There is a 50% chance that flows will exceed this volume
30% Exceedance
There is a 30% chance that flows will exceed this volume
10% or 5% Exceedance
There is a 10%/5% chance that flows will exceed this volume

Rogue, Umpqua Basin Summary

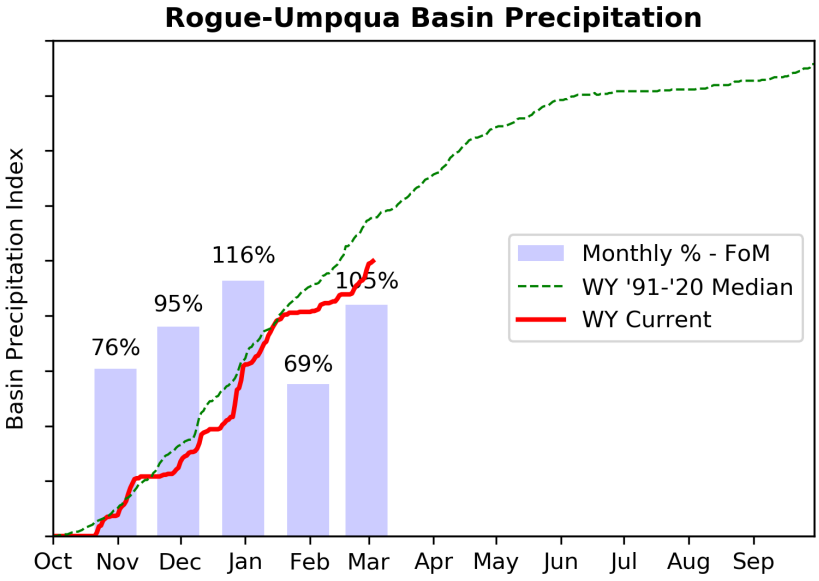
SNOWPACK



► *View snowpack for individual sites by accessing the basin data report* **here**.

As of March 1, the basin snowpack is 101% of median, modestly higher than last month when the basin snowpack was 95% of median.

PRECIPITATION



► *View precipitation for individual sites by accessing the basin data report* **here**.

FoM = First of Month

February precipitation is above normal at 105% of median. Precipitation since the beginning of the water year (October 1 - March 1) is 84% of median.

RESERVOIR STORAGE

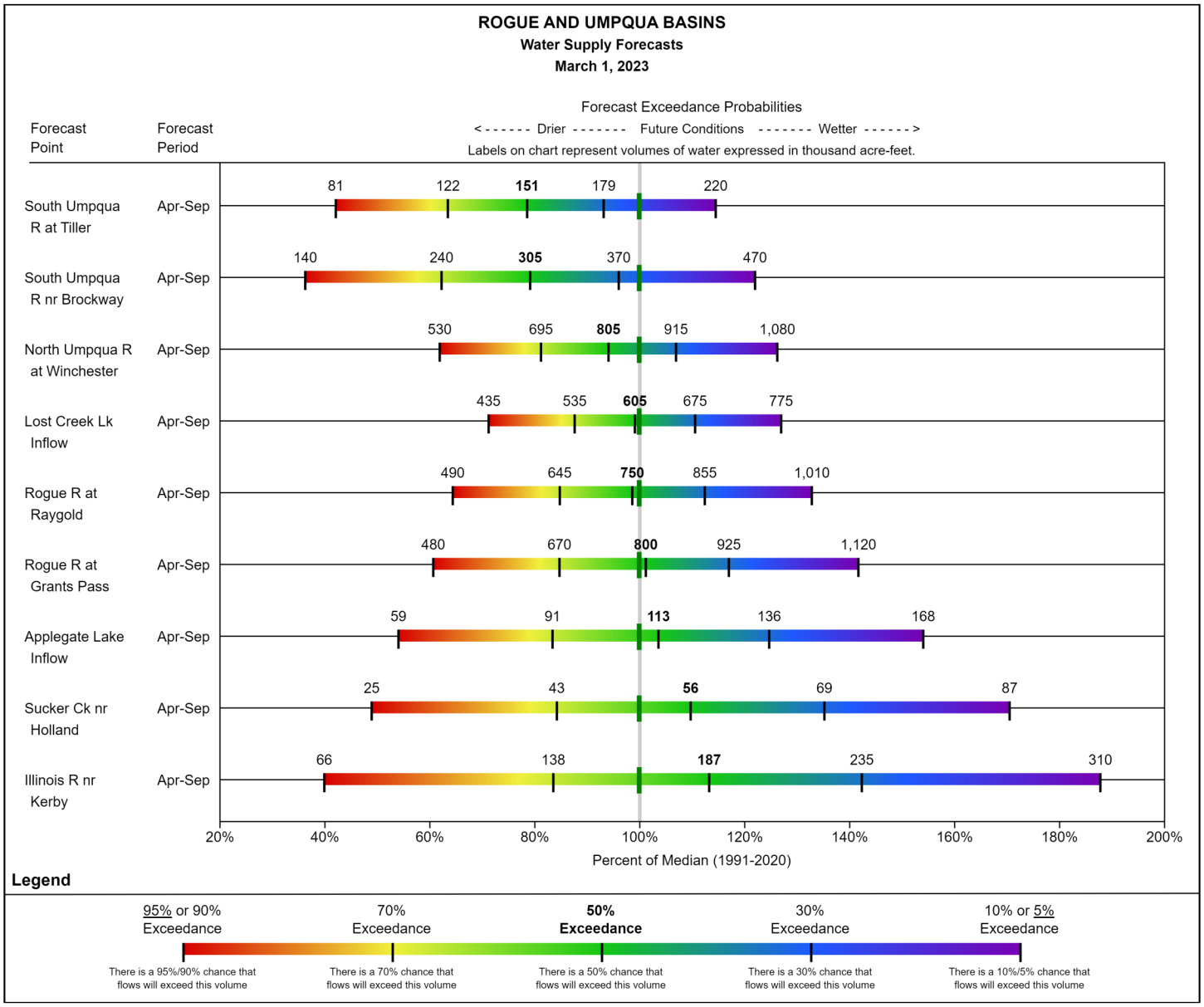
As of March 1, storage at major reservoirs in the basin ranges from 33% of median at Emigrant Lake to 74% of median at Fish Lake.

Rogue-Umpqua	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Median % Capacity	Current % Median	Last Year % Median
Emigrant Lake	8.6	3.2	26.0	39.0	22%	8%	67%	33%	12%
Fish Lake	3.3	3.0	4.4	7.9	41%	37%	56%	74%	67%
Applegate	13.2	15.1	24.8	75.2	18%	20%	33%	53%	61%
Lost Creek	144.0	102.1	224.1	315.0	46%	32%	71%	64%	46%
Basin Index					**39%**	**28%**	**64%**	**61%**	**44%**
# of reservoirs					4	4	4	4	4

STREAMFLOW FORECAST

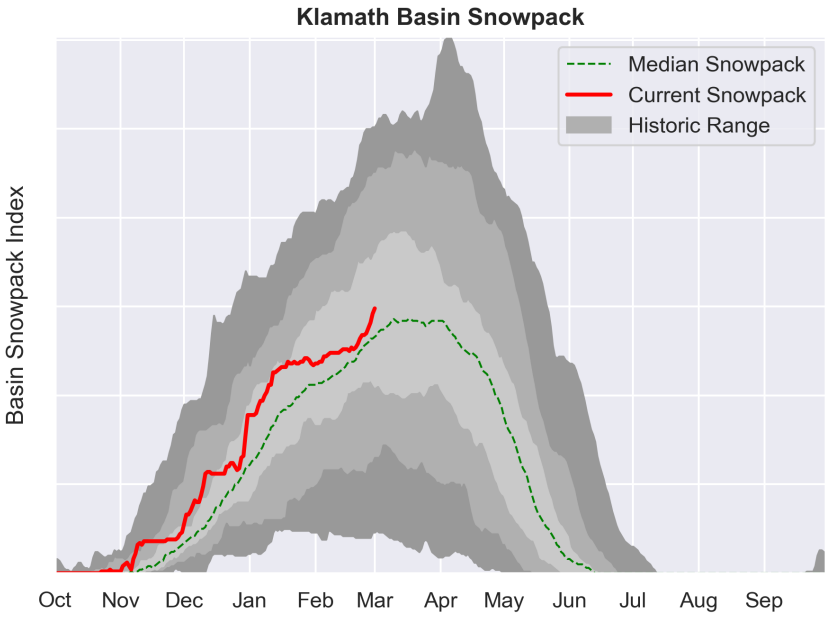
The April through September streamflow forecasts in the basin range from 75% to 113% of median.

For data in tabular format, in addition to non-primary period data, please view the basin data reports **here**.


ROGUE AND UMPQUA BASINS
Water Supply Forecasts
March 1, 2023
Forecast Exceedance Probabilities
< - - - - - - Drier - - - - - - - Future Conditions - - - - - - - Wetter - - - - - - >
Labels on chart represent volumes of water expressed in thousand acre-feet.
Forecast Point
Forecast Period
South Umpqua R at Tiller
Apr-Sep
81 122 151 179 220
South Umpqua R nr Brockway
Apr-Sep
140 240 305 370 470
North Umpqua R at Winchester
Apr-Sep
530 695 805 915 1,080
Lost Creek Lk Inflow
Apr-Sep
435 535 605 675 775
Rogue R at Raygold
Apr-Sep
490 645 750 855 1,010
Rogue R at Grants Pass
Apr-Sep
480 670 800 925 1,120
Applegate Lake Inflow
Apr-Sep
59 91 113 136 168
Sucker Ck nr Holland
Apr-Sep
25 43 56 69 87
Illinois R nr Kerby
Apr-Sep
66 138 187 235 310
20% 40% 60% 80% 100% 120% 140% 160% 180% 200%
Percent of Median (1991-2020)
Legend
95% or 90% Exceedance
There is a 95%/90% chance that flows will exceed this volume
70% Exceedance
There is a 70% chance that flows will exceed this volume
50% Exceedance
There is a 50% chance that flows will exceed this volume
30% Exceedance
There is a 30% chance that flows will exceed this volume
10% or 5% Exceedance
There is a 10%/5% chance that flows will exceed this volume

Klamath Basin Summary

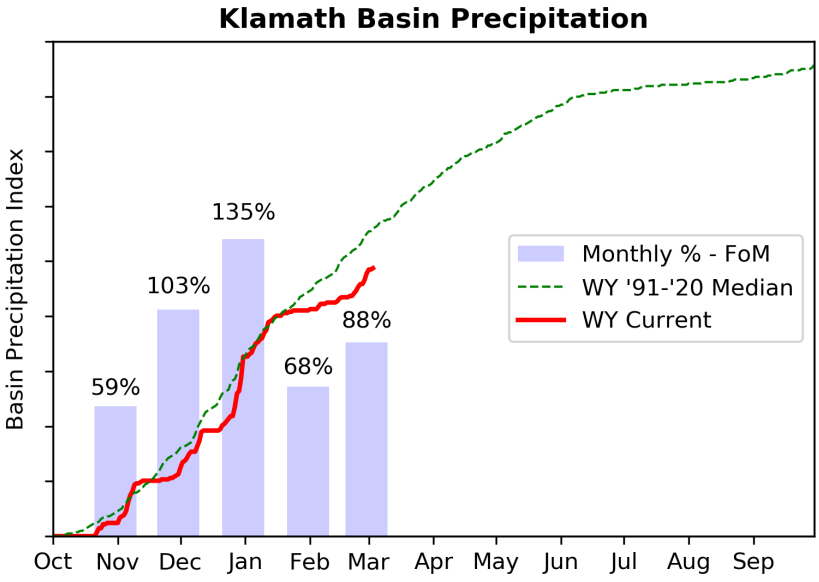
SNOWPACK



► *View snowpack for individual sites by accessing the basin data report* **here**.

As of March 1, the basin snowpack is 109% of median, slightly higher than last month when the basin snowpack was 105% of median. Snow accumulation in the basin has already exceeded the normal peak, nearly 2 weeks before normal peak snow accumulation.

PRECIPITATION



► *View precipitation for individual sites by accessing the basin data report* **here**.

FoM = First of Month

February precipitation is below normal at 88% of median. Precipitation since the beginning of the water year (October 1 - March 1) is 87% of median.

RESERVOIR STORAGE

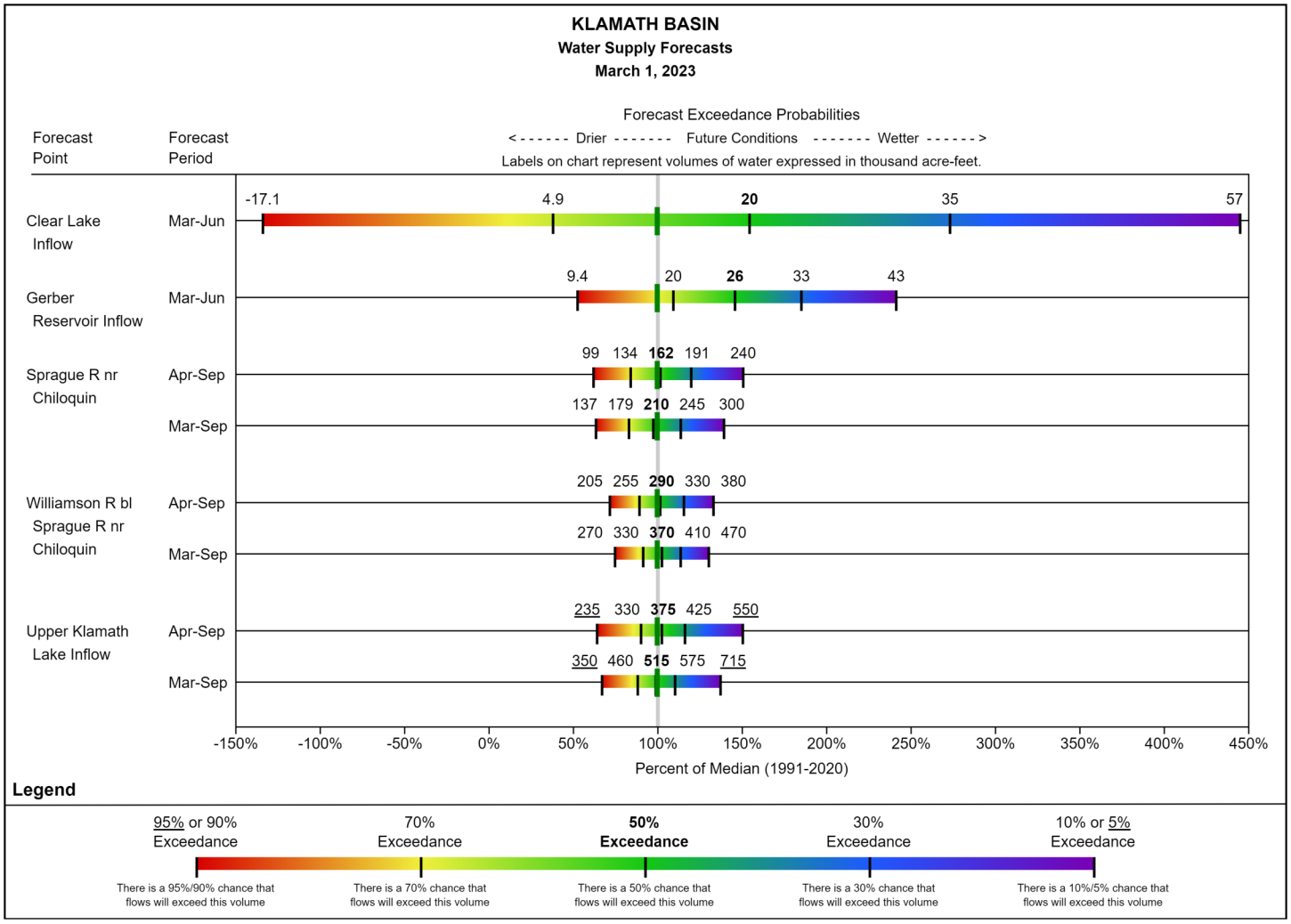
As of March 1, storage at major reservoirs in the basin ranges from 21% of median at Gerber Reservoir to 94% of median at Upper Klamath Lake.

Klamath	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Median % Capacity	Current % Median	Last Year % Median
Gerber	9.4	6.5	46.0	94.3	10%	7%	49%	21%	14%
Clear Lake	56.3	59.0	137.4	513.3	11%	11%	27%	41%	43%
Howard Prairie	11.0	4.2	35.4	62.1	18%	7%	57%	31%	12%
Upper Klamath Lake	361.8	322.6	385.4	523.7	69%	62%	74%	94%	84%
Fourmile Lake	4.0	2.3	6.7	15.6	25%	15%	43%	59%	35%
Hyatt Prairie	2.4	1.2	11.1	16.2	15%	7%	69%	22%	11%
Basin Index					**36%**	**32%**	**51%**	**72%**	**64%**
# of reservoirs					6	6	6	6	6

STREAMFLOW FORECAST

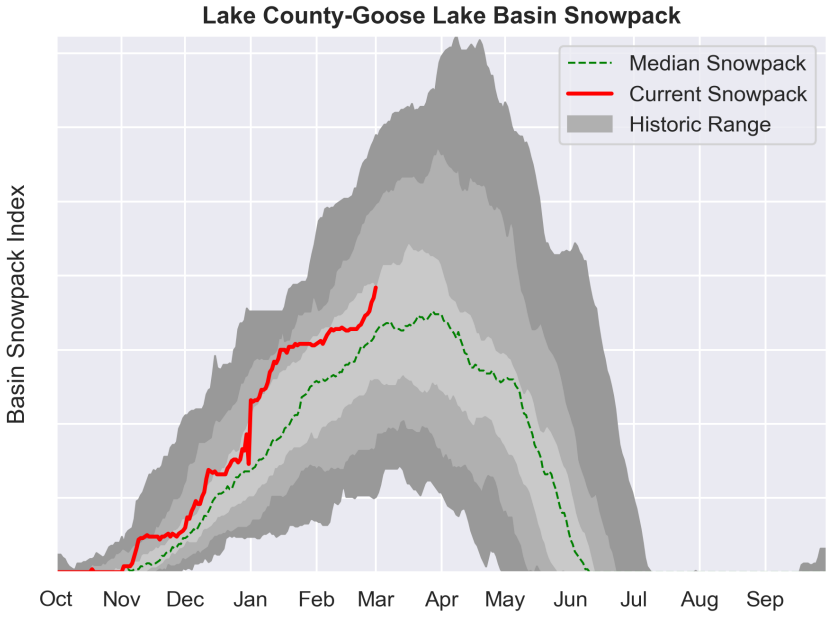
Volumetric streamflow forecasts are above normal and range from 102% to 155%.

For data in tabular format, in addition to non-primary period data, please view the basin data reports **here**.


KLAMATH BASIN
Water Supply Forecasts
March 1, 2023
Forecast Exceedance Probabilities
Forecast Point
Forecast Period
< - - - - - - Drier - - - - - - - Future Conditions - - - - - - - Wetter - - - - - - >
Labels on chart represent volumes of water expressed in thousand acre-feet.
Clear Lake Inflow
Mar-Jun
-17.1
4.9
20
35
57
Gerber Reservoir Inflow
Mar-Jun
9.4
20
26
33
43
Sprague R nr Chiloquin
Apr-Sep
99
134
162
191
240
Mar-Sep
137
179
210
245
300
Williamson R bl Sprague R nr Chiloquin
Apr-Sep
205
255
290
330
380
Mar-Sep
270
330
370
410
470
Upper Klamath Lake Inflow
Apr-Sep
235
330
375
425
550
Mar-Sep
350
460
515
575
715
-150%
-100%
-50%
0%
50%
100%
150%
200%
250%
300%
350%
400%
450%
Percent of Median (1991-2020)
Legend
95% or 90% Exceedance
There is a 95%/90% chance that flows will exceed this volume
70% Exceedance
There is a 70% chance that flows will exceed this volume
50% Exceedance
There is a 50% chance that flows will exceed this volume
30% Exceedance
There is a 30% chance that flows will exceed this volume
10% or 5% Exceedance
There is a 10%/5% chance that flows will exceed this volume

Lake County, Goose Lake Basin Summary

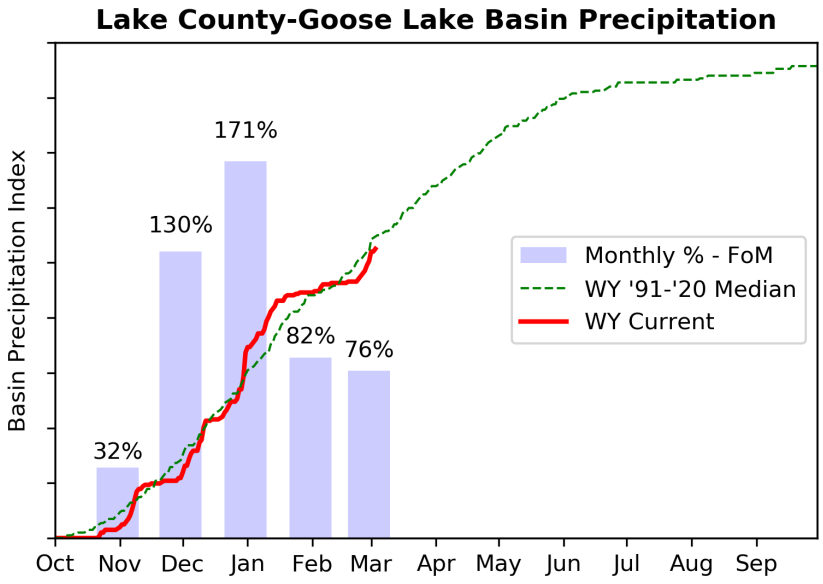
SNOWPACK



► *View snowpack for individual sites by accessing the basin data report* **here**.

As of March 1, the basin snowpack is 132% of median, slightly lower than last month when the basin snowpack was 139% of median. Snow accumulation in the basin has already exceeded the normal peak, nearly 51 month before normal peak snow accumulation.

PRECIPITATION



► *View precipitation for individual sites by accessing the basin data report* **here**.

FoM = First of Month

February precipitation is below normal at 76% of median. Precipitation since the beginning of the water year (October 1 - March 1) is 97% of median.

RESERVOIR STORAGE

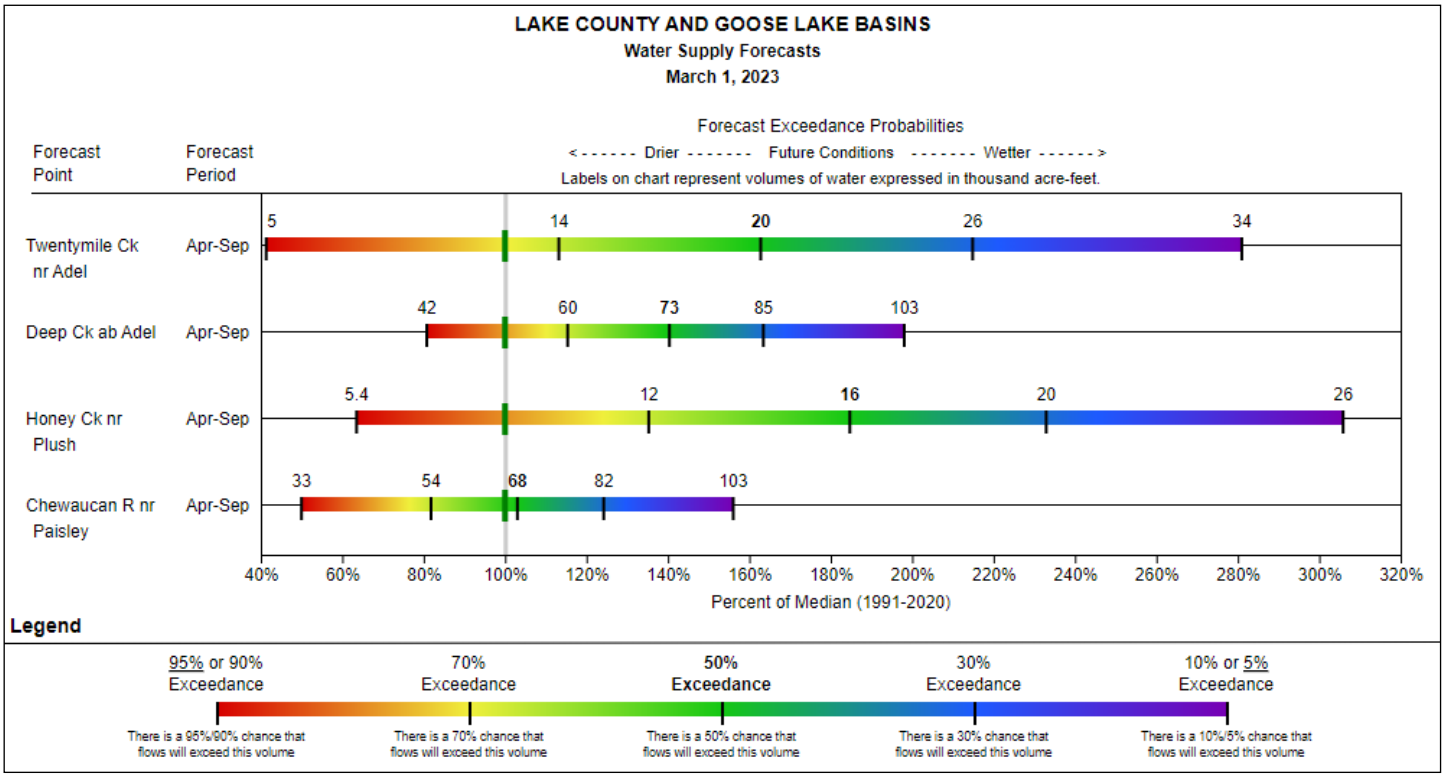
As of March 1, storage at major reservoirs in the basin ranges from 14% of median at Drews Reservoir to 47% of median at Cottonwood Reservoir.

Lake County-Goose Lake	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Median % Capacity	Current % Median	Last Year % Median
Cottonwood	1.8	1.4	3.8	9.3	19%	15%	41%	47%	36%
Drews	4.2	3.9	28.9	63.5	7%	6%	46%	14%	14%
Basin Index					**8%**	**7%**	**45%**	**18%**	**16%**
# of reservoirs					2	2	2	2	2

STREAMFLOW FORECAST

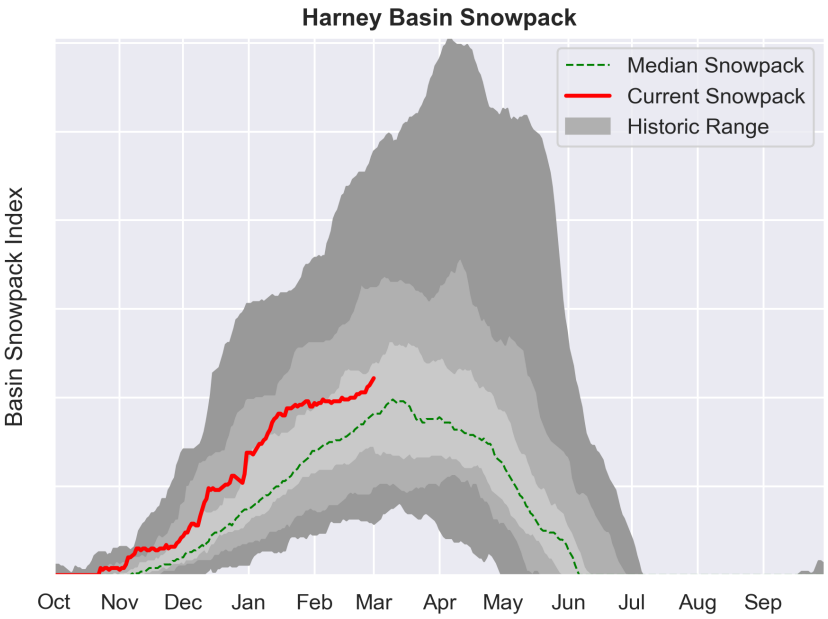
The April through September streamflow forecasts in the basin range from 103% to 185%.

For data in tabular format, in addition to non-primary period data, please view the basin data reports **here**.



Harney Basin Summary

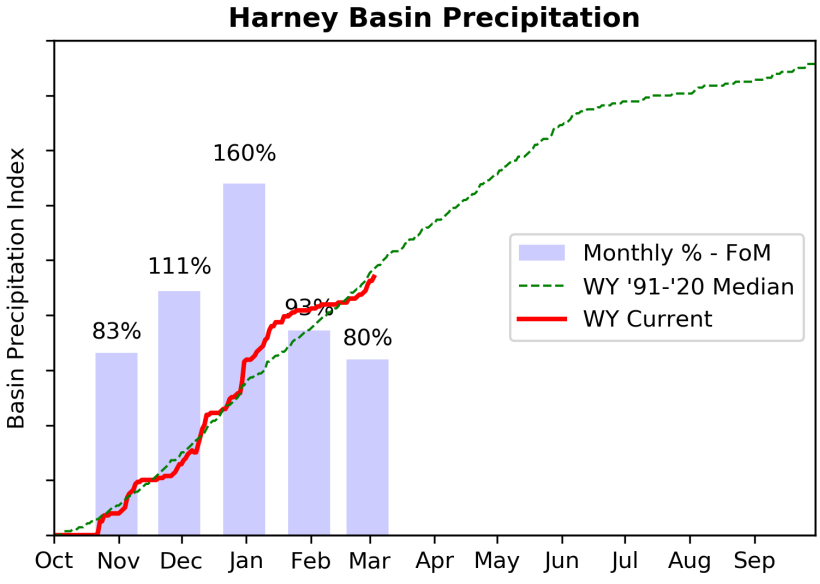
SNOWPACK



► *View snowpack for individual sites by accessing the basin data report* **here**.

As of March 1, the basin snowpack is 142% of median, lower than Feb. 1 when the basin snowpack was 159% of median. Snow accumulation in the basin has already exceeded the normal peak, nearly 2 months before normal peak snow accumulation.

PRECIPITATION



► *View precipitation for individual sites by accessing the basin data report* **here**.

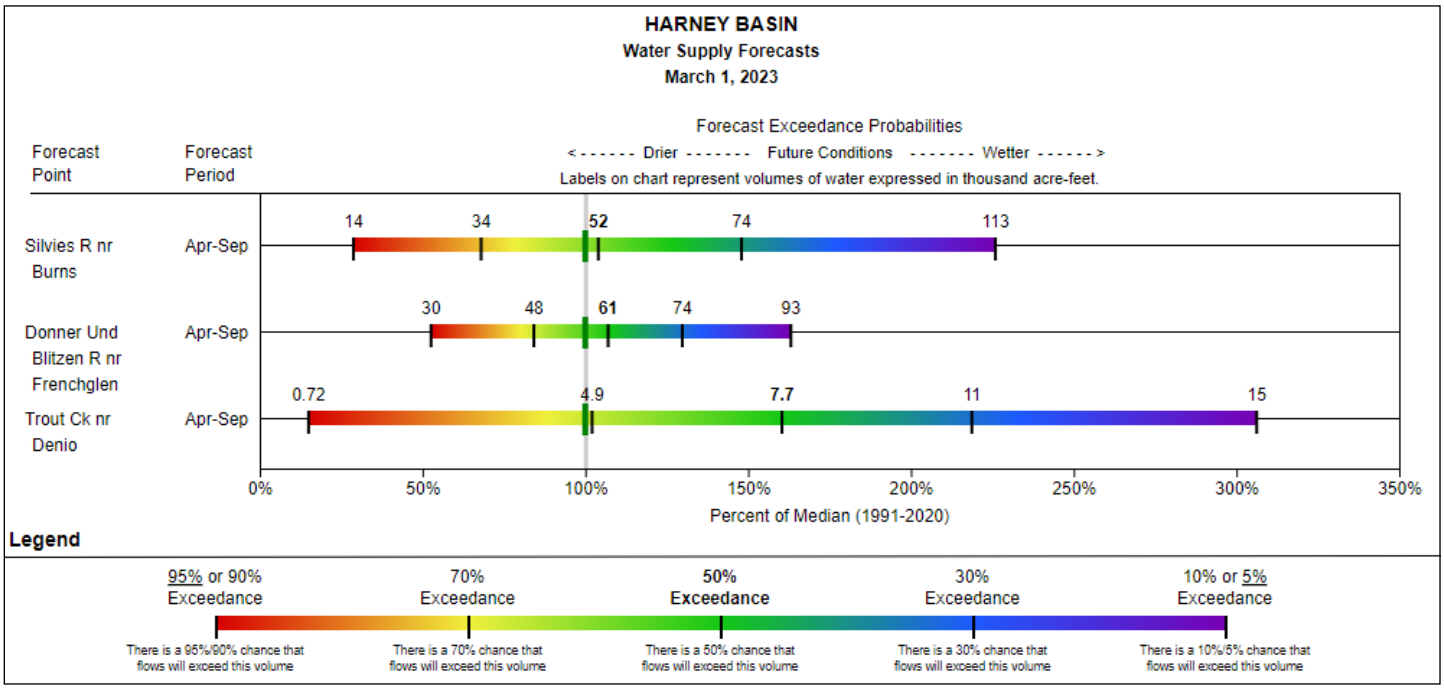
FoM = First of Month

February precipitation is slightly below normal at 80% of median. Precipitation since the beginning of the water year (October 1 - March 1) is 103% of median.

STREAMFLOW FORECAST

The April through September streamflow forecasts in the basin range from 104% to 160% of median.

For data in tabular format, in addition to non-primary period data, please view the basin data reports **here**.



Additional Resources

Interpreting Water Supply Forecast Charts

Water Supply Forecasting

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For more water supply and resource management information, contact:

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Lead Hydrologist
USDA NRCS Oregon Snow Survey
matt.warbritton@usda.gov
Phone: (503) 307-2829

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