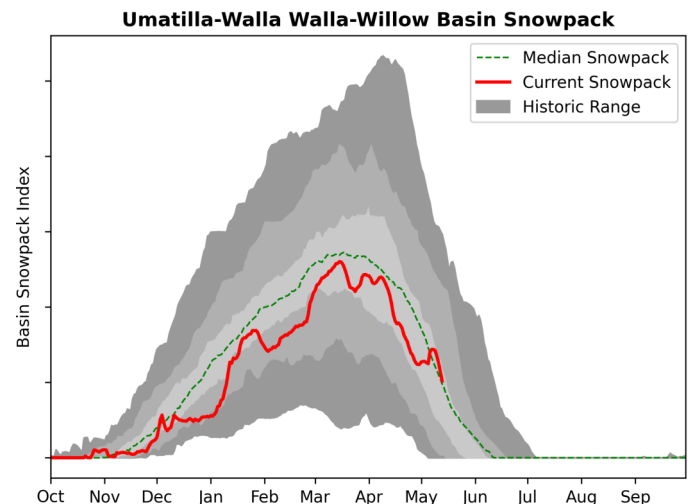


# BE FLOOD AWARE

## Umatilla River Awareness - Pendleton, Oregon

### Today's Summary for May 13, 2024

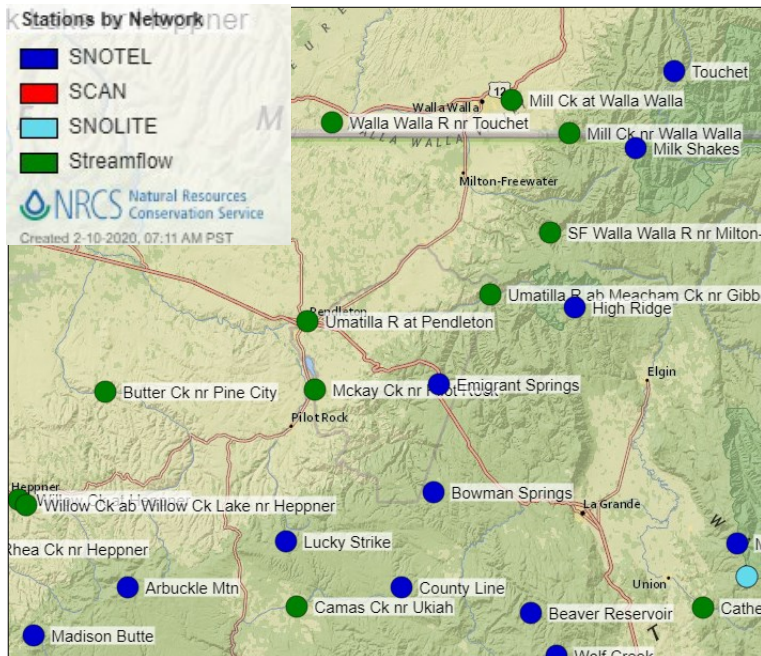
- Sites located in the Umatilla Basin are reporting amounts of snow water equivalent (SWE) below to above normal (1991-2020 median) with values between 0.0" and 29.1".
- Water year-to-date precipitation (Oct. 1 to present) ranges from 80% to 137% of normal. Over the last 7 days, precipitation amounts have ranged from 0.2" to 1.5".
- The NWS mountain forecast calls for mostly clear and sunny skies through Saturday night. Highs ranging from the 50s to 60s. Lows in the upper 30s and 40s. The NWS River Forecasting Center is not predicting significant flooding through the week.
- Snow densities range from 46% to 53%. Snow density is simply: snow water equivalent divided by snow depth x 100%.
- Decreases in snow depth occur naturally during and after cold snow storms. Decreasing snow depth is not the best indicator of snowmelt.
- Daily, consecutive decreases in snow water equivalent of 0.5 inches or greater, along with densities of about 40% or greater (typically during spring-time), can be an indicator that snowmelt may be imminent.



This graph shows today's mountain snowpack levels recorded at NRCS snow telemetry (SNOTEL) sites in the Umatilla, Walla Walla, and Willow Basin.

## Where does the Umatilla River snow and streamflow data come from?

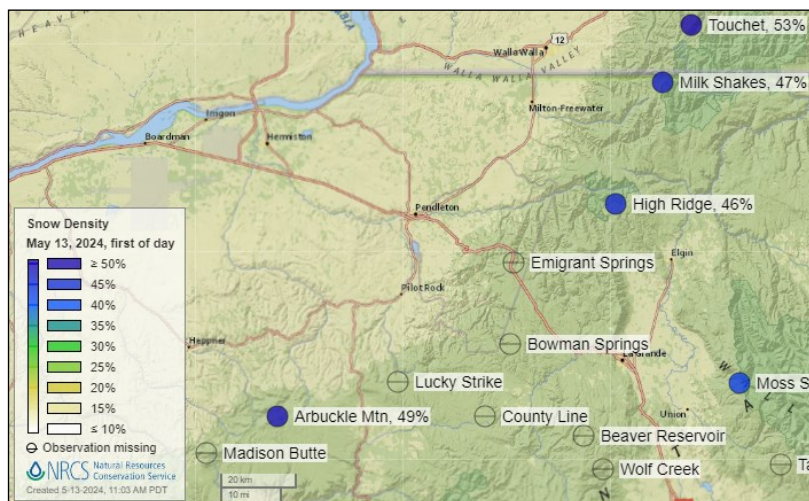
The USDA Natural Resources Conservation Service has eight automated snow telemetry (SNOTEL) sites in the Umatilla watershed, shown here on this map. These sites record data every hour for snow water equivalent (SWE) level, which is the amount of water stored in the snow, the snow depth, precipitation, air temperature, and more. The map also includes various streamflow gaging stations operated by USGS and OWRD. See the tables below for today's data readings at these sites. For near-real-time data, check the [NRCS Snow Survey website](#), and the [OWRD Near Real Time Hydrographics website](#).



Site	Elevation	Snow Water Equivalent inches	SWE % of 1991-2020 Median	Snow Depth inches	Snow Density %	Precipitation (Oct. 1 to date) inches	Precipitation % of 1991-2020 Median	Midnight Air Temperature (Degrees F)
Arbutuckle Mtn	5,770	3.4	-	7	49%	34.0	121%	45
Milk Shakes	5,580	29.1	90%	62	47%	57.3	90%	46
Touchet	5,530	6.4	46%	12	53%	39.2	80%	51
Madison Butte	5,150	0.0	-	0	-	20.2	137%	49
Lucky Strike	4,970	0.0	-	0	-	27.0	134%	49
High Ridge	4,920	11.0	423%	24	46%	41.7	94%	46
Bowman Springs	4,530	0.0	-	0	-	22.3	108%	49
Emigrant Springs	3,800	0.0	-	0	-	25.1	88%	56

## What's the current snow density?

This map shows the current snow densities at NRCS snow survey sites across the region. When snow density reaches 40% or more, there is a greater risk for flooding if a moderate or heavy rainstorm falls on top of that snow.



## Seasonal Volumetric Streamflow Forecast

Forecast Point	Agency	Forecast Period	50% KAF	% of Median (NRCS) % of Average (NWS)
Umatilla R ab Meacham nr Gibbon* (May 1)	NRCS	<u>MAY-SEP</u>	45	100%
Umatilla R at Pendleton* (May 1)	NRCS	<u>MAY-SEP</u>	76	103%
Umatilla R ab Meacham nr Gibbon (May 12)	NWS-RFC	<b>APR-SEP</b>	58.7	71%
Umatilla R at Pendleton (May 12)	NWS-RFC	<b>APR-SEP</b>	111	67%

\* NRCS forecasts are preliminary, final forecasts can be found [here](#).

## Using the Forecast — An Example

**Using the 50 Percent Exceedance Forecast.** Using the example forecasts shown below, there is a 50% chance that actual streamflow volume at McKay Creek near Pilot Rock will be less than 17.9 KAF (thousands of acre feet) of volumetric streamflow between April 1 and Sept 30. There is also a 50% chance that actual streamflow volume will be greater than 17.9 KAF. The forecast value is 62% of the average.

Forecast Point	period	50% (KAF)	% of avg	max (KAF)	30% (KAF)	70% (KAF)	min (KAF)	30-yr avg
McKay Ck nr Pilot Rock	MAR-JUL	30	59	56	40	22	12.4	51
	APR-SEP	17.9	62	40	26	11.5	4.6	29

Max (10%), 30%, 50%, 70% and Min (90%) chance that actual volume will exceed forecast.  
Averages are for the 1981-2010 period.  
All volumes are in thousands of acre-feet.

footnotes:

- 1) Max and Min are 5% and 95% chance that actual volume will exceed forecast
- 2) streamflow is adjusted for upstream storage
- 3) median value used in place of average

## Observed Streamflow

Gaging Station	Agency	Current Flow (cfs)	Stage (ft)	Mean Daily Flow (Previous Day)
McKay Cr nr Pendleton (May 13)	OWRD	172 cfs	1.2 ft	172 cfs
Umatilla ab Meacham Cr nr Gibbon (May 13)	USGS	373 cfs	4.1 ft	402 cfs
Umatilla R at Pendleton (May 13)	OWRD	908 cfs	6.03 ft	956 cfs

Get the latest data online at:

<https://go.usa.gov/xdNvt>

For questions, contact:

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