

# Month in Review - March 2024

Weather Forecast Office

Pendleton, OR

Wednesday, April 10

Photo taken by NWS Pendleton staff  
at Wallowa Lake, Oregon



**The Month in Review is a retrospective collection of climate statistics for NWS Pendleton's forecast area with specific emphasis on ASOS-based climate sites, snowpack and drought evolution, and various statistics for the water year to date.**

**Prepared by NWS Pendleton's Climate Services team.**



# Key Points - March 2024

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

- Near- to slightly above-normal temperatures were recorded for NWS Pendleton's forecast area during March.
- Near- to below-normal precipitation was observed for NWS Pendleton's forecast area during March.
- Snow water equivalent (SWE) increased during early March for all basins/watersheds in NWS Pendleton's forecast area. A mid-month warm and dry stretch saw a decline in SWE, followed by a small increase in SWE towards the end of the month as a cooler, more unsettled weather pattern brought additional snowfall to the mountains.

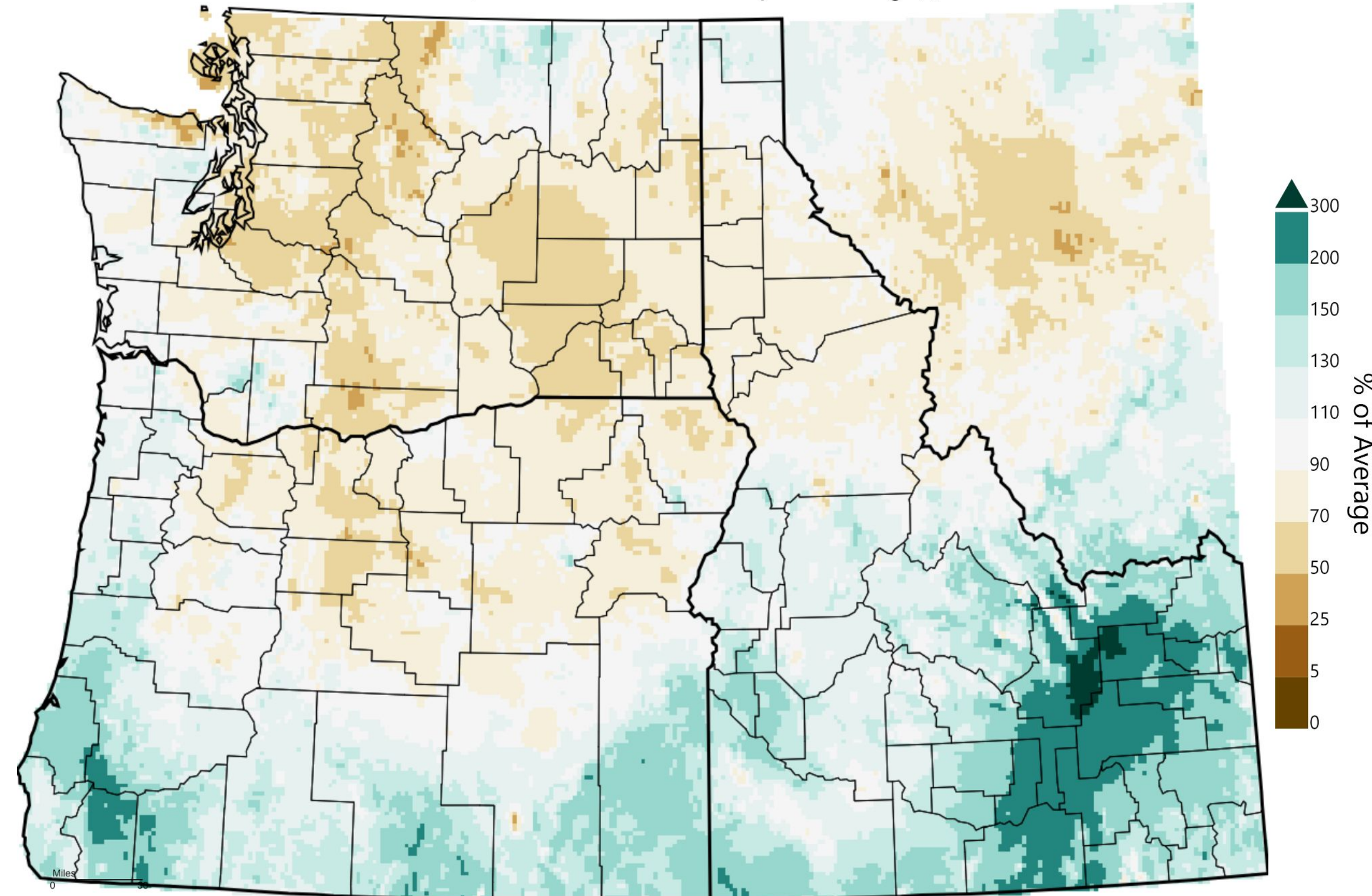


# Precipitation Anomaly - March 2024

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

## Pacific Northwest - Precipitation

March 2024, Percent of 1991-2020 Computed Average(s)



Near- to below-normal precipitation was observed for most of the forecast area during March.

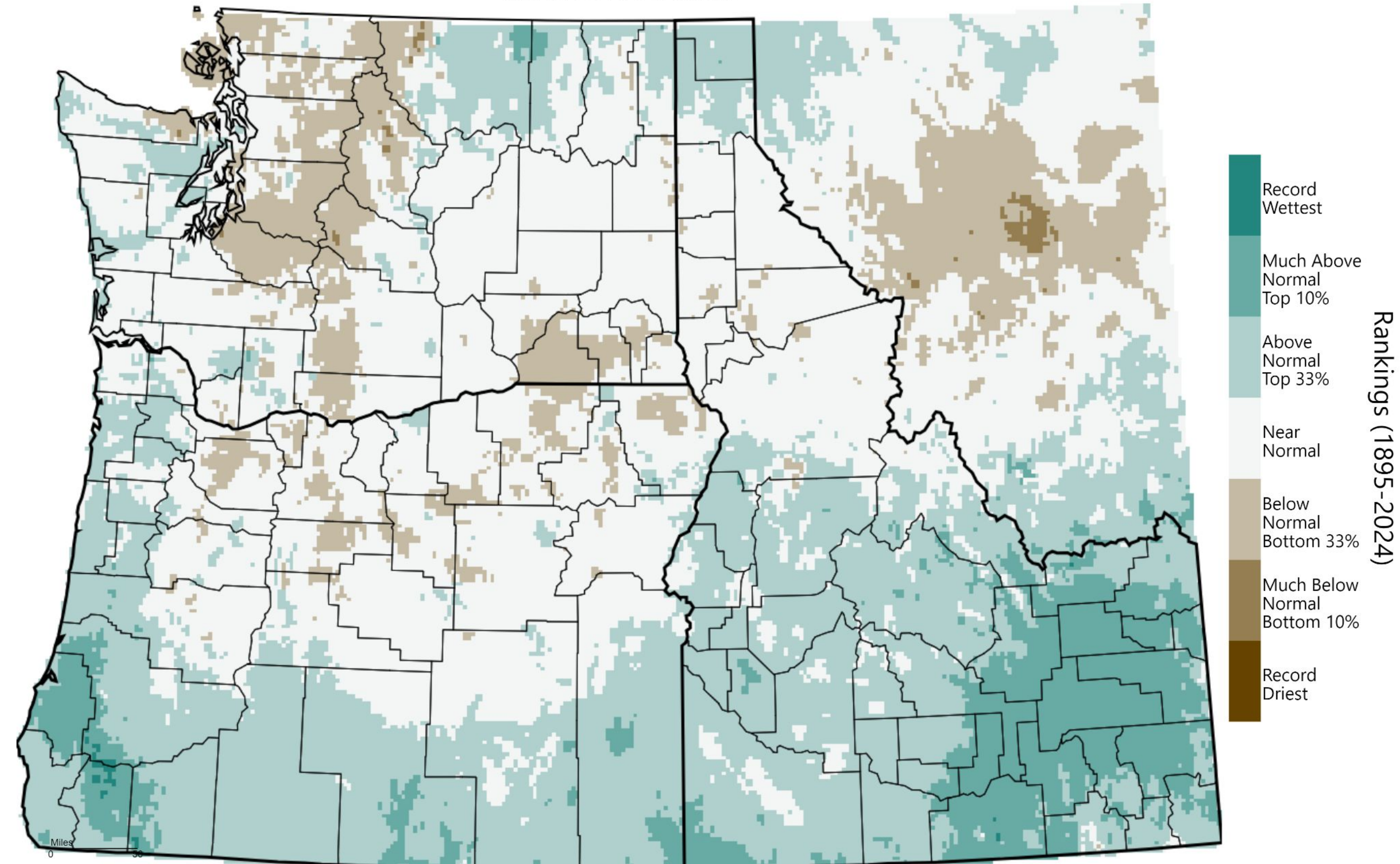


# Precipitation Percentiles - March 2024

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

## Pacific Northwest - Precipitation March 2024, Percentile

Near- to below-normal precipitation was observed for most of the forecast area during March.



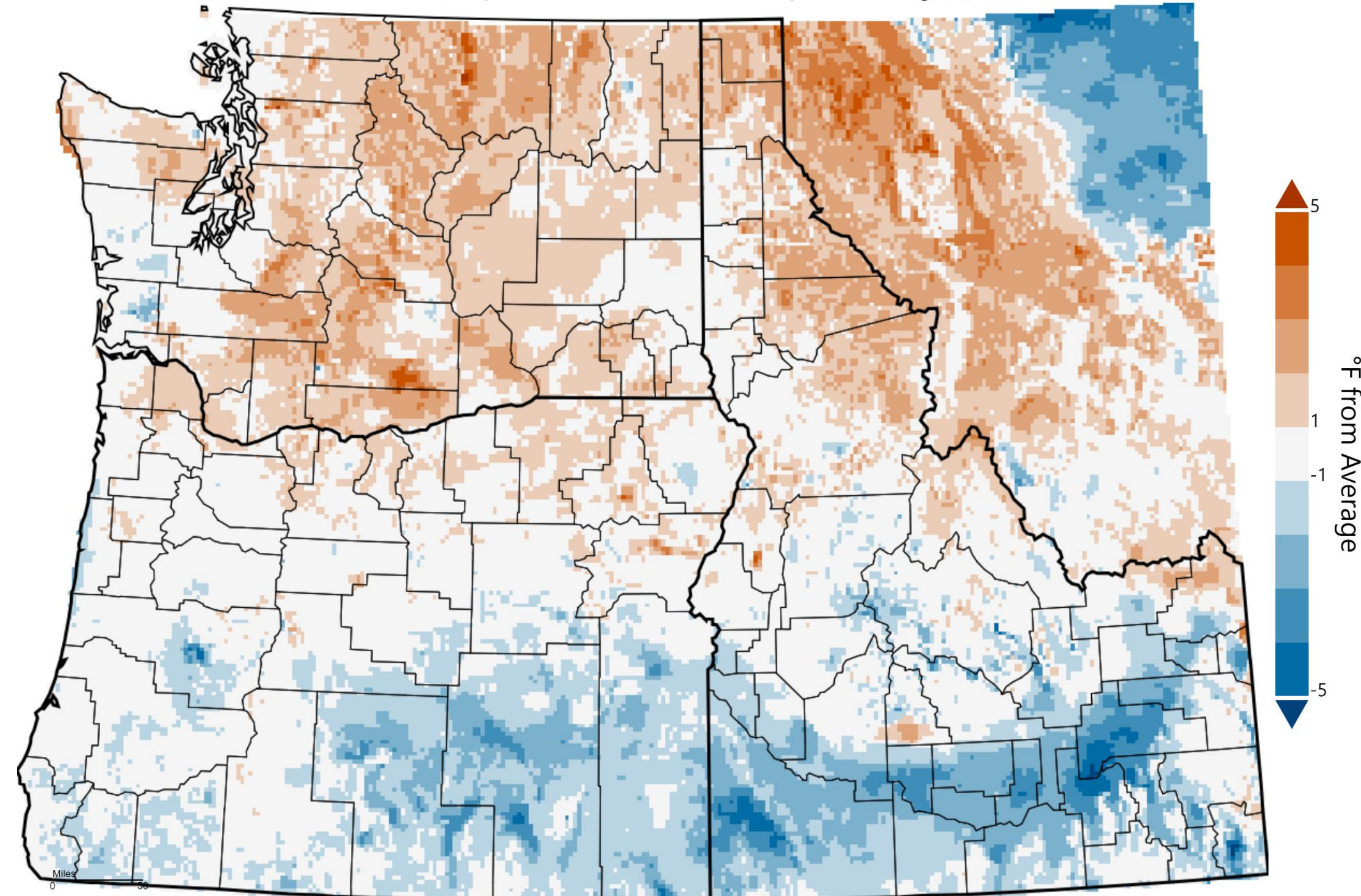


# Temperature Anomaly - March 2024

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

**Pacific Northwest - Mean Temperature**  
March 2024, Departure from 1991-2020 Computed Average(s)

Predominantly near- to above-normal temperatures were recorded across the forecast area this March.



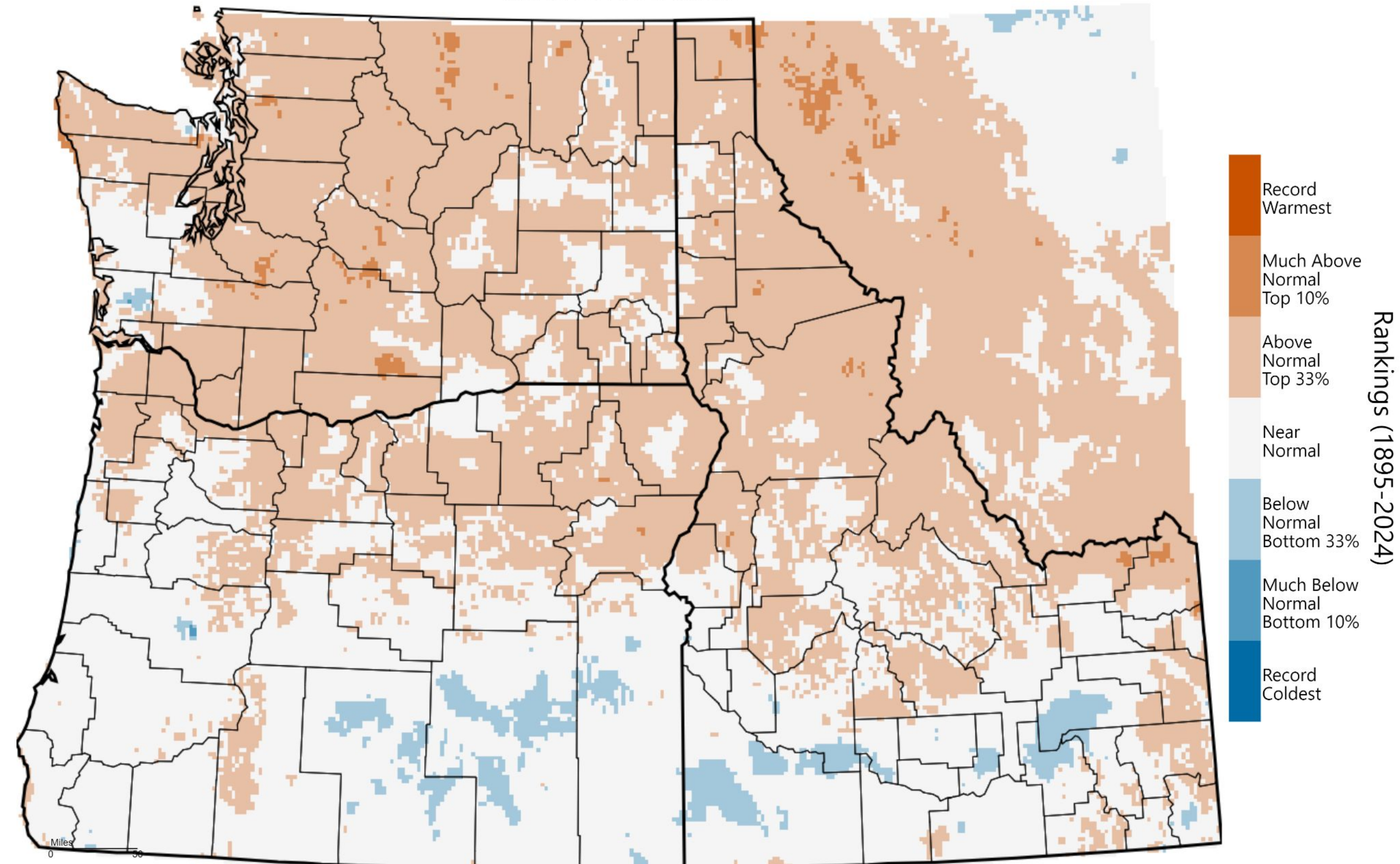


# Temperature Percentiles - March 2024

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

**Pacific Northwest - Mean Temperature**  
March 2024, Percentile

Predominantly near- to above-normal temperatures were recorded across the forecast area this March.





# March 2024 Climate Statistics - Pendleton ASOS

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

Variable (units)	Observed	Normal	Departure
<b>Warmest Daily Maximum Temperature (F)</b>	<b>76</b>	<b>-</b>	<b>-</b>
<b>Average Daily Maximum Temperature (F)</b>	<b>58.5</b>	<b>55.0</b>	<b>3.5</b>
<b>Average Daily Minimum Temperature (F)</b>	<b>34.6</b>	<b>33.7</b>	<b>0.9</b>
<b>Coolest Daily Minimum Temperature (F)</b>	<b>24</b>	<b>-</b>	<b>-</b>
<b>Average Temperature (F)</b>	<b>46.6</b>	<b>44.4</b>	<b>2.2</b>
<b>Total Precipitation (inches)</b>	<b>1.08</b>	<b>1.33</b>	<b>-0.25</b>
<b>Total Snow (inches)</b>	<b>0.1</b>	<b>0.7</b>	<b>-0.6</b>

Additional climate statistics can be found here: <https://www.weather.gov/wrh/climate?wfo=pdt>



# March 2024 Climate Statistics - Walla Walla ASOS

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

Variable (units)	Observed	Normal	Departure
<b>Warmest Daily Maximum Temperature (F)</b>	<b>75</b>	<b>-</b>	<b>-</b>
<b>Average Daily Maximum Temperature (F)</b>	<b>56.8</b>	<b>55.8</b>	<b>1.0</b>
<b>Average Daily Minimum Temperature (F)</b>	<b>36.7</b>	<b>37.8</b>	<b>-1.1</b>
<b>Coolest Daily Minimum Temperature (F)</b>	<b>26</b>	<b>-</b>	<b>-</b>
<b>Average Temperature (F)</b>	<b>46.8</b>	<b>46.8</b>	<b>0.0</b>
<b>Total Precipitation (inches)</b>	<b>1.14</b>	<b>2.11</b>	<b>-0.97</b>

Additional climate statistics can be found here: <https://www.weather.gov/wrh/climate?wfo=pdt>





# March 2024 Climate Statistics - The Dalles ASOS

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

Variable (units)	Observed	Normal	Departure
<b>Warmest Daily Maximum Temperature (F)</b>	<b>77</b>	<b>-</b>	<b>-</b>
<b>Average Daily Maximum Temperature (F)</b>	<b>59.5</b>	<b>56.7</b>	<b>2.8</b>
<b>Average Daily Minimum Temperature (F)</b>	<b>36.1</b>	<b>36.2</b>	<b>-0.1</b>
<b>Coolest Daily Minimum Temperature (F)</b>	<b>25</b>		
<b>Average Temperature (F)</b>	<b>47.8</b>	<b>46.4</b>	<b>1.4</b>
<b>Total Precipitation (inches)</b>	<b>1.14</b>	<b>1.18</b>	<b>-0.04</b>

Additional climate statistics can be found here: <https://www.weather.gov/wrh/climate?wfo=pdt>



# March 2024 Climate Statistics - Ellensburg ASOS

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

Variable (units)	Observed	Normal	Departure
<b>Warmest Daily Maximum Temperature (F)</b>	<b>76</b>	<b>-</b>	<b>-</b>
<b>Average Daily Maximum Temperature (F)</b>	<b>56.4</b>	<b>53.3</b>	<b>3.1</b>
<b>Average Daily Minimum Temperature (F)</b>	<b>30.4</b>	<b>30.9</b>	<b>-0.5</b>
<b>Coolest Daily Minimum Temperature (F)</b>	<b>17</b>	<b>-</b>	<b>-</b>
<b>Average Temperature (F)</b>	<b>43.4</b>	<b>42.1</b>	<b>1.3</b>
<b>Total Precipitation (inches)</b>	<b>0.87</b>	<b>0.81</b>	<b>0.06</b>

Additional climate statistics can be found here: <https://www.weather.gov/wrh/climate?wfo=pdt>

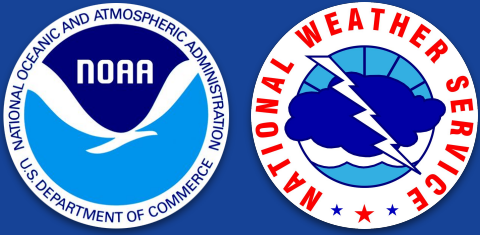


# March 2024 Climate Statistics - Hermiston ASOS

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

Variable (units)	Observed	Normal	Departure
<b>Warmest Daily Maximum Temperature (F)</b>	<b>80</b>	<b>-</b>	<b>-</b>
<b>Average Daily Maximum Temperature (F)</b>	<b>61.1</b>	<b>59.1</b>	<b>2.0</b>
<b>Average Daily Minimum Temperature (F)</b>	<b>32.3</b>	<b>33.7</b>	<b>-1.4</b>
<b>Coolest Daily Minimum Temperature (F)</b>	<b>19</b>	<b>-</b>	<b>-</b>
<b>Average Temperature (F)</b>	<b>46.7</b>	<b>46.4</b>	<b>0.3</b>
<b>Total Precipitation (inches)</b>	<b>0.73</b>	<b>0.77</b>	<b>-0.04</b>

Additional climate statistics can be found here: <https://www.weather.gov/wrh/climate?wfo=pdt>



# March 2024 Climate Statistics - Meacham ASOS

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

Variable (units)	Observed	Normal	Departure
<b>Warmest Daily Maximum Temperature (F)</b>	<b>67</b>	<b>-</b>	<b>-</b>
<b>Average Daily Maximum Temperature (F)</b>	<b>46.3</b>	<b>45.7</b>	<b>0.6</b>
<b>Average Daily Minimum Temperature (F)</b>	<b>22.1</b>	<b>24.4</b>	<b>-2.3</b>
<b>Coolest Daily Minimum Temperature (F)</b>	<b>-2</b>	<b>-</b>	<b>-</b>
<b>Average Temperature (F)</b>	<b>34.2</b>	<b>35.0</b>	<b>-0.8</b>
<b>Total Precipitation (inches)</b>	<b>2.24</b>	<b>4.09</b>	<b>-1.85</b>

Additional climate statistics can be found here: <https://www.weather.gov/wrh/climate?wfo=pdt>



# March 2024 Climate Statistics - Pasco ASOS

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

Variable (units)	Observed	Normal	Departure
<b>Warmest Daily Maximum Temperature (F)</b>	<b>80</b>	<b>-</b>	<b>-</b>
<b>Average Daily Maximum Temperature (F)</b>	<b>61.9</b>	<b>58.6</b>	<b>3.3</b>
<b>Average Daily Minimum Temperature (F)</b>	<b>32.7</b>	<b>33.1</b>	<b>-0.4</b>
<b>Coolest Daily Minimum Temperature (F)</b>	<b>18</b>	<b>-</b>	<b>-</b>
<b>Average Temperature (F)</b>	<b>47.3</b>	<b>45.8</b>	<b>1.5</b>
<b>Total Precipitation (inches)</b>	<b>0.40</b>	<b>0.69</b>	<b>-0.29</b>

Additional climate statistics can be found here: <https://www.weather.gov/wrh/climate?wfo=pdt>



# March 2024 Climate Statistics - Redmond ASOS

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

Variable (units)	Observed	Normal	Departure
<b>Warmest Daily Maximum Temperature (F)</b>	<b>77</b>		
<b>Average Daily Maximum Temperature (F)</b>	<b>55.1</b>	<b>54.9</b>	<b>0.2</b>
<b>Average Daily Minimum Temperature (F)</b>	<b>26.9</b>	<b>27.7</b>	<b>-0.8</b>
<b>Coolest Daily Minimum Temperature (F)</b>	<b>15</b>		
<b>Average Temperature (F)</b>	<b>41.0</b>	<b>41.3</b>	<b>-0.3</b>
<b>Total Precipitation (inches)</b>	<b>0.20</b>	<b>0.58</b>	<b>-0.38</b>

Additional climate statistics can be found here: <https://www.weather.gov/wrh/climate?wfo=pdt>



# March 2024 Climate Statistics - Yakima ASOS

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

Variable (units)	Observed	Normal	Departure
<b>Warmest Daily Maximum Temperature (F)</b>	<b>76</b>		
<b>Average Daily Maximum Temperature (F)</b>	<b>58.6</b>	<b>56.6</b>	<b>2.0</b>
<b>Average Daily Minimum Temperature (F)</b>	<b>29.7</b>	<b>30.2</b>	<b>-0.5</b>
<b>Coolest Daily Minimum Temperature (F)</b>	<b>21</b>		
<b>Average Temperature (F)</b>	<b>44.2</b>	<b>43.4</b>	<b>0.8</b>
<b>Total Precipitation (inches)</b>	<b>0.58</b>	<b>0.64</b>	<b>-0.06</b>

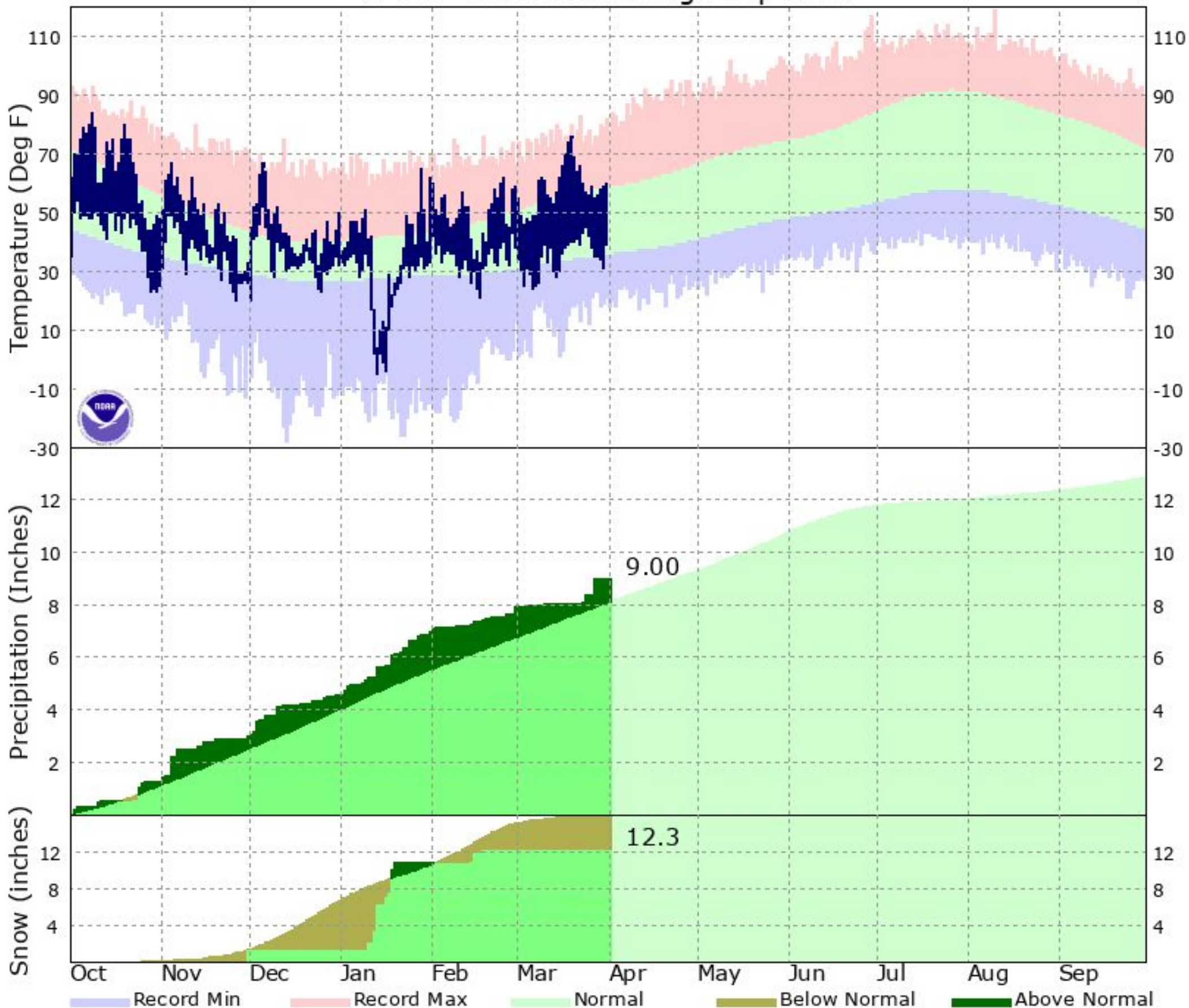
Additional climate statistics can be found here: <https://www.weather.gov/wrh/climate?wfo=pdt>



# Water Year Climate Graphs - Pendleton ASOS

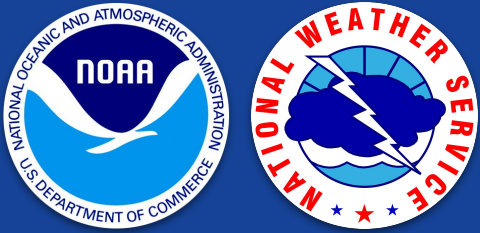
Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

KPDT - Oct 2023 Through Sep 2024



So far this water year, Pendleton has observed slightly above-normal precipitation and slightly below-normal snowfall.



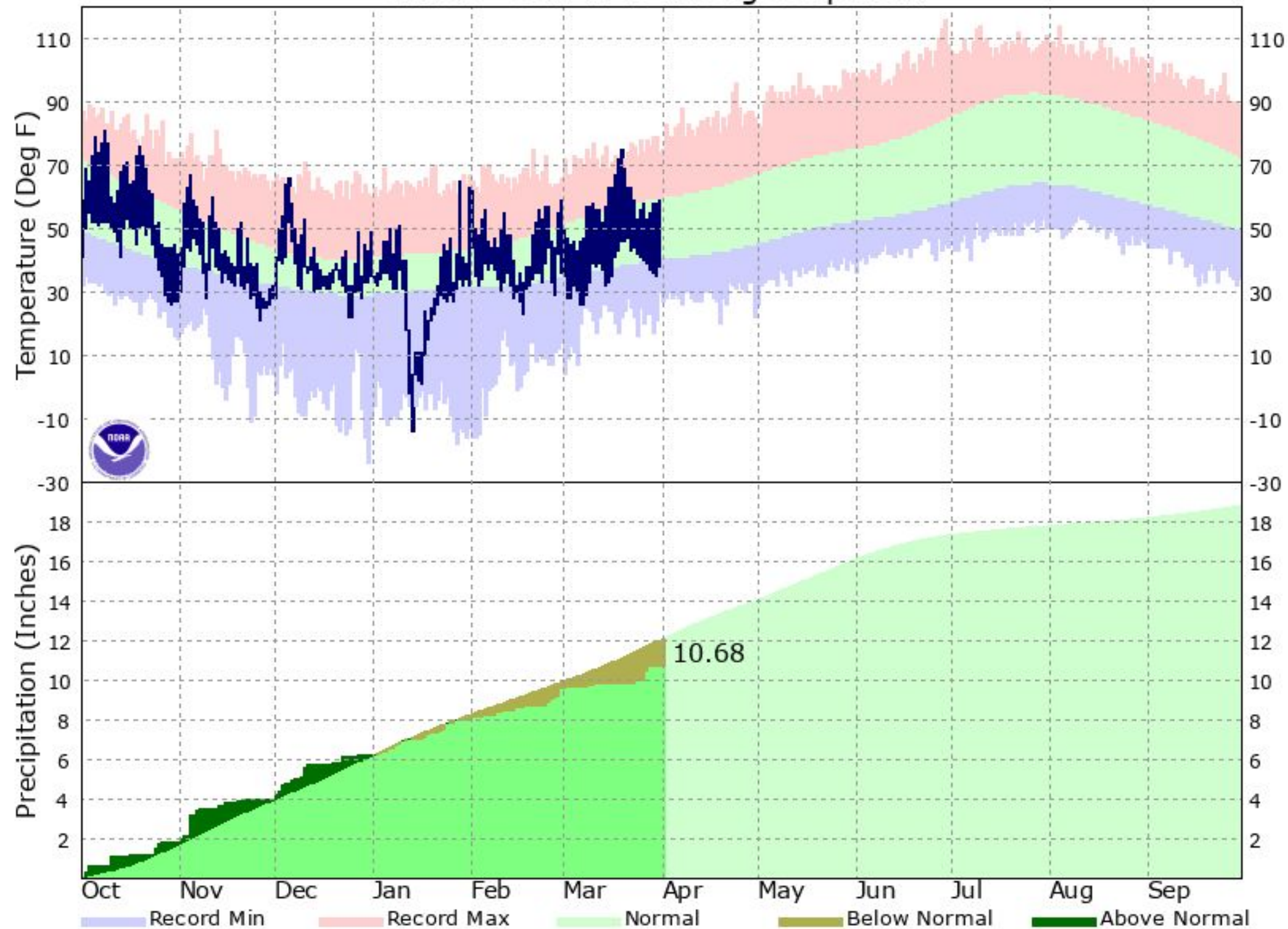


# Water Year Climate Graphs - Walla Walla ASOS

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

KALW - Oct 2023 Through Sep 2024

So far this water year, Walla Walla has received slightly below-normal precipitation.

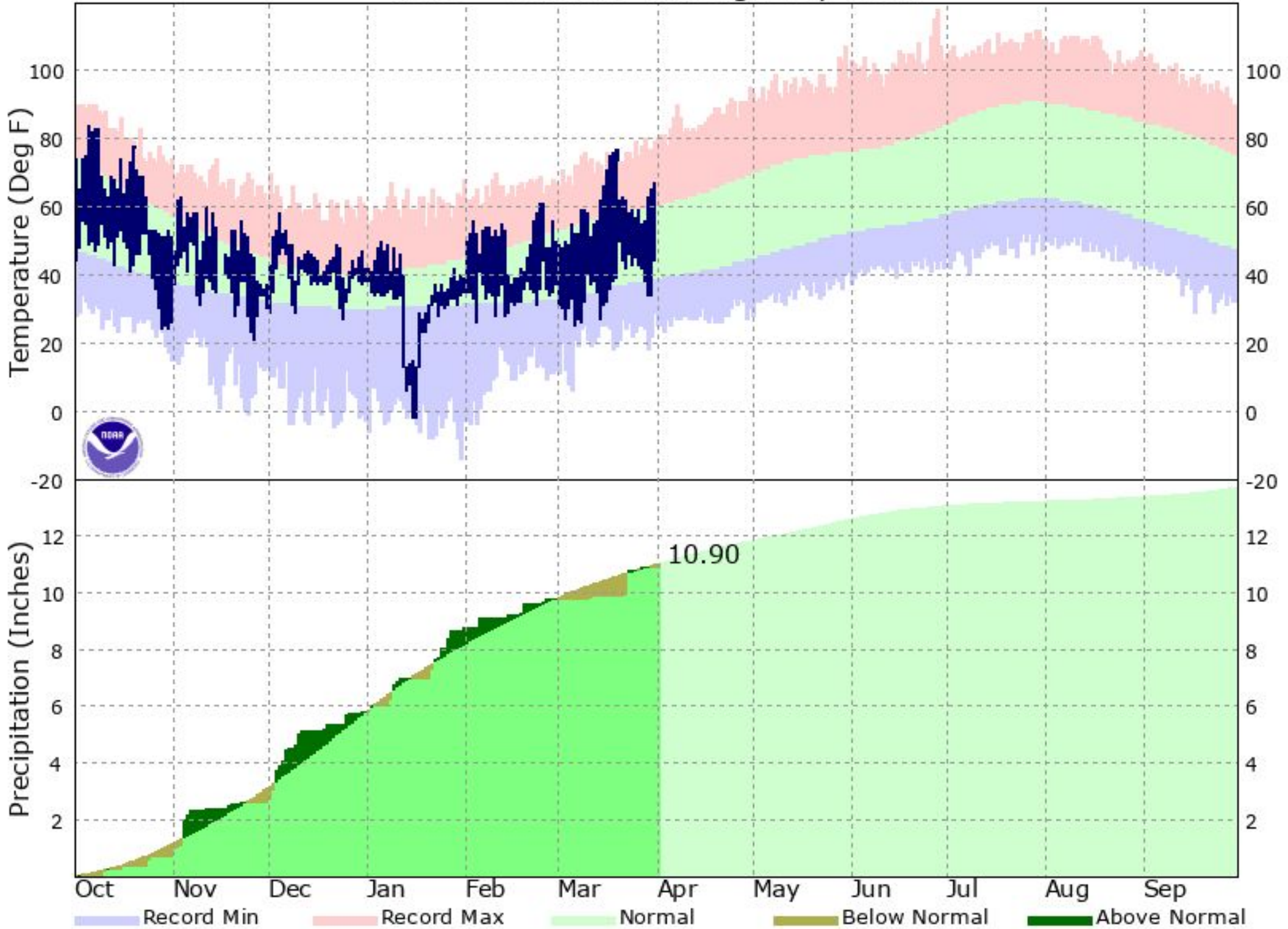




# Water Year Climate Graphs - The Dalles ASOS

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

KDLS - Oct 2023 Through Sep 2024



So far this water year, The Dalles has recorded near-normal precipitation.

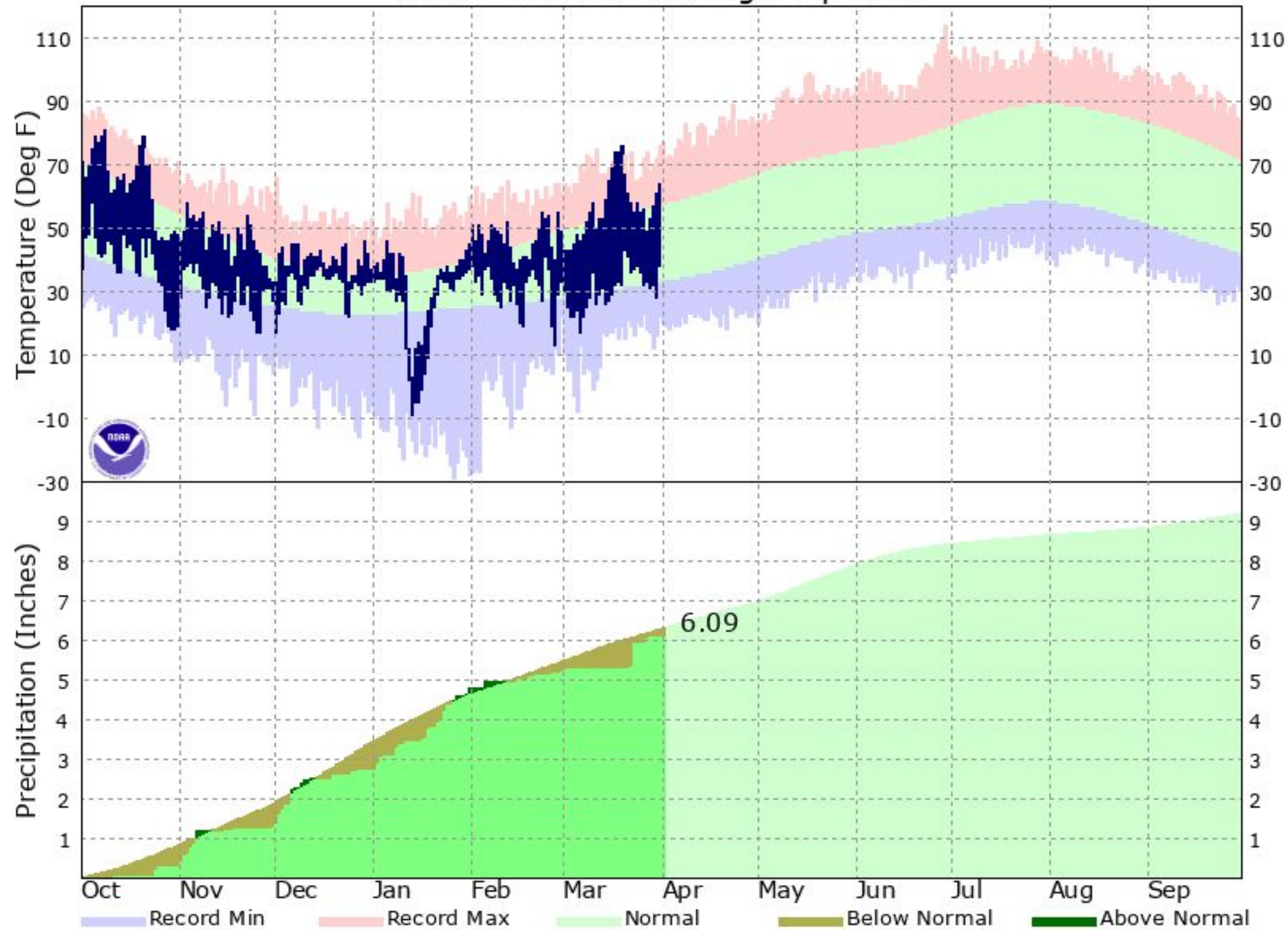


# Water Year Climate Graphs - Ellensburg ASOS

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

KELN - Oct 2023 Through Sep 2024

So far this water year, Ellensburg has observed near-normal precipitation.

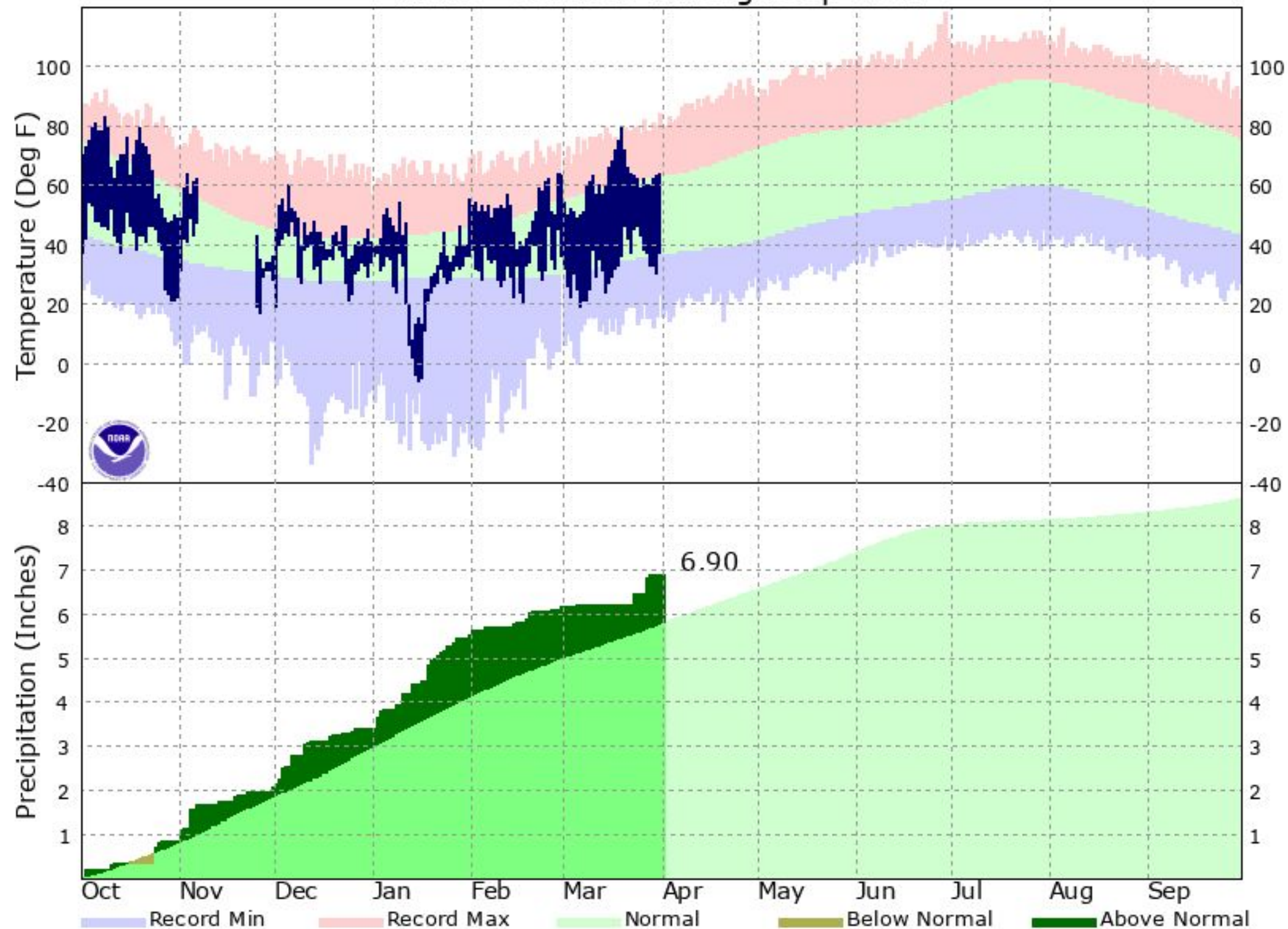




# Water Year Climate Graphs - Hermiston ASOS

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

KHRI - Oct 2023 Through Sep 2024



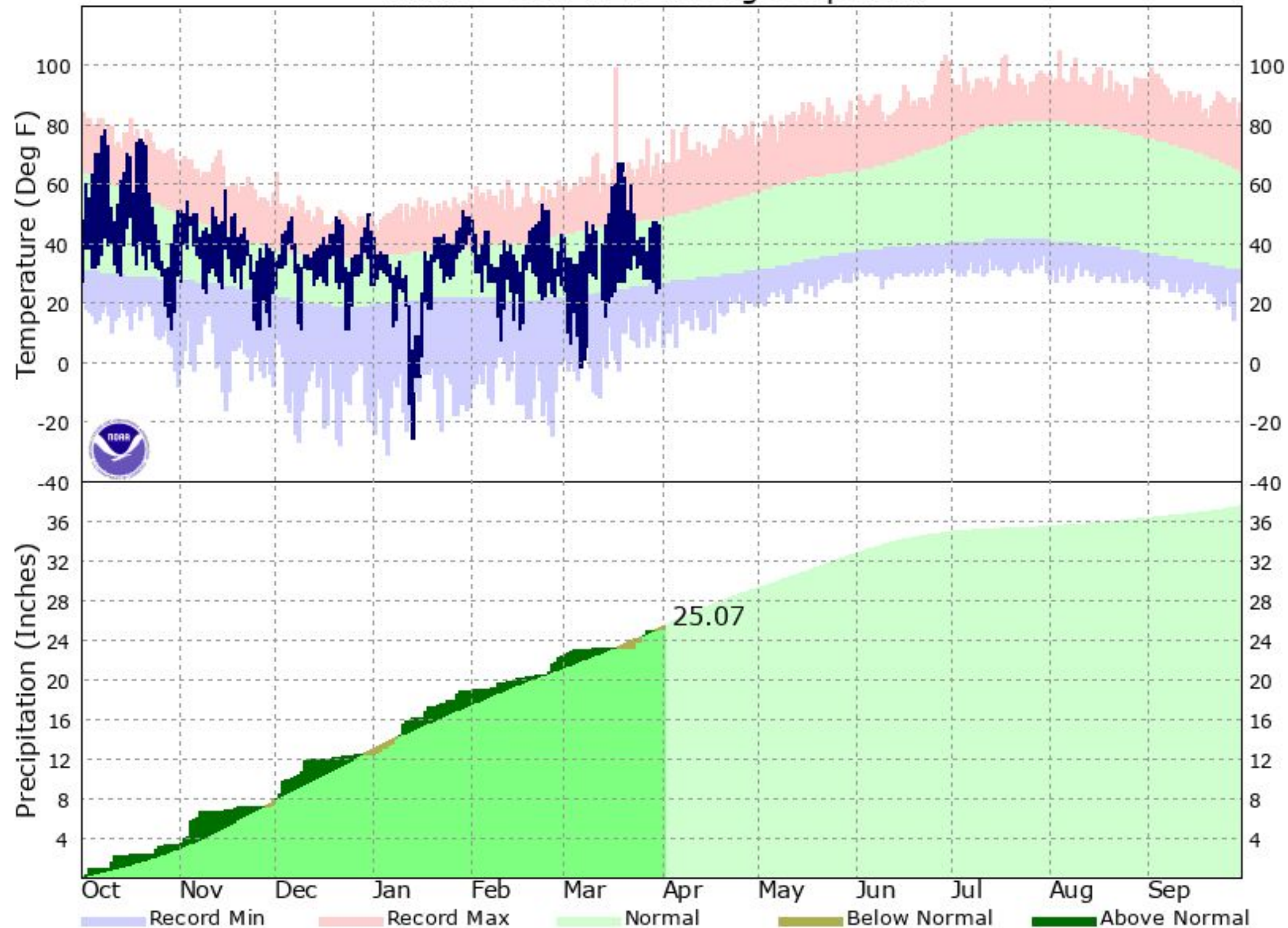
So far this water year, Hermiston has recorded above-normal precipitation.



# Water Year Climate Graphs - Meacham ASOS

KMEH - Oct 2023 Through Sep 2024

So far this water year, Meacham has received near-normal precipitation.



- Note: The March 17 record maximum temperature on the graph is incorrect.

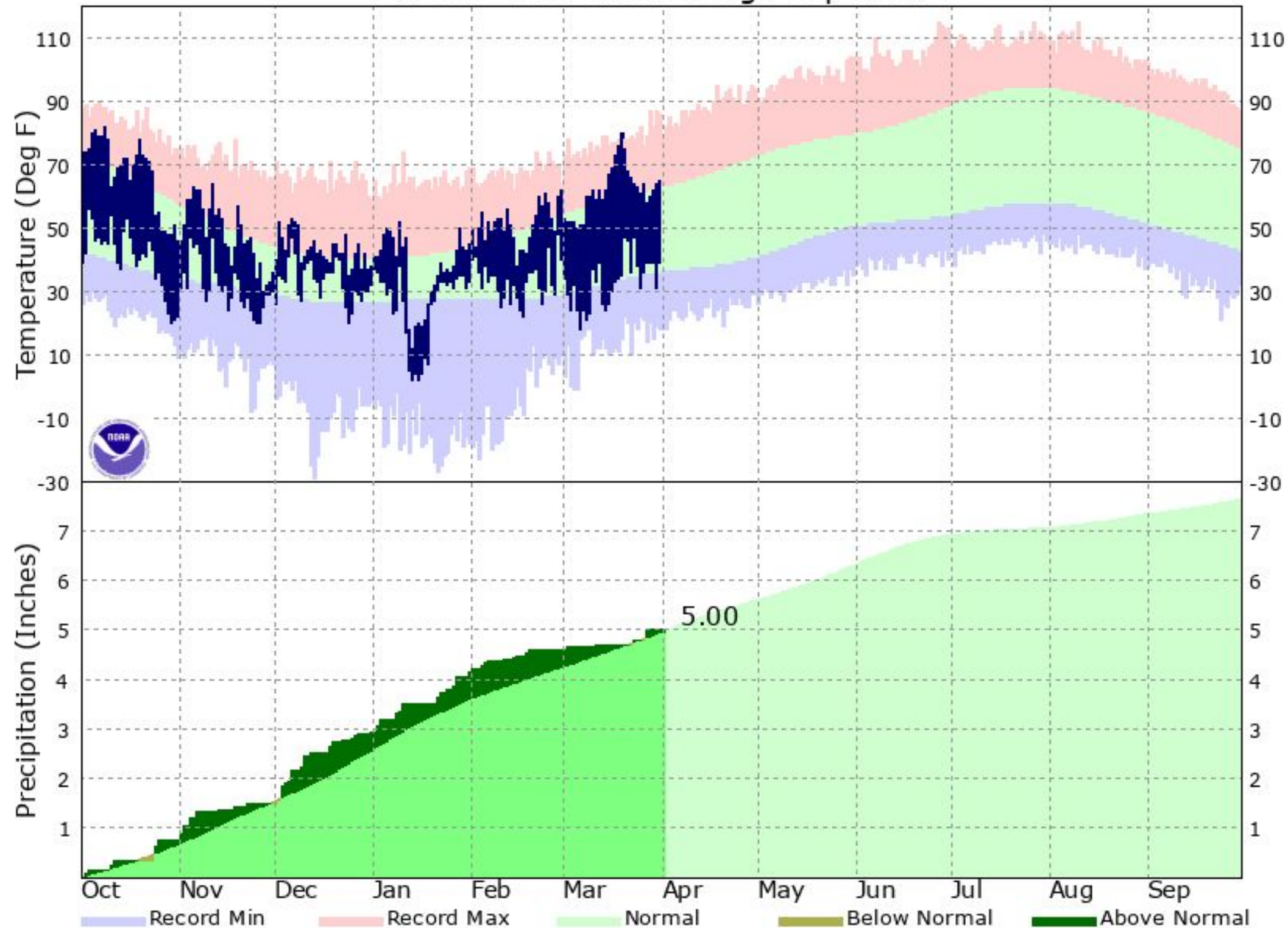


# Water Year Climate Graphs - Pasco ASOS

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

KPSC - Oct 2023 Through Sep 2024

So far this water year, Pasco has observed near-normal precipitation.

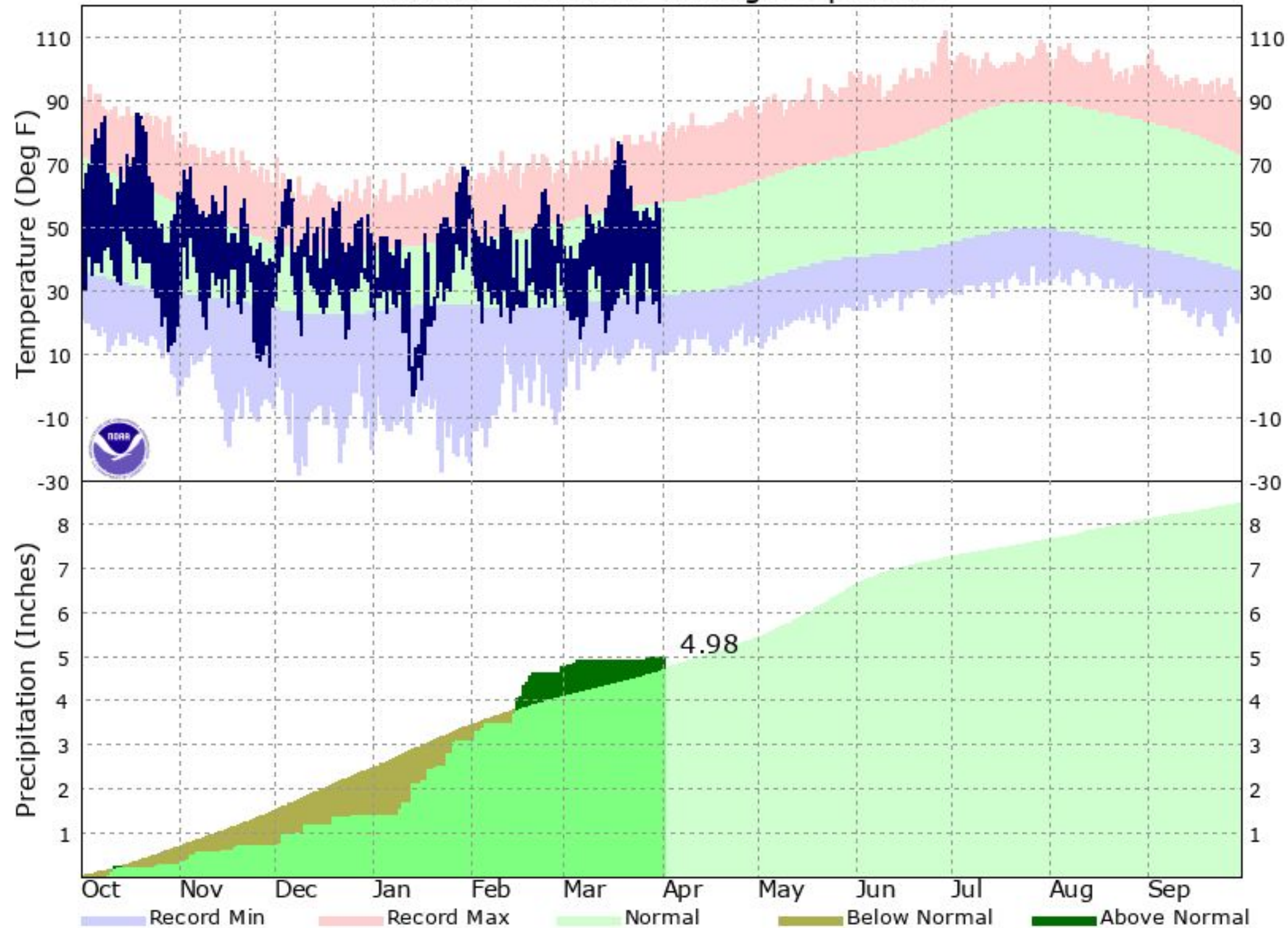




# Water Year Climate Graphs - Redmond ASOS

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

KRDM - Oct 2023 Through Sep 2024



So far this water year, primarily due to a wet January, February, and early March, Redmond has recorded slightly above-normal precipitation.

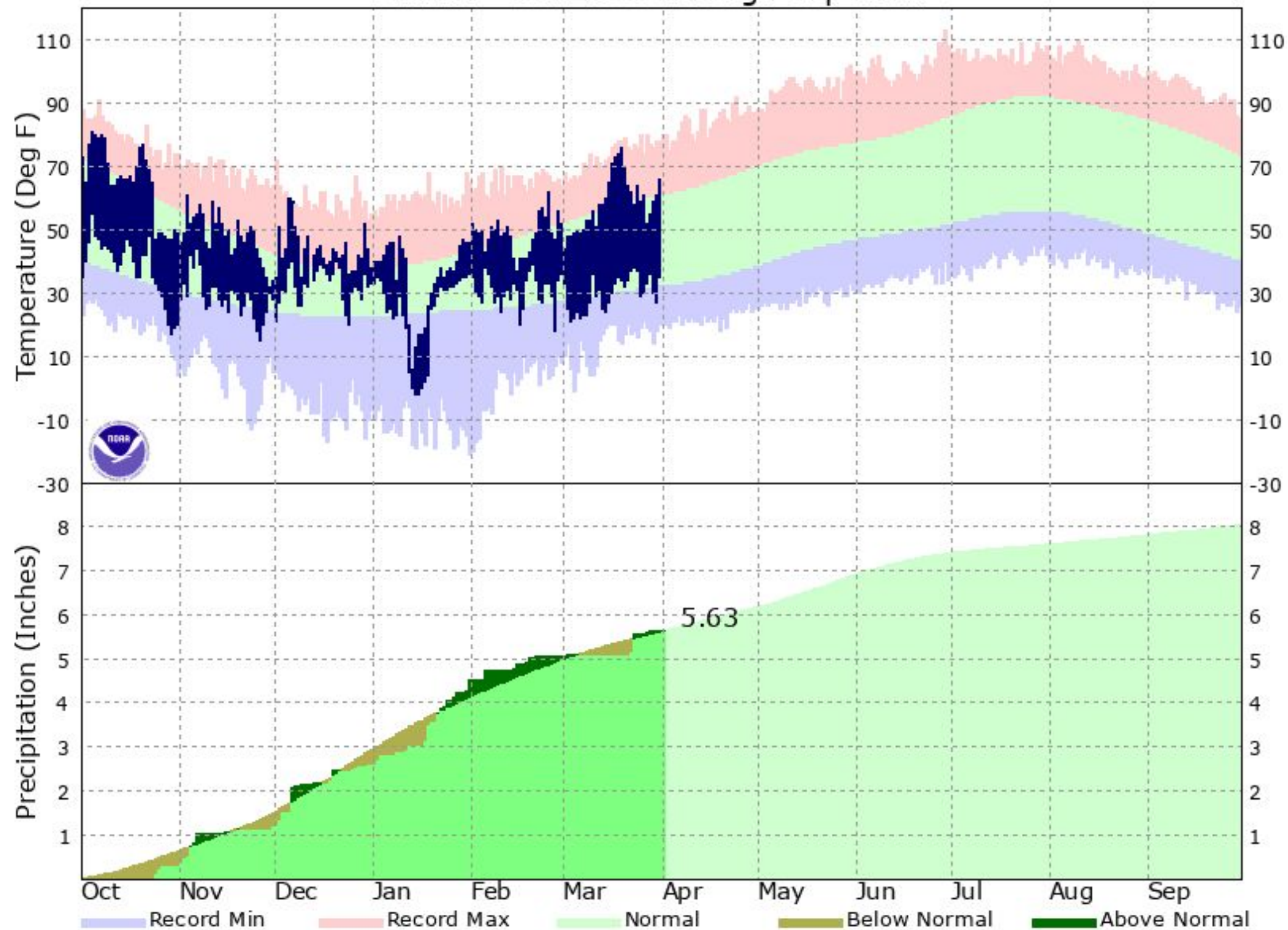


# Water Year Climate Graphs - Yakima ASOS

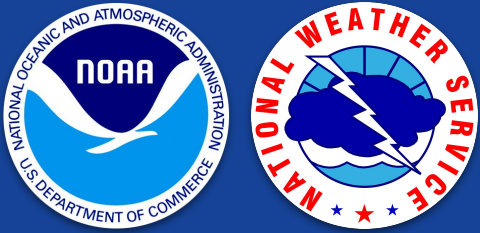
Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

KYKM - Oct 2023 Through Sep 2024

So far this water year, Yakima has recorded near-normal precipitation.



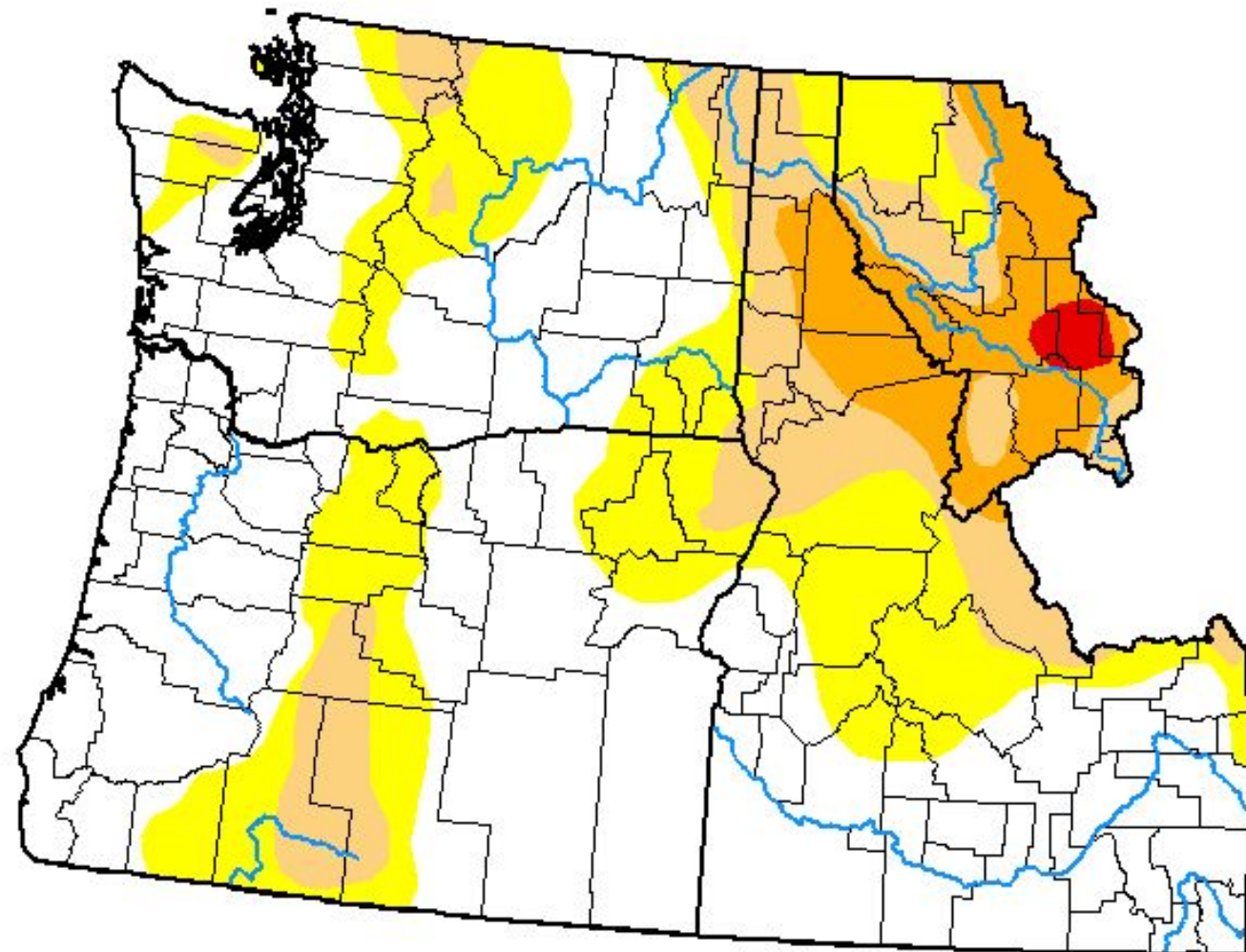




# Drought Status: Current Conditions

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

## U.S. Drought Monitor Pacific Northwest DEWS



**March 26, 2024**

(Released Thursday, Mar. 28, 2024)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	56.49	43.51	20.12	7.85	0.54	0.00
<b>Last Week</b> 03-19-2024	55.27	44.73	20.20	7.85	0.54	0.00
<b>3 Months Ago</b> 12-26-2023	44.06	55.94	24.20	4.48	0.00	0.00
<b>Start of Calendar Year</b> 01-02-2024	44.06	55.94	26.37	4.48	0.00	0.00
<b>Start of Water Year</b> 09-26-2023	34.73	65.27	50.11	28.69	7.48	0.00
<b>One Year Ago</b> 03-28-2023	17.76	82.24	36.91	12.83	2.20	0.50

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:

Brad Rippey  
U.S. Department of Agriculture



[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

D4 (Exceptional Drought): None.

D3 (Extreme Drought): None.

D2 (Severe Drought): None.

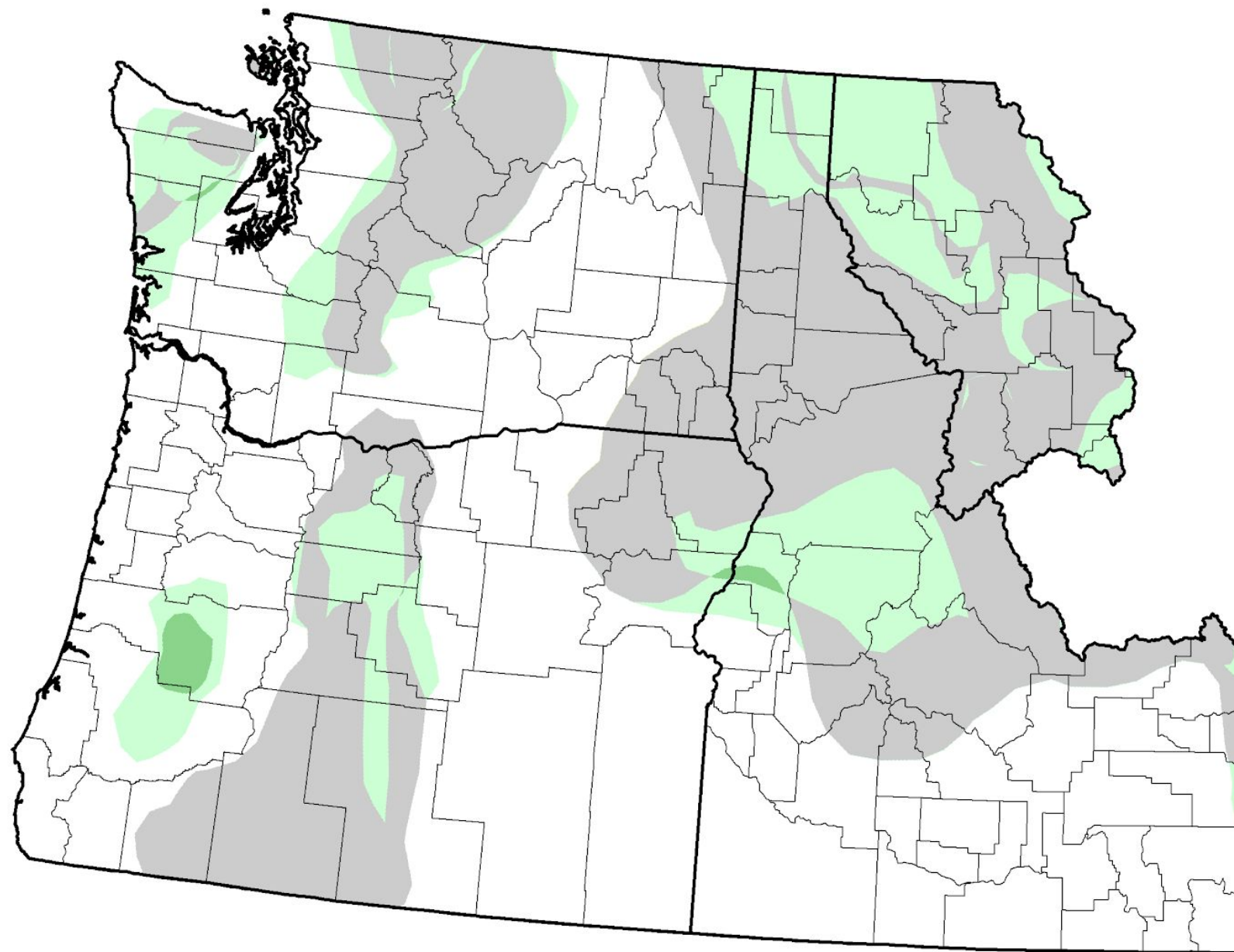
D1 (Moderate Drought): Portions of Wallowa, Union, Sherman, Wasco, Jefferson, Deschutes, and Crook counties.

D0 (Abnormally Dry): Portions of Umatilla, Union, Wallowa, Grant, Wasco, Sherman, Gilliam, Jefferson, Deschutes, Crook, Wheeler, Klickitat, Yakima, Kittitas, Walla Walla, and Columbia counties.



# Drought Status: 4-Week Change

U.S. Drought Monitor Class Change - Pacific Northwest DEWS  
4 Week



March 26, 2024  
compared to  
February 27, 2024

[droughtmonitor.unl.edu](http://droughtmonitor.unl.edu)



- 5 Class Degradation
- 4 Class Degradation
- 3 Class Degradation
- 2 Class Degradation
- 1 Class Degradation
- No Change
- 1 Class Improvement
- 2 Class Improvement
- 3 Class Improvement
- 4 Class Improvement
- 5 Class Improvement

Improved: Portions of Yakima, Kittitas, Wasco, Sherman, Jefferson, Deschutes, Crook, Union, and Wallowa counties.

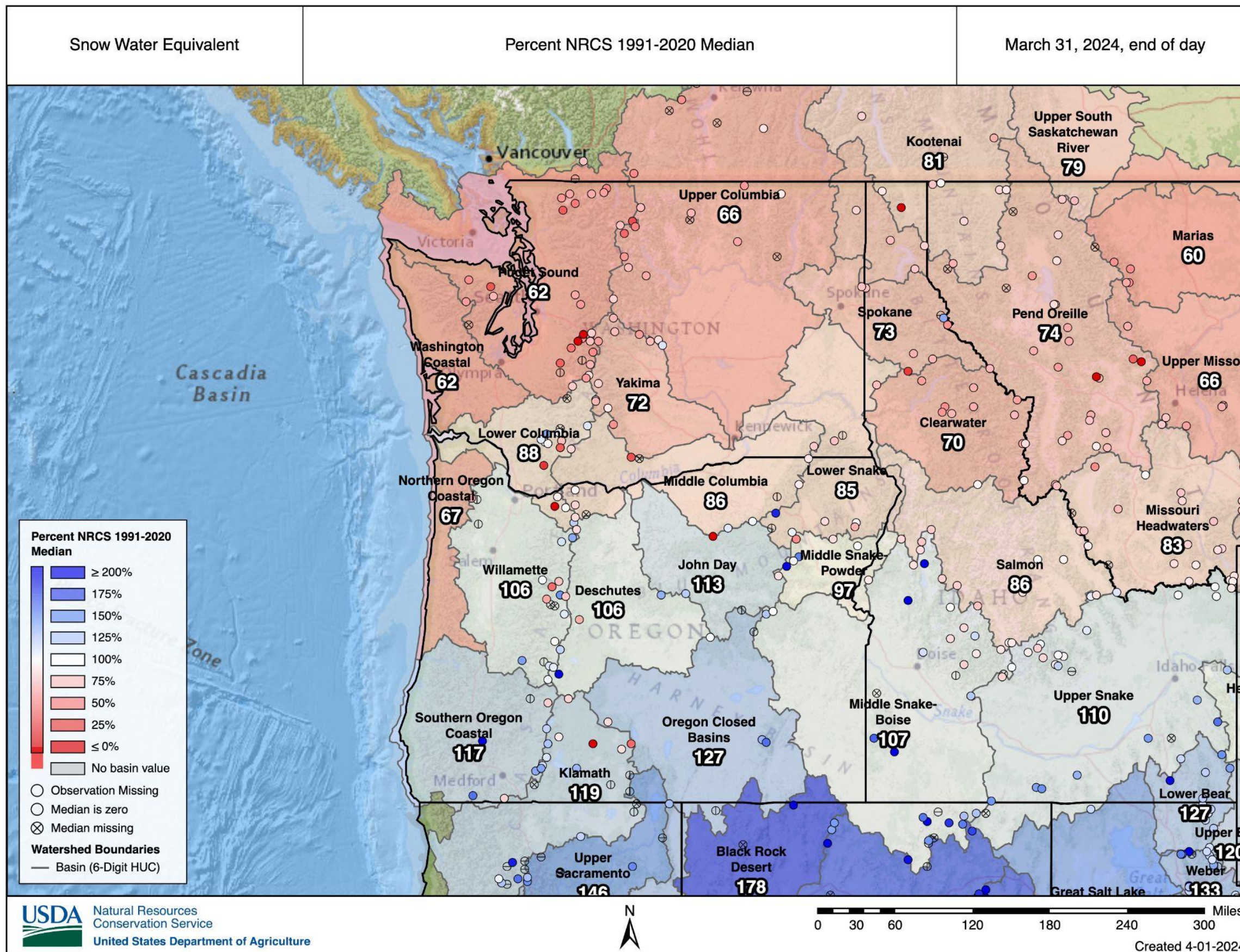
Degraded: None.

No change: Portions of Columbia, Walla Walla, Umatilla, Union, Wallowa, Grant, Deschutes, Crook, Jefferson, Sherman, Gilliam, Wasco, Yakima, Kittitas, and Klickitat counties.



# SNOTEL Snow Water Equivalent (SWE) - Basin/Watershed Map

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10



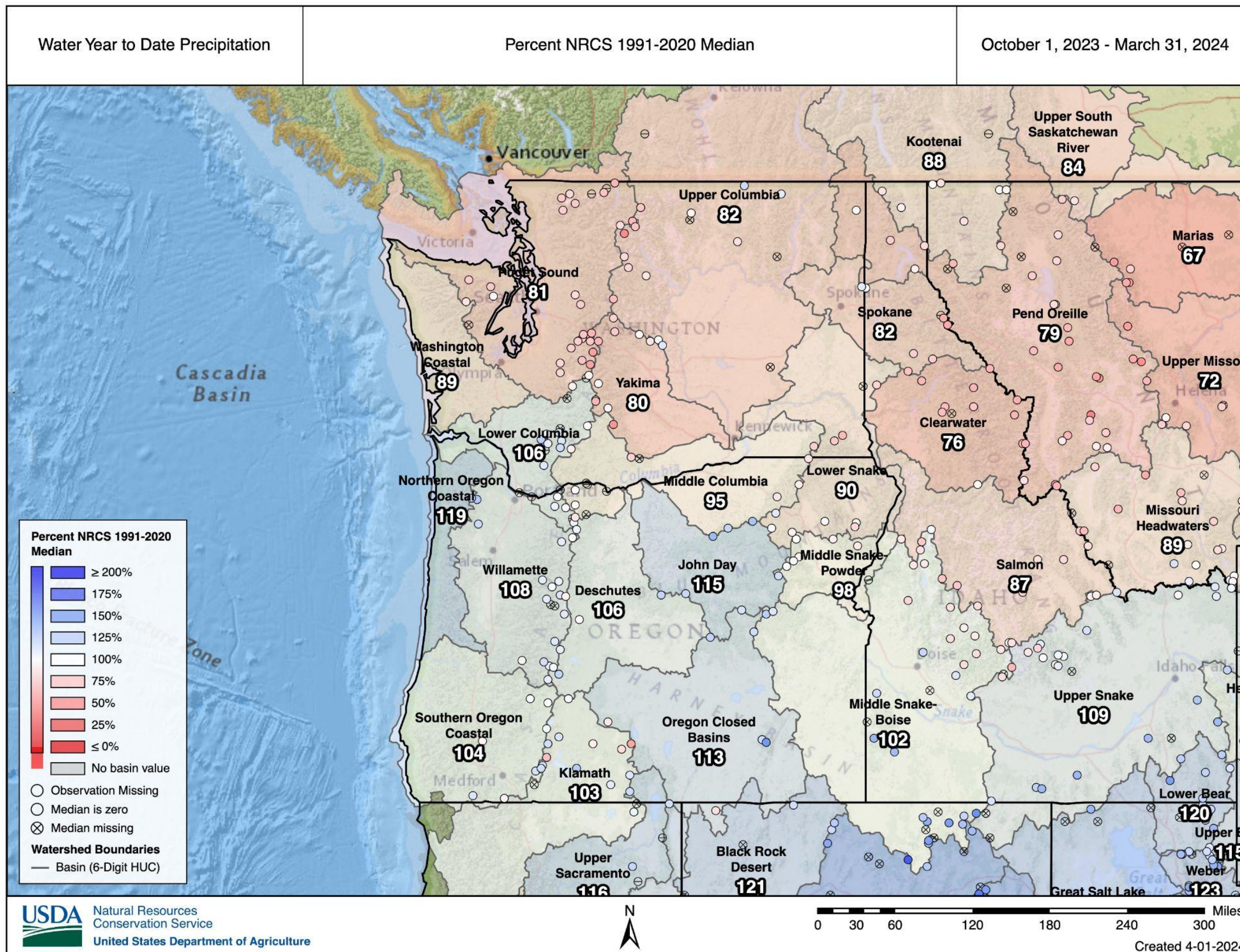
Basin-wide snow water equivalent (SWE) percent of 1991-2020 median is shown on the left. Basin names are displayed, and individual SNOTELs are represented as circles.

SWE is near to above normal for central and southeast Oregon, near to below normal for northeast Oregon, and below normal for Washington.



# SNOTEL Precipitation - Basin/Watershed Map

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10



Basin-wide SNOTEL precipitation for the water year to date (October 1, 2023-March 31, 2024) relative to the 1991-2020 median is shown on the left. Basin names are displayed, and individual SNOTELs are represented as circles.

For the water year to date, precipitation has been mostly near or above normal for areas south of approximately 45N latitude. Conversely, precipitation has been mostly near or below normal north of roughly 45N latitude.



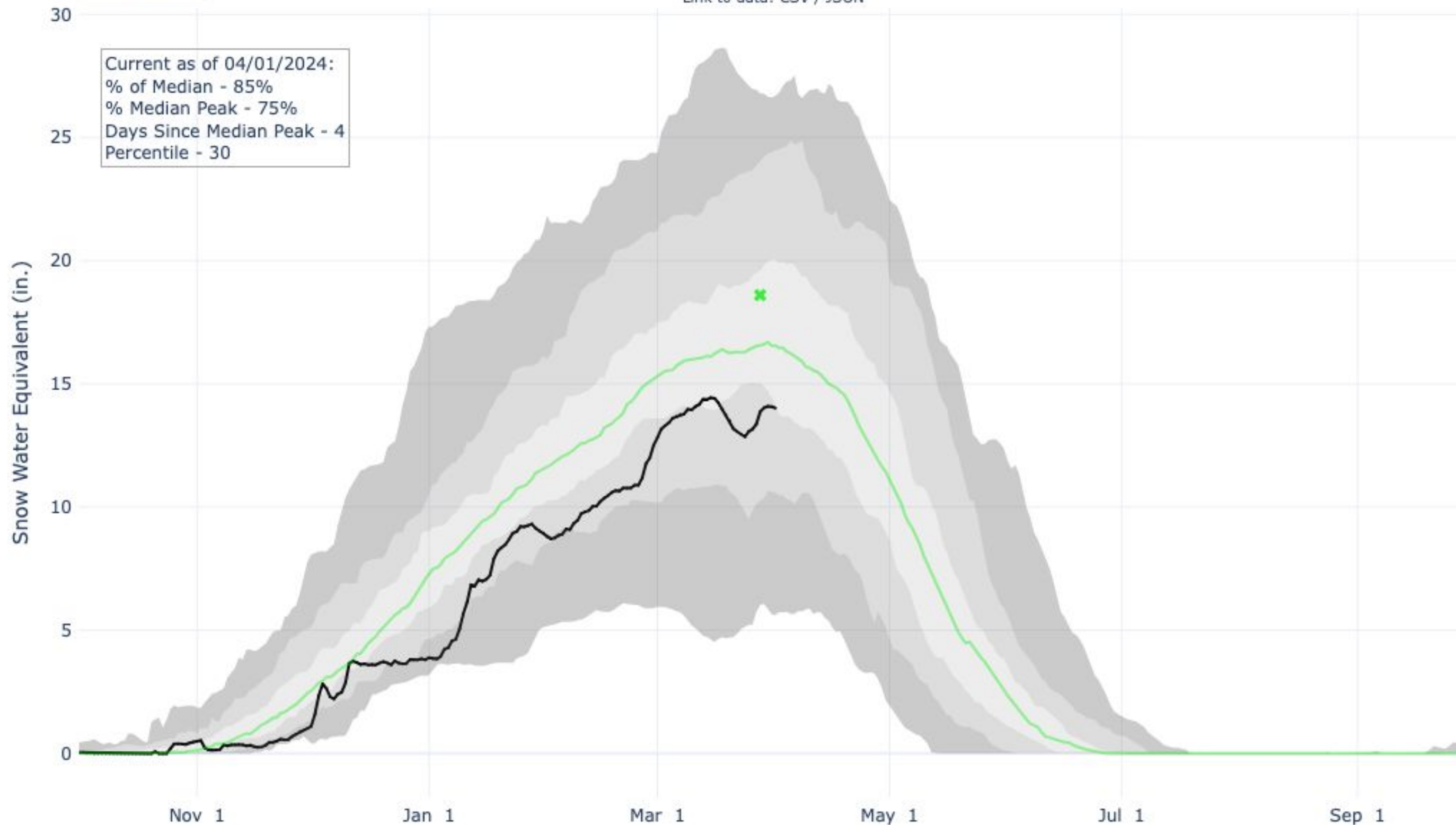
# SNOTEL Snow Water Equivalent (SWE) - Lower Snake Watershed

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

## SNOW WATER EQUIVALENT IN LOWER SNAKE

Reset Range

[Link to data: CSV / JSON](#)



Station List

- ✖ Median Peak SWE
- Median ('91-'20)
- Stats. Shading
- 2024 (16 sites)

Shading breaks at the 10th, 30th, 50th, 70th, and 90th percentiles for the period of record.

The black line indicates the current water year, while the green line shows the median value, and the green "x" is the median peak SWE magnitude and date.





# SNOTEL Snow Water Equivalent (SWE) - Middle Columbia Watershed

## SNOW WATER EQUIVALENT IN MIDDLE COLUMBIA

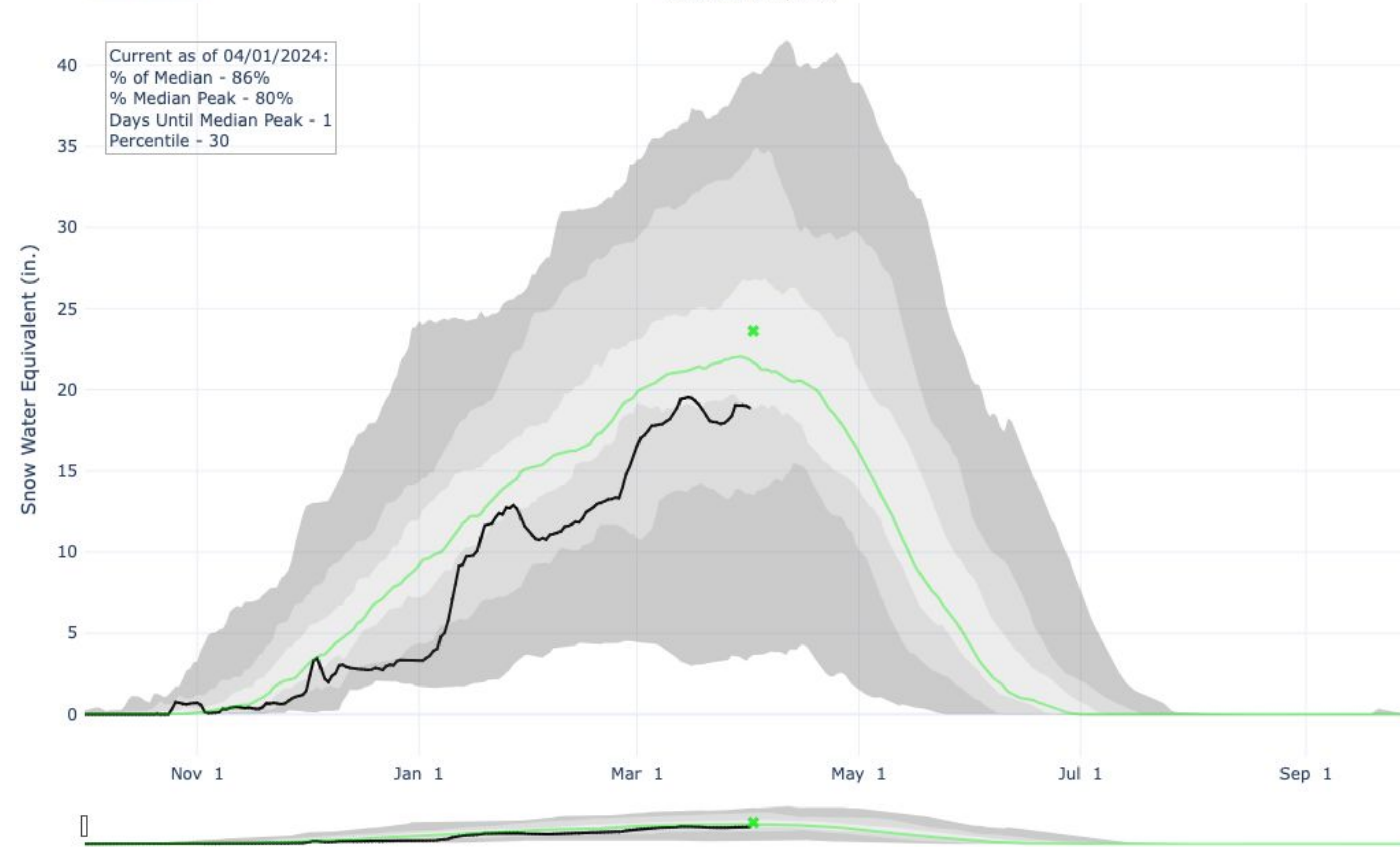
Reset Range

Link to data: CSV / JSON

Current as of 04/01/2024:  
% of Median - 86%  
% Median Peak - 80%  
Days Until Median Peak - 1  
Percentile - 30

Station List

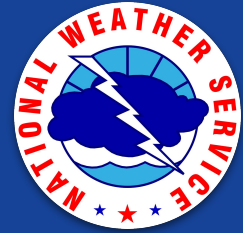
- ✖ Median Peak SWE
- Median ('91-'20)
- Stats. Shading
- 2024 (20 sites)



Shading breaks at the 10th, 30th, 50th, 70th, and 90th percentiles for the period of record.

The black line indicates the current water year, while the green line shows the median value, and the green "x" is the median peak SWE magnitude and date.





# SNOTEL Snow Water Equivalent (SWE) - Yakima Watershed

## SNOW WATER EQUIVALENT IN YAKIMA

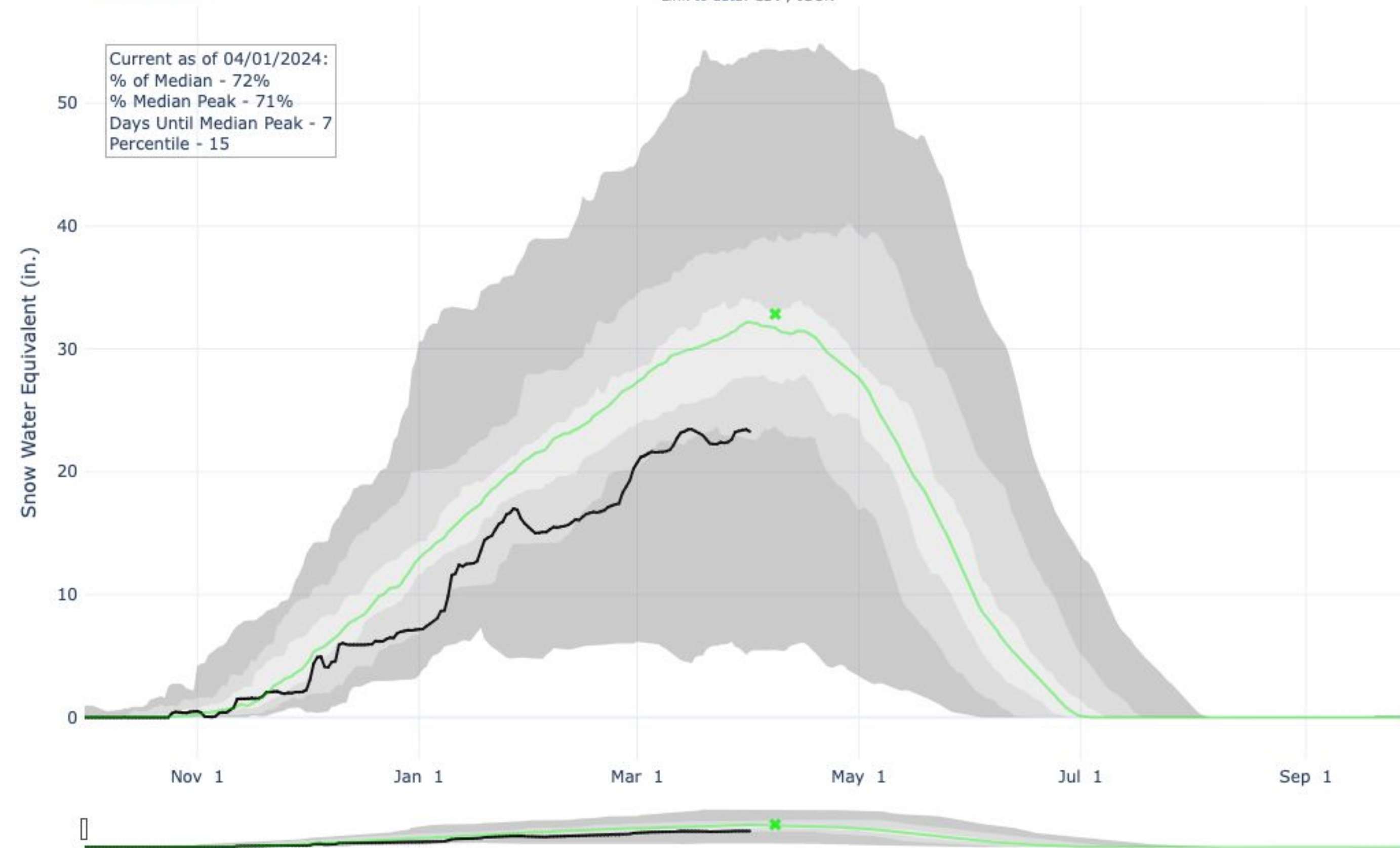
Reset Range

[Link to data: CSV / JSON](#)

Current as of 04/01/2024:  
% of Median - 72%  
% Median Peak - 71%  
Days Until Median Peak - 7  
Percentile - 15

Station List

- Median Peak SWE
- Median ('91-'20)
- Stats. Shading
- 2024 (17 sites)



Shading breaks at the 10th, 30th, 50th, 70th, and 90th percentiles for the period of record.

The black line indicates the current water year, while the green line shows the median value, and the green "x" is the median peak SWE magnitude and date.





# SNOTEL Snow Water Equivalent (SWE) - Deschutes Watershed

## SNOW WATER EQUIVALENT IN DESCHUTES

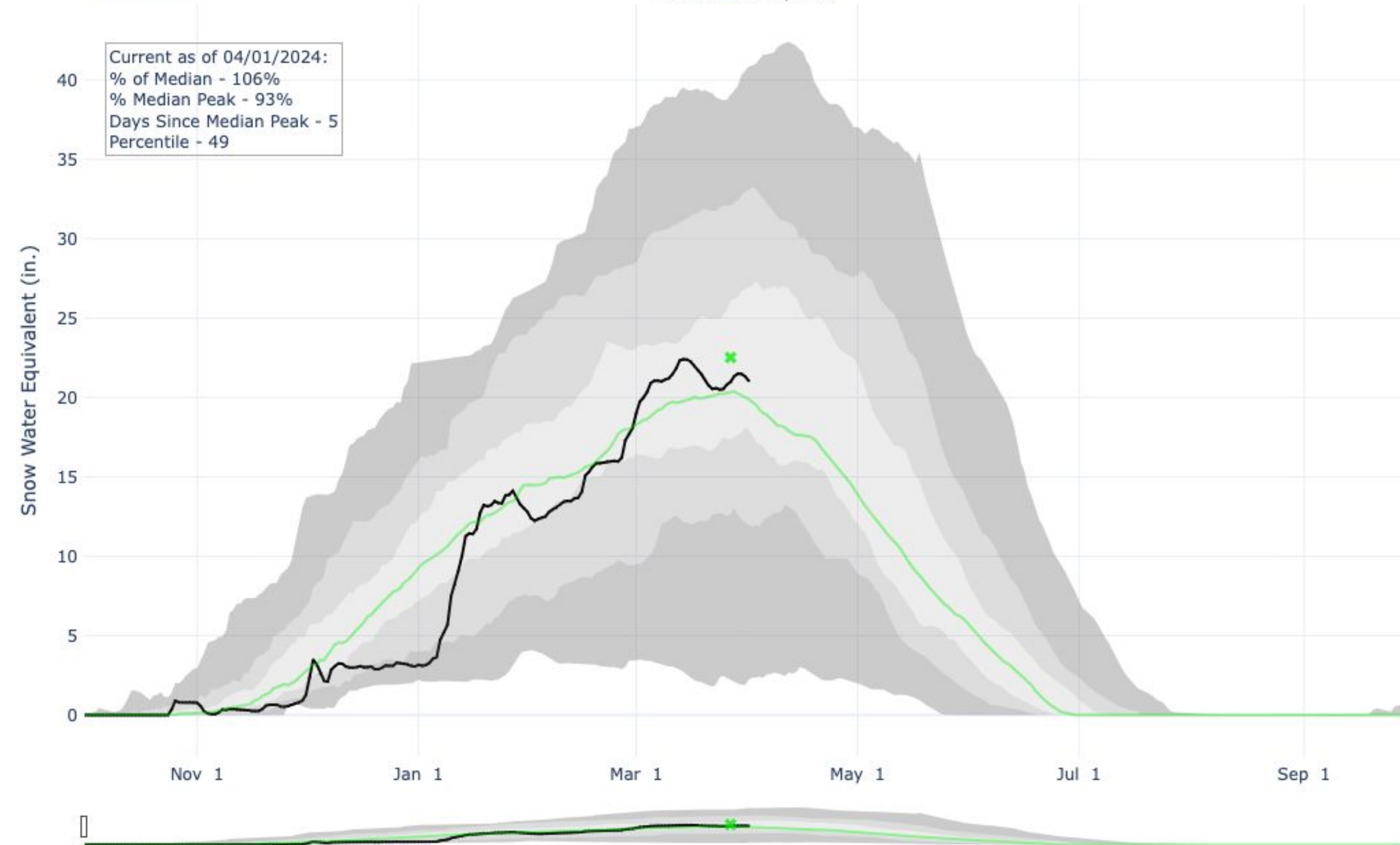
Reset Range

[Link to data: CSV / JSON](#)

Current as of 04/01/2024:  
% of Median - 106%  
% Median Peak - 93%  
Days Since Median Peak - 5  
Percentile - 49

Station List

- ✱ Median Peak SWE
- Median ('91-'20)
- Stats. Shading
- 2024 (18 sites)

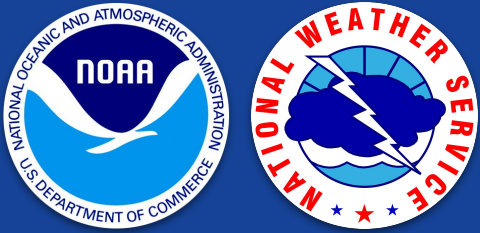


Shading breaks at the 10th, 30th, 50th, 70th, and 90th percentiles for the period of record.

The black line indicates the current water year, while the green line shows the median value, and the green "x" is the median peak SWE magnitude and date.







# SNOTEL Snow Water Equivalent (SWE) - John Day Watershed

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

## SNOW WATER EQUIVALENT IN JOHN DAY

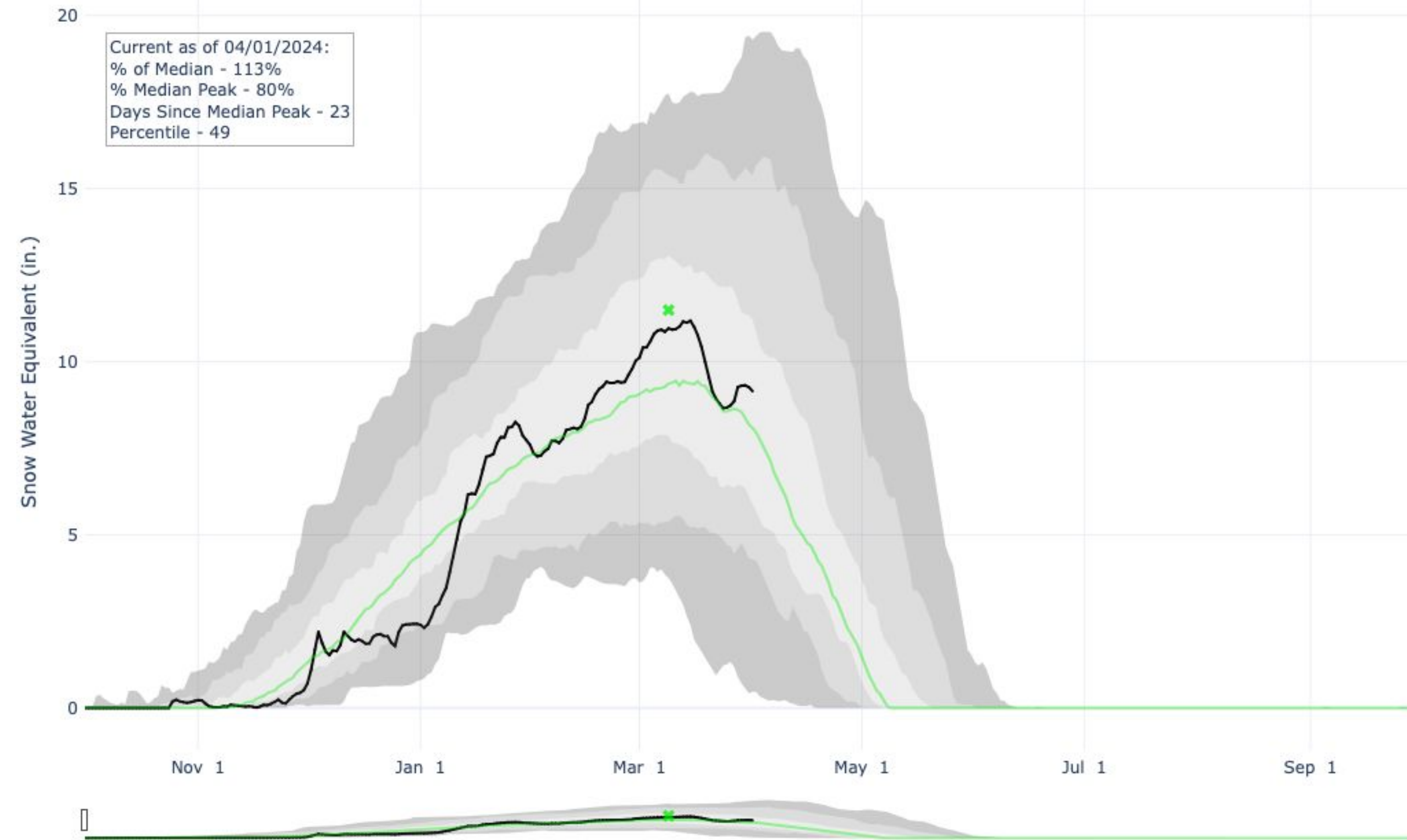
Reset Range

[Link to data: CSV / JSON](#)

Current as of 04/01/2024:  
% of Median - 113%  
% Median Peak - 80%  
Days Since Median Peak - 23  
Percentile - 49

Station List

- ✖ Median Peak SWE
- Median ('91-'20)
- Stats. Shading
- 2024 (13 sites)



Shading breaks at the 10th, 30th, 50th, 70th, and 90th percentiles for the period of record.

The black line indicates the current water year, while the green line shows the median value, and the green "x" is the median peak SWE magnitude and date.





# Summary

Weather Forecast Office  
Pendleton, OR  
Wednesday, April 10

- Near- to slightly above-normal temperatures were recorded for NWS Pendleton's forecast area during March.
- Near- to below-normal precipitation was observed for NWS Pendleton's forecast area during March.
- Snow water equivalent (SWE) increased during early March for all basins/watersheds in NWS Pendleton's forecast area. A mid-month warm and dry stretch saw a decline in SWE, followed by a small increase in SWE towards the end of the month as a cooler, more unsettled weather pattern brought additional snowfall to the mountains.



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