

# Month in Review - September 2024

Weather Forecast Office

Pendleton, OR

Monday, October 28

Photo taken by off-duty NWS Pendleton staff in southern Morrow County, 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 - September 2024

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

- Mean (average) temperatures were predominantly above normal (relative to the 1991-2020 climate reference period) across the forecast area during September.
- Generally below- or much-below-normal precipitation was recorded across the western half of the forecast area including the Cascades and their eastern slopes, central Oregon, and portions of the Columbia Basin. A mix of above- and below-normal precipitation was observed for the Blue Mountains region, overall near normal.
- Drought conditions improved in eastern Kittitas County with no change elsewhere.



# Local Storm Reports (LSRs) - September 2024

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

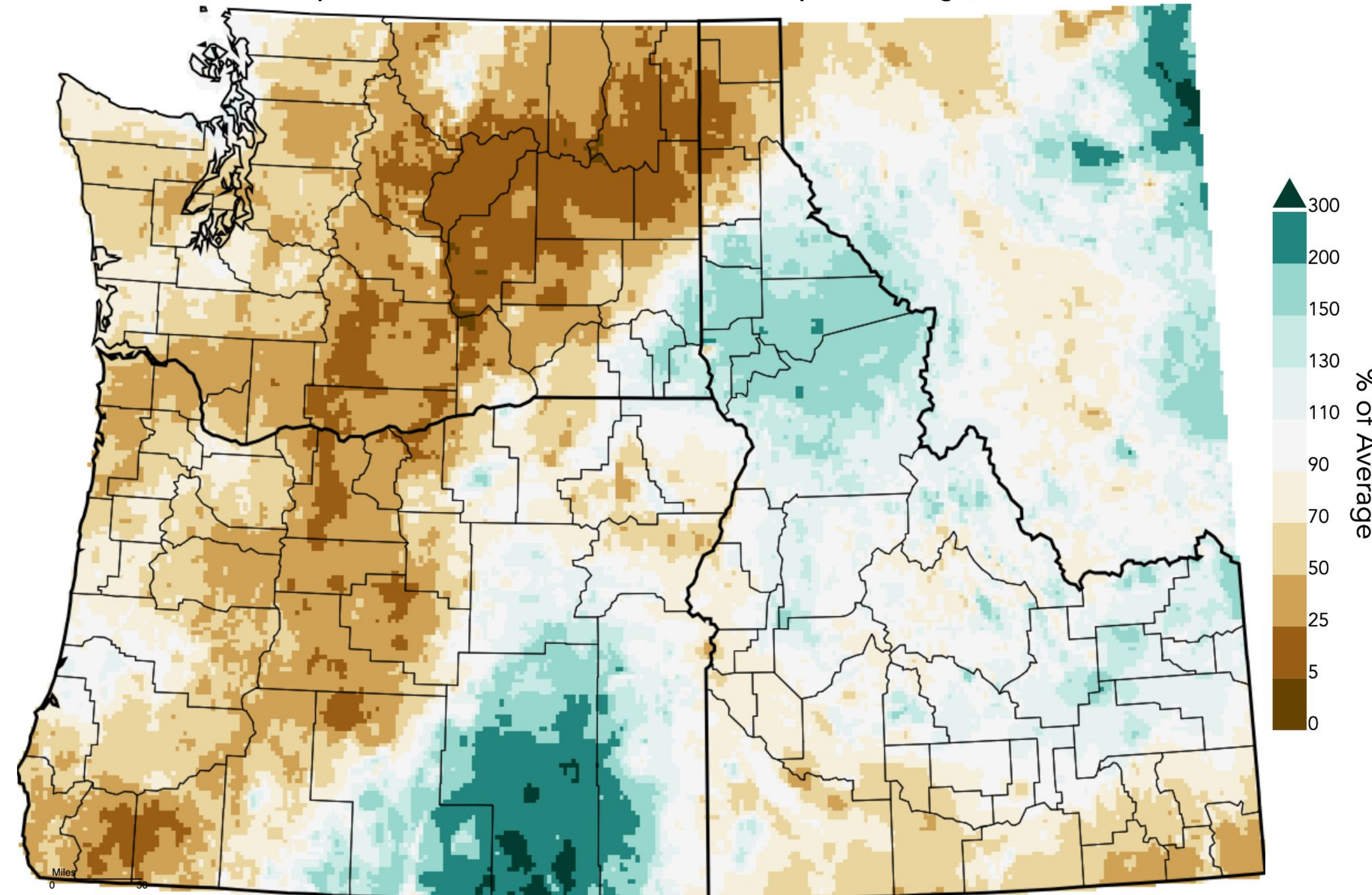
- Iowa State University's website provides a nice graphical interface for viewing archived local storm reports. See the following link for September's local storm reports in NWS Pendleton's forecast area:  
<https://mesonet.agron.iastate.edu/lsr/#PDT/202409010700/202410010700/011011>
- For recent LSRs, <https://www.weather.gov/source/crh/lsrcmap.html?sid=pdt> or <https://mesonet.agron.iastate.edu/lsr/#PDT/YYYYMMDDHHmm/YYYYMMDDHHmm/111111> and change the time to your desired date range.



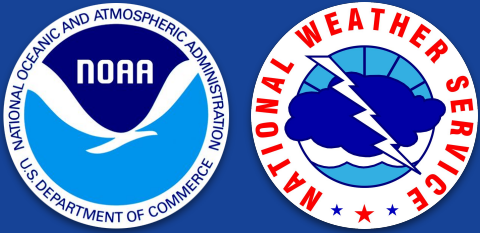
# Precipitation Anomaly - September 2024

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

**Pacific Northwest - Precipitation**  
September 2024, Percent of 1991-2020 Computed Average(s)



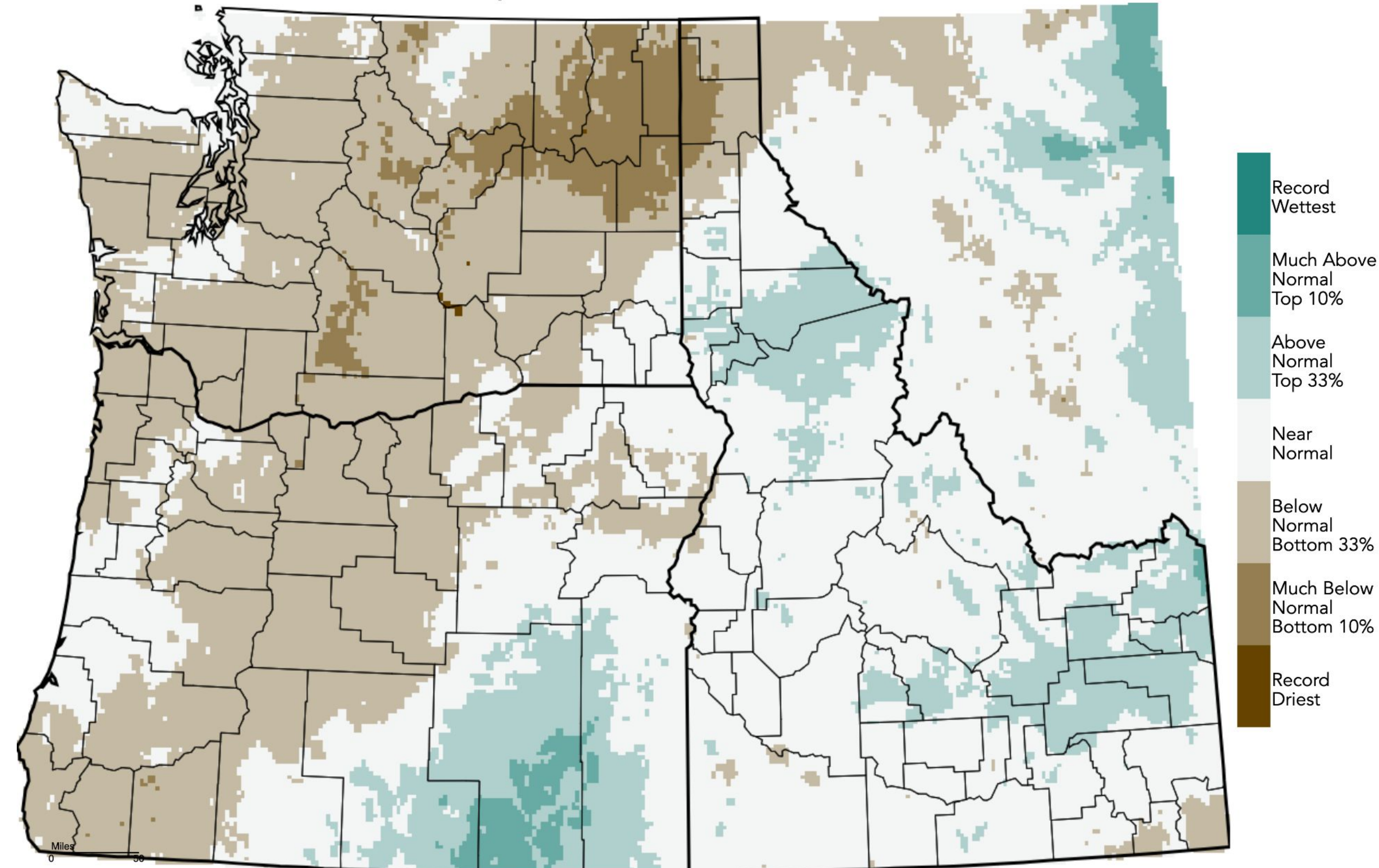
Generally below- or much-below-normal precipitation was recorded across the western half of the forecast area including the Cascades and their eastern slopes, central Oregon, and portions of the Columbia Basin. A mix of above- and below-normal precipitation was observed for the Blue Mountains region, overall near normal.



# Precipitation Percentiles - September 2024

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

Pacific Northwest - Precipitation  
September 2024, Percentile



Rankings (1895-2024)

For historical context, a mix of below-normal (bottom 33% of all years), near-normal, and above-normal (top 33% of all years) precipitation was observed during September across the Blue Mountains region and their adjoining foothills. Precipitation was below (bottom 33% of all years) or much below normal (bottom 10% of all years) for much of the Columbia Basin, central Oregon, and Cascades.

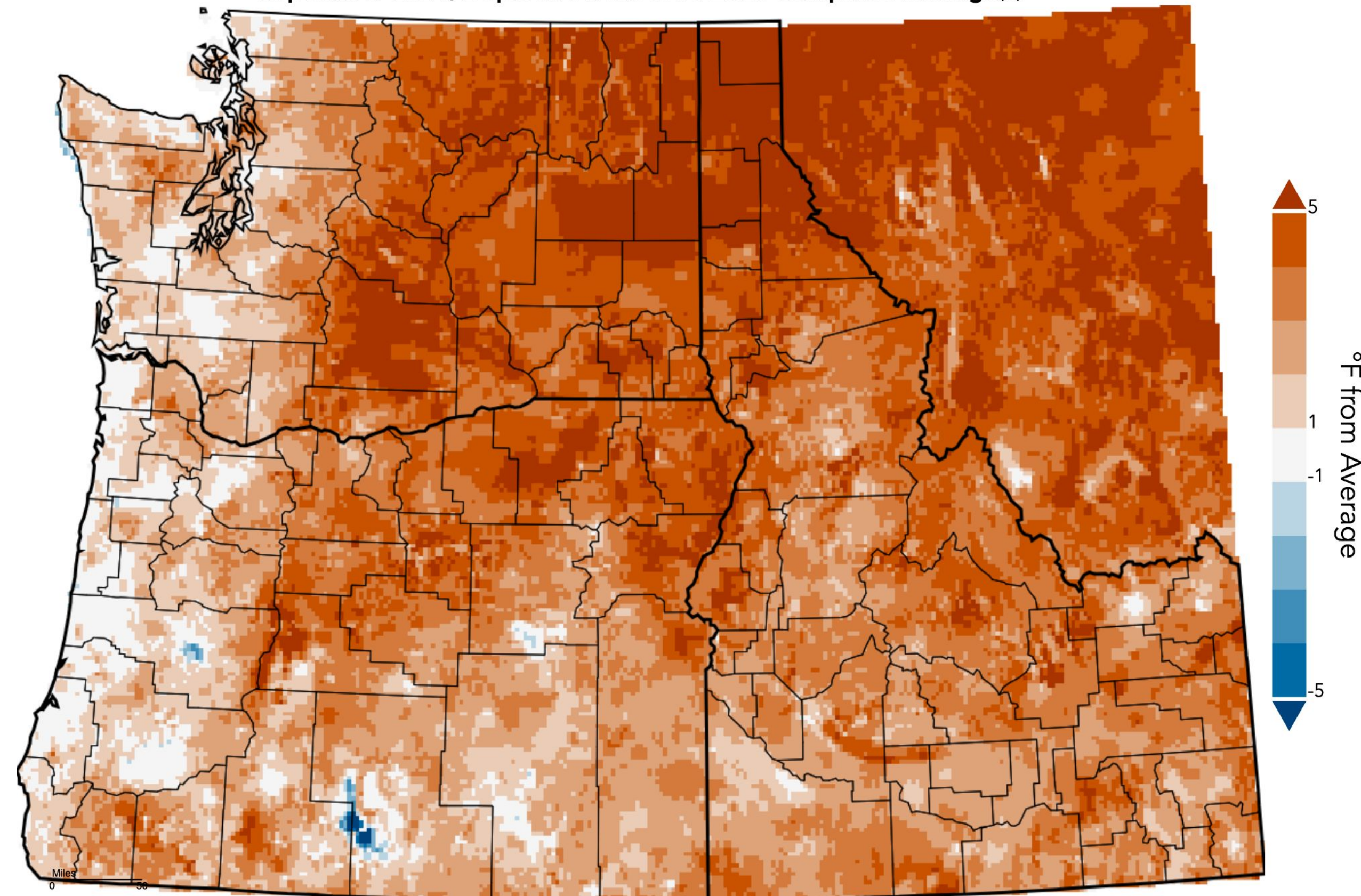


# Temperature Anomaly - September 2024

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

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

Mean (average) temperatures were predominantly above normal (relative to the 1991-2020 climate reference period) across the forecast area during September.



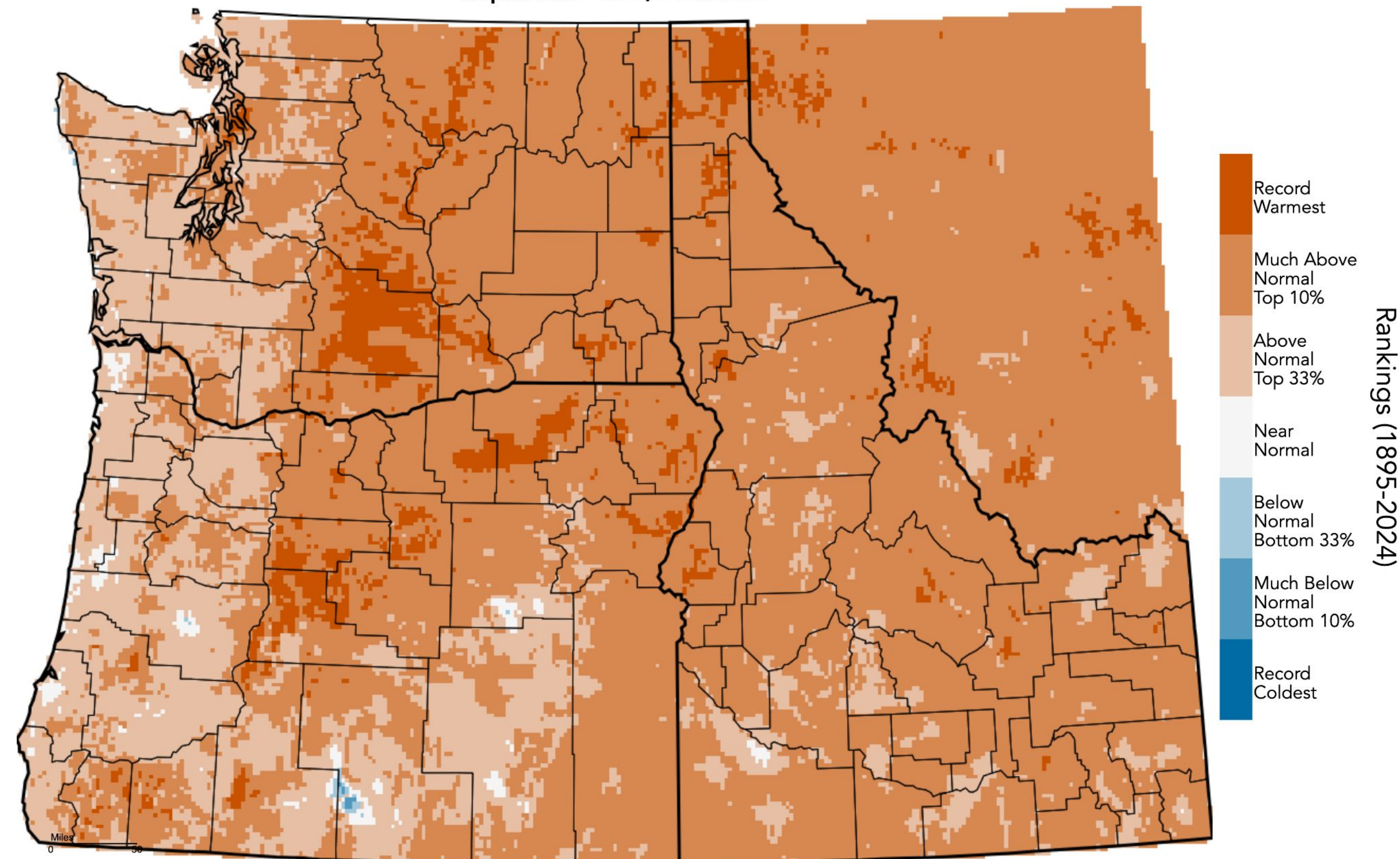


# Temperature Percentiles - September 2024

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

Pacific Northwest - Mean Temperature  
September 2024, Percentile

For historical context, mean (average) temperatures during September were mostly much above normal (top 10% of all years) with a few pockets of record warmest.



WestWide Drought Tracker, WRCC, Climate Engine, Data Source: PRISM Prelim, created 05 Oct 2024



# September 2024 Climate Statistics - Pendleton ASOS

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

Variable (units)	Observed	Normal	Departure
<b>Warmest Daily Maximum Temperature (F)</b>	<b>100</b>	<b>-</b>	<b>-</b>
<b>Average Daily Maximum Temperature (F)</b>	<b>82.6</b>	<b>78.0</b>	<b>4.6</b>
<b>Average Daily Minimum Temperature (F)</b>	<b>54.0</b>	<b>49.0</b>	<b>5.0</b>
<b>Coolest Daily Minimum Temperature (F)</b>	<b>35</b>	<b>-</b>	<b>-</b>
<b>Average Temperature (F)</b>	<b>68.3</b>	<b>63.5</b>	<b>4.8</b>
<b>Total Precipitation (inches)</b>	<b>0.42</b>	<b>0.53</b>	<b>-0.11</b>
<b>Total Snow (inches)</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

Variable (units)	Value	Day
<b>Daily Record High Temperature (F)</b>	<b>100</b>	<b>5th</b>
<b>Daily Record Low Temperature (F)</b>		
<b>Daily Record Precipitation (inches)</b>		

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





# September 2024 Climate Statistics - Walla Walla ASOS

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

Variable (units)	Observed	Normal	Departure
<b>Warmest Daily Maximum Temperature (F)</b>	<b>99*</b>	<b>-</b>	<b>-</b>
<b>Average Daily Maximum Temperature (F)</b>	<b>81.5*</b>	<b>78.5</b>	<b>3.0*</b>
<b>Average Daily Minimum Temperature (F)</b>	<b>56.7*</b>	<b>53.9</b>	<b>2.8*</b>
<b>Coolest Daily Minimum Temperature (F)</b>	<b>40*</b>	<b>-</b>	<b>-</b>
<b>Average Temperature (F)</b>	<b>69.1*</b>	<b>66.2</b>	<b>2.9*</b>
<b>Total Precipitation (inches)</b>	<b>0.60*</b>	<b>0.64</b>	<b>-0.04*</b>

\*Note: Data were unavailable 9/16-9/17 at Walla Walla airport (ALW).

Variable (units)	Value	Day
<b>Daily Record High Temperature (F)</b>		
<b>Daily Record Low Temperature (F)</b>		
<b>Daily Record Precipitation (inches)</b>		



# September 2024 Climate Statistics - The Dalles ASOS

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

Variable (units)	Observed	Normal	Departure
<b>Warmest Daily Maximum Temperature (F)</b>	<b>99</b>	<b>-</b>	<b>-</b>
<b>Average Daily Maximum Temperature (F)</b>	<b>82.8</b>	<b>80.4</b>	<b>2.4</b>
<b>Average Daily Minimum Temperature (F)</b>	<b>55.8</b>	<b>52.2</b>	<b>3.6</b>
<b>Coolest Daily Minimum Temperature (F)</b>	<b>40</b>	<b>-</b>	<b>-</b>
<b>Average Temperature (F)</b>	<b>69.3</b>	<b>66.3</b>	<b>3.0</b>
<b>Total Precipitation (inches)</b>	<b>0.03</b>	<b>0.33</b>	<b>-0.30</b>

Variable (units)	Value	Day
<b>Daily Record High Temperature (F)</b>	<b>99</b>	<b>6th</b>
<b>Daily Record Low Temperature (F)</b>		
<b>Daily Record Precipitation (inches)</b>		

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



# September 2024 Climate Statistics - Ellensburg ASOS

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

Variable (units)	Observed	Normal	Departure
Warmest Daily Maximum Temperature (F)	99R	-	-
Average Daily Maximum Temperature (F)	81.9	77.5	4.4
Average Daily Minimum Temperature (F)	51.5	46.9	4.6
Coolest Daily Minimum Temperature (F)	32	-	-
Average Temperature (F)	66.7	62.2	4.5
Total Precipitation (inches)	0.08	0.37	-0.29

Variable (units)	Value	Day
Daily Record High Temperature (F)	99, 98, 95	1st, 6th, 7th
Daily Record Low Temperature (F)		
Daily Record Precipitation (inches)		

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



# September 2024 Climate Statistics - Hermiston ASOS

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

Variable (units)	Observed	Normal	Departure
<b>Warmest Daily Maximum Temperature (F)</b>	<b>98</b>	<b>-</b>	<b>-</b>
<b>Average Daily Maximum Temperature (F)</b>	<b>84.2</b>	<b>81.2</b>	<b>3.0</b>
<b>Average Daily Minimum Temperature (F)</b>	<b>52.8</b>	<b>47.9</b>	<b>4.9</b>
<b>Coolest Daily Minimum Temperature (F)</b>	<b>36</b>	<b>-</b>	<b>-</b>
<b>Average Temperature (F)</b>	<b>68.5</b>	<b>64.6</b>	<b>3.9</b>
<b>Total Precipitation (inches)</b>	<b>0.41</b>	<b>0.33</b>	<b>0.08</b>

Variable (units)	Value	Day
<b>Daily Record High Temperature (F)</b>	<b>97, 91</b>	<b>5th, 24th</b>
<b>Daily Record Low Temperature (F)</b>		
<b>Daily Record Precipitation (inches)</b>	<b>0.41</b>	<b>11th</b>



# September 2024 Climate Statistics - Meacham ASOS

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

Variable (units)	Observed	Normal	Departure
<b>Warmest Daily Maximum Temperature (F)</b>	<b>93</b>	<b>-</b>	<b>-</b>
<b>Average Daily Maximum Temperature (F)</b>	<b>73.8</b>	<b>70.3</b>	<b>3.5</b>
<b>Average Daily Minimum Temperature (F)</b>	<b>39.3</b>	<b>34.4</b>	<b>4.9</b>
<b>Coolest Daily Minimum Temperature (F)</b>	<b>23</b>	<b>-</b>	<b>-</b>
<b>Average Temperature (F)</b>	<b>56.6</b>	<b>52.4</b>	<b>4.2</b>
<b>Total Precipitation (inches)</b>	<b>1.28</b>	<b>1.21</b>	<b>0.07</b>

Variable (units)	Value	Day
<b>Daily Record High Temperature (F)</b>		
<b>Daily Record Low Temperature (F)</b>		
<b>Daily Record Precipitation (inches)</b>		

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

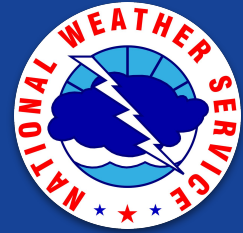


# September 2024 Climate Statistics - Pasco ASOS

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

Variable (units)	Observed	Normal	Departure
<b>Warmest Daily Maximum Temperature (F)</b>	<b>97</b>	<b>-</b>	<b>-</b>
<b>Average Daily Maximum Temperature (F)</b>	<b>84.6</b>	<b>80.9</b>	<b>3.7</b>
<b>Average Daily Minimum Temperature (F)</b>	<b>52.3</b>	<b>47.6</b>	<b>4.7</b>
<b>Coolest Daily Minimum Temperature (F)</b>	<b>33</b>	<b>-</b>	<b>-</b>
<b>Average Temperature (F)</b>	<b>68.5</b>	<b>64.2</b>	<b>4.3</b>
<b>Total Precipitation (inches)</b>	<b>0.11</b>	<b>0.31</b>	<b>-0.20</b>

Variable (units)	Value	Day
<b>Daily Record High Temperature (F)</b>		
<b>Daily Record Low Temperature (F)</b>		
<b>Daily Record Precipitation (inches)</b>		



# September 2024 Climate Statistics - Redmond ASOS

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

Variable (units)	Observed	Normal	Departure
<b>Warmest Daily Maximum Temperature (F)</b>	<b>98</b>	<b>-</b>	<b>-</b>
<b>Average Daily Maximum Temperature (F)</b>	<b>82.0</b>	<b>78.6</b>	<b>3.4</b>
<b>Average Daily Minimum Temperature (F)</b>	<b>43.7*</b>	<b>40.6</b>	<b>3.1*</b>
<b>Coolest Daily Minimum Temperature (F)</b>	<b>25</b>	<b>-</b>	<b>-</b>
<b>Average Temperature (F)</b>	<b>62.9*</b>	<b>59.6</b>	<b>3.3*</b>
<b>Total Precipitation (inches)</b>	<b>0.26</b>	<b>0.37</b>	<b>-0.11</b>

\*Note: Data were unavailable 9/14 at Redmond airport (RDM).

Variable (units)	Value	Day
<b>Daily Record High Temperature (F)</b>	<b>98, 95</b>	<b>6th, 24th</b>
<b>Daily Record Low Temperature (F)</b>		
<b>Daily Record Precipitation (inches)</b>		



# September 2024 Climate Statistics - Yakima ASOS

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

Variable (units)	Observed	Normal	Departure
<b>Warmest Daily Maximum Temperature (F)</b>	<b>98</b>	<b>-</b>	<b>-</b>
<b>Average Daily Maximum Temperature (F)</b>	<b>83.6</b>	<b>79.4</b>	<b>4.2</b>
<b>Average Daily Minimum Temperature (F)</b>	<b>49.7</b>	<b>44.9</b>	<b>4.8</b>
<b>Coolest Daily Minimum Temperature (F)</b>	<b>34</b>	<b>-</b>	<b>-</b>
<b>Average Temperature (F)</b>	<b>66.7</b>	<b>62.2</b>	<b>4.5</b>
<b>Total Precipitation (inches)</b>	<b>0.06</b>	<b>0.23</b>	<b>-0.17</b>

Variable (units)	Value	Day
<b>Daily Record High Temperature (F)</b>	<b>98, 95</b>	<b>6th, 7th</b>
<b>Daily Record Low Temperature (F)</b>		
<b>Daily Record Precipitation (inches)</b>		

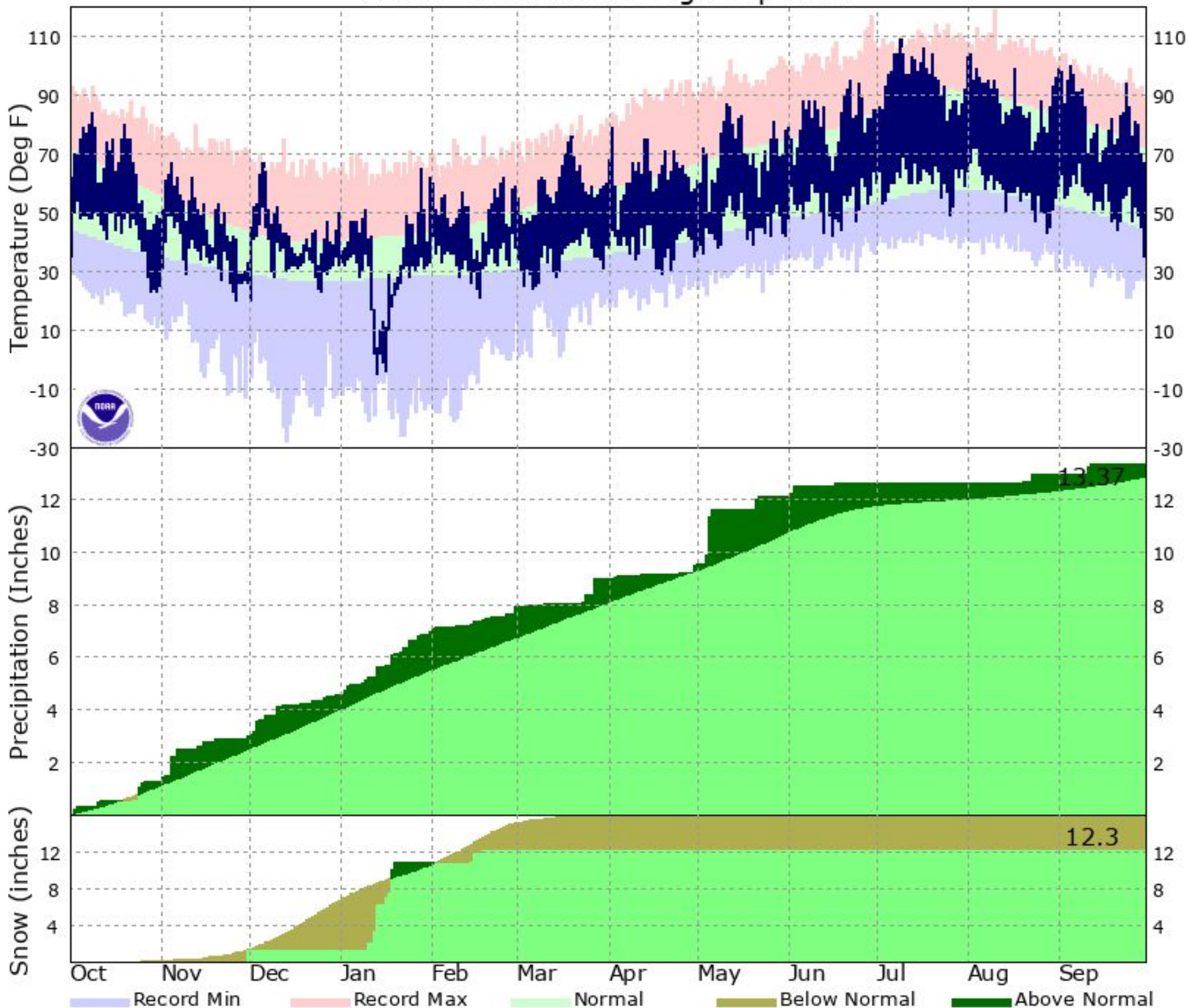




# Water Year Climate Graphs - Pendleton ASOS

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

KPDT - Oct 2023 Through Sep 2024



During the 2023-2024 water year, Pendleton observed slightly above-normal precipitation and below-normal snowfall.

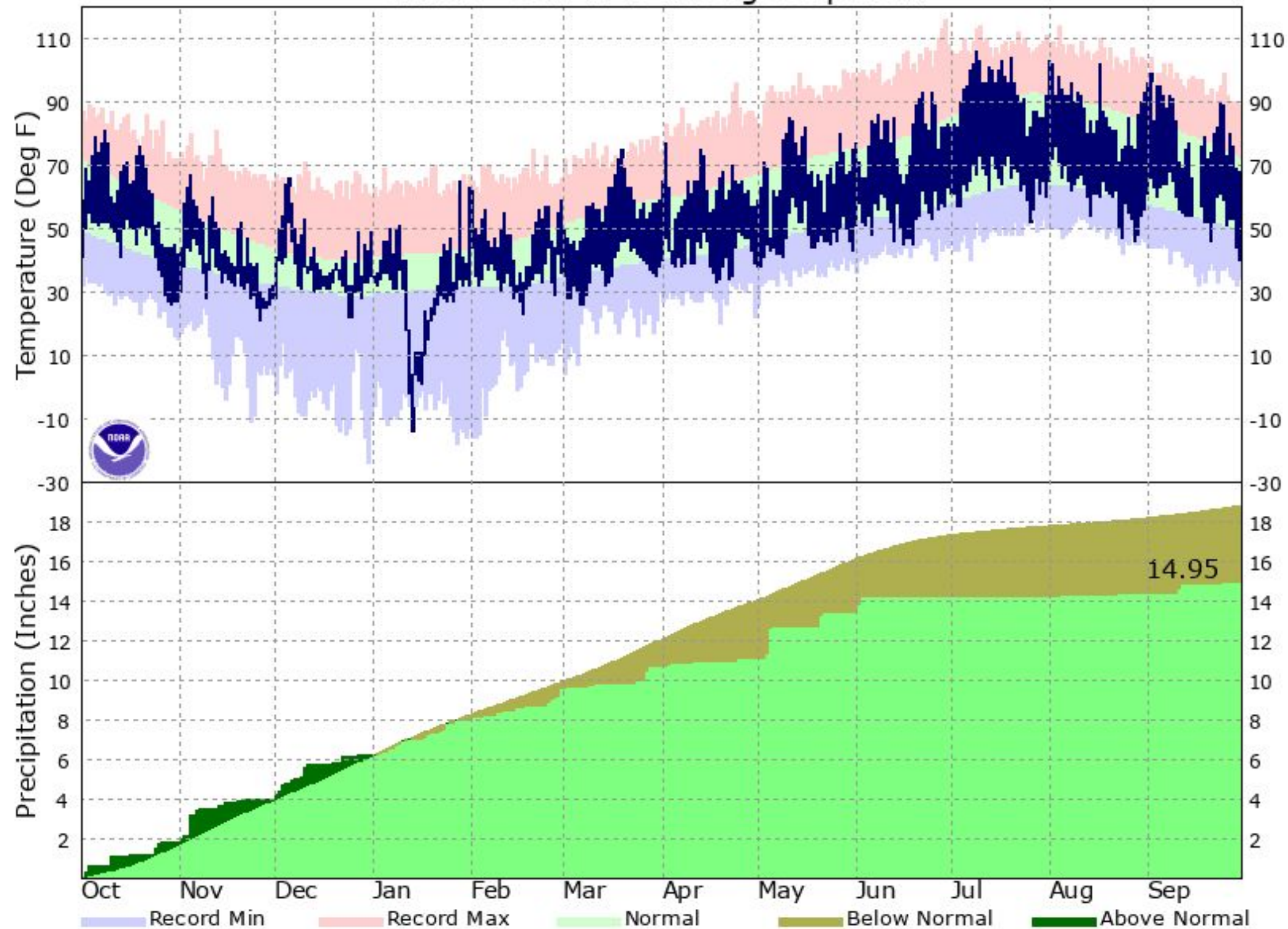
The latest graphs are located here:  
<https://www.weather.gov/pdt/CliPlot>



# Water Year Climate Graphs - Walla Walla ASOS

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

KALW - Oct 2023 Through Sep 2024



During the 2023-2024 water year, Walla Walla received below-normal precipitation.

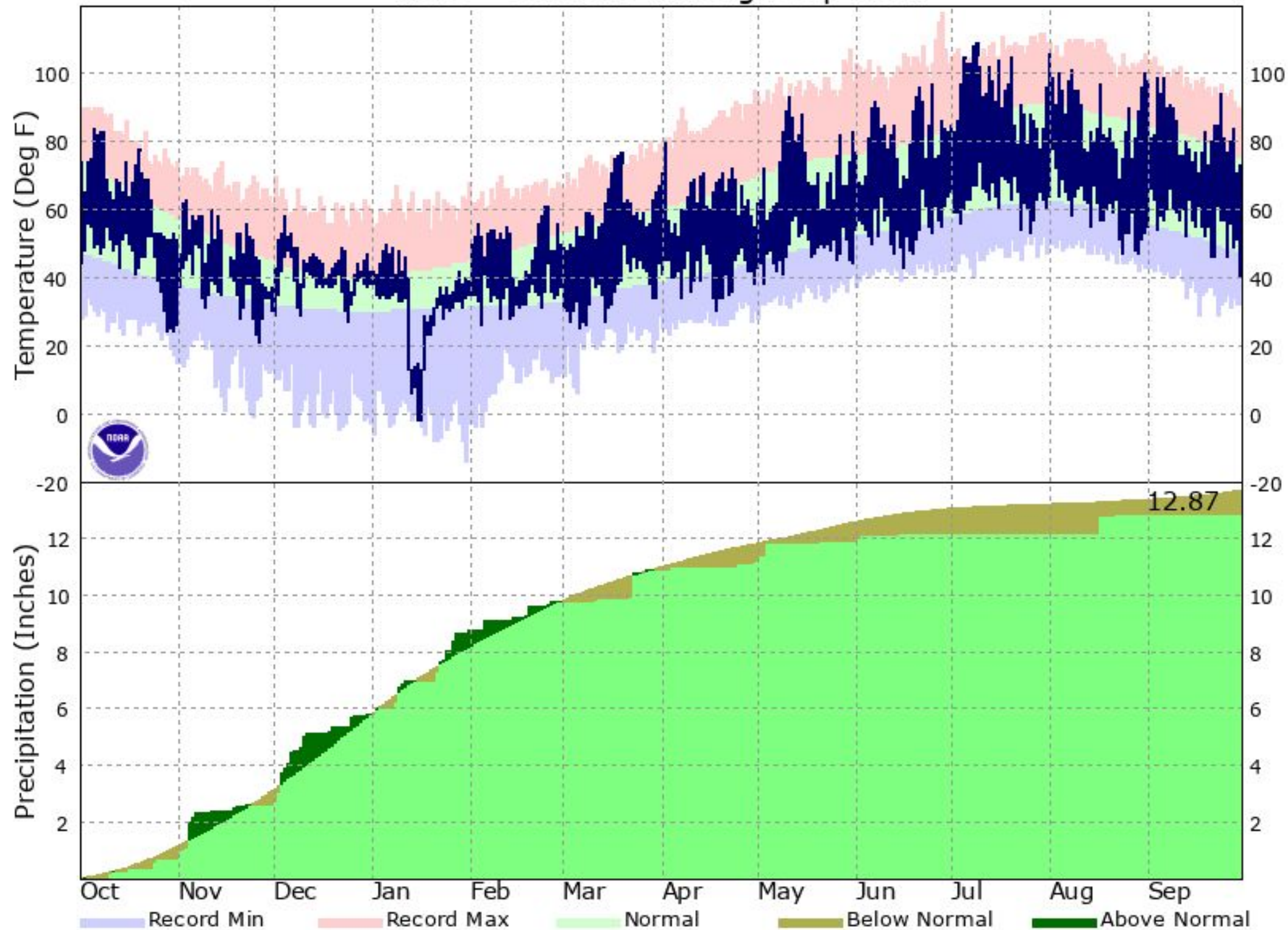
The latest graphs are located here:  
<https://www.weather.gov/pdt/CliPlot>



# Water Year Climate Graphs - The Dalles ASOS

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

KDLS - Oct 2023 Through Sep 2024



During the 2023-2024 water year, The Dalles recorded slightly below-normal precipitation.

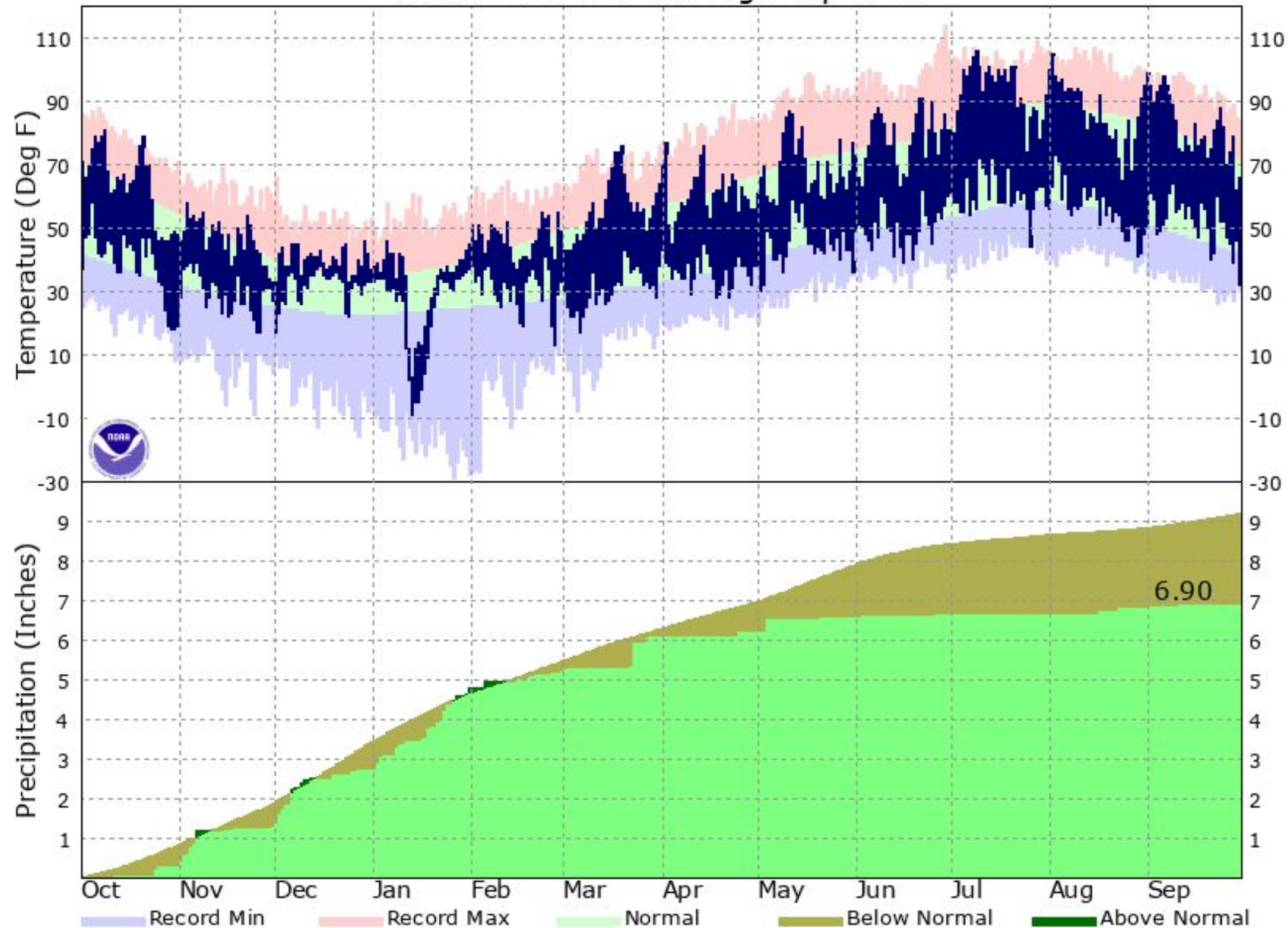
The latest graphs are located here:  
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# Water Year Climate Graphs - Ellensburg ASOS

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

KELN - Oct 2023 Through Sep 2024



During the 2023-2024 water year, Ellensburg observed below-normal precipitation.

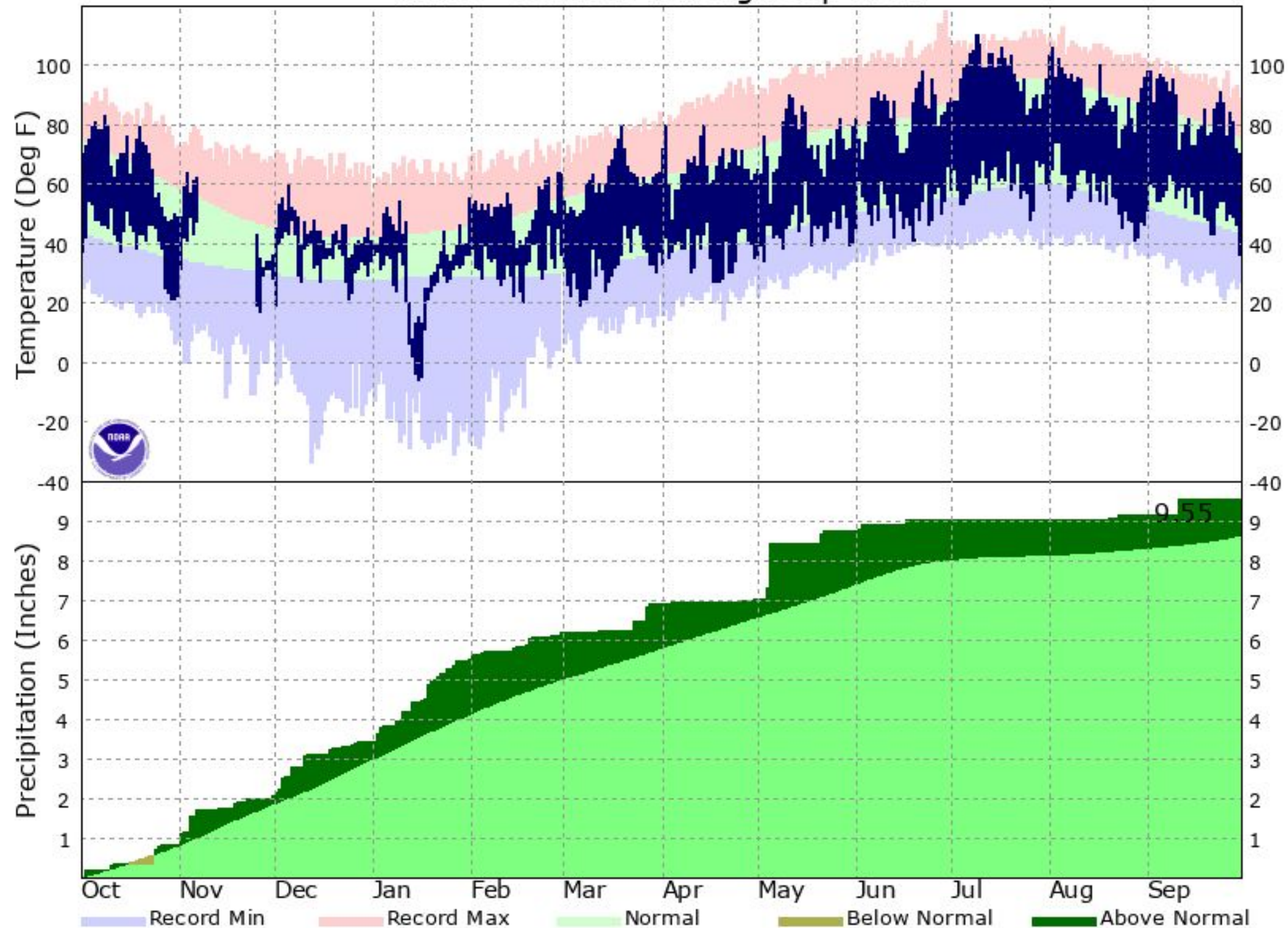
The latest graphs are located here:  
<https://www.weather.gov/pdt/CliPlot>



# Water Year Climate Graphs - Hermiston ASOS

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

KHRI - Oct 2023 Through Sep 2024



During the 2023-2024 water year, Hermiston recorded slightly above-normal precipitation.

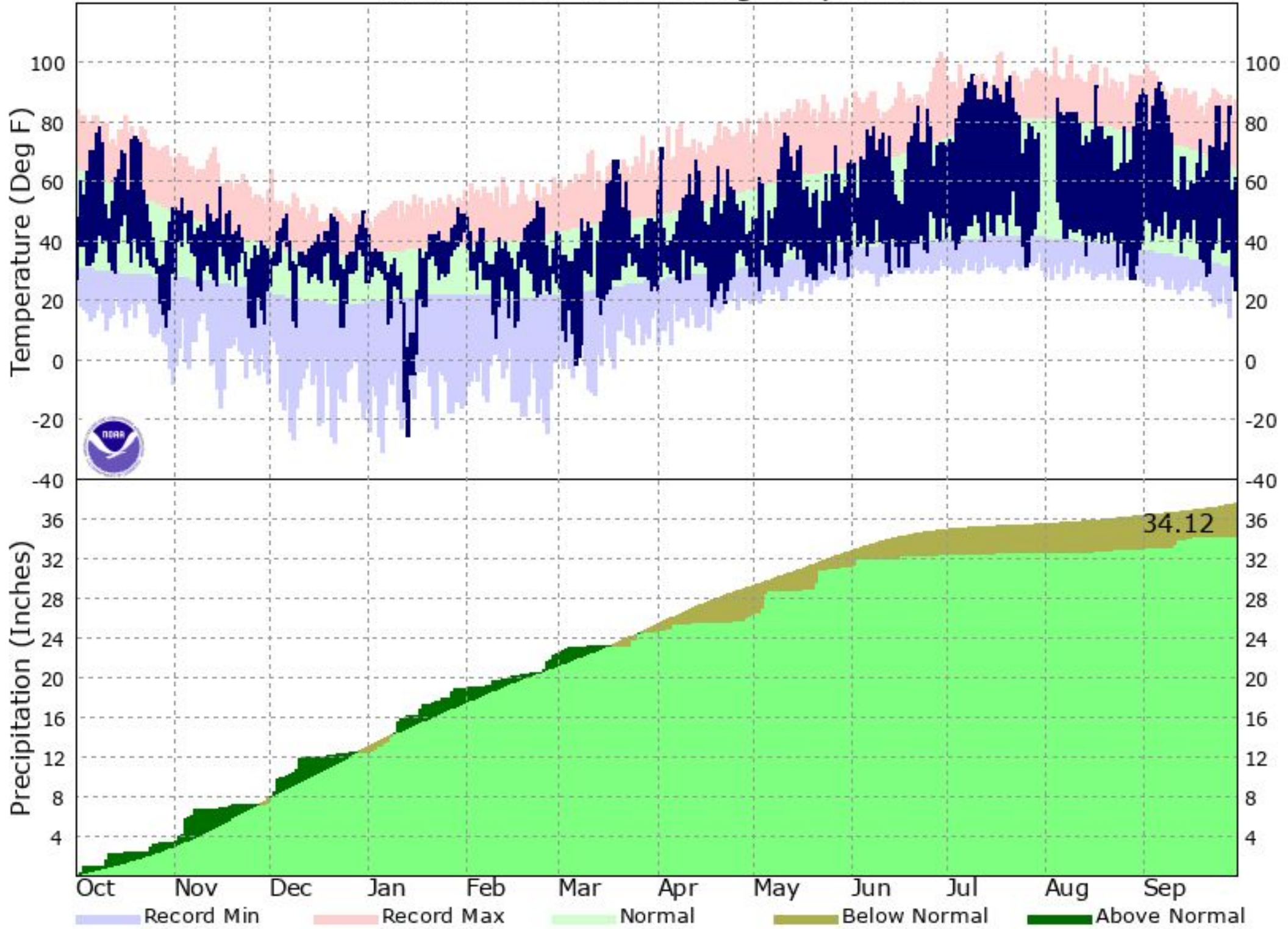
The latest graphs are located here:  
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# Water Year Climate Graphs - Meacham ASOS

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

KMEH - Oct 2023 Through Sep 2024



During the 2023-2024 water year, Meacham received slightly below-normal precipitation.

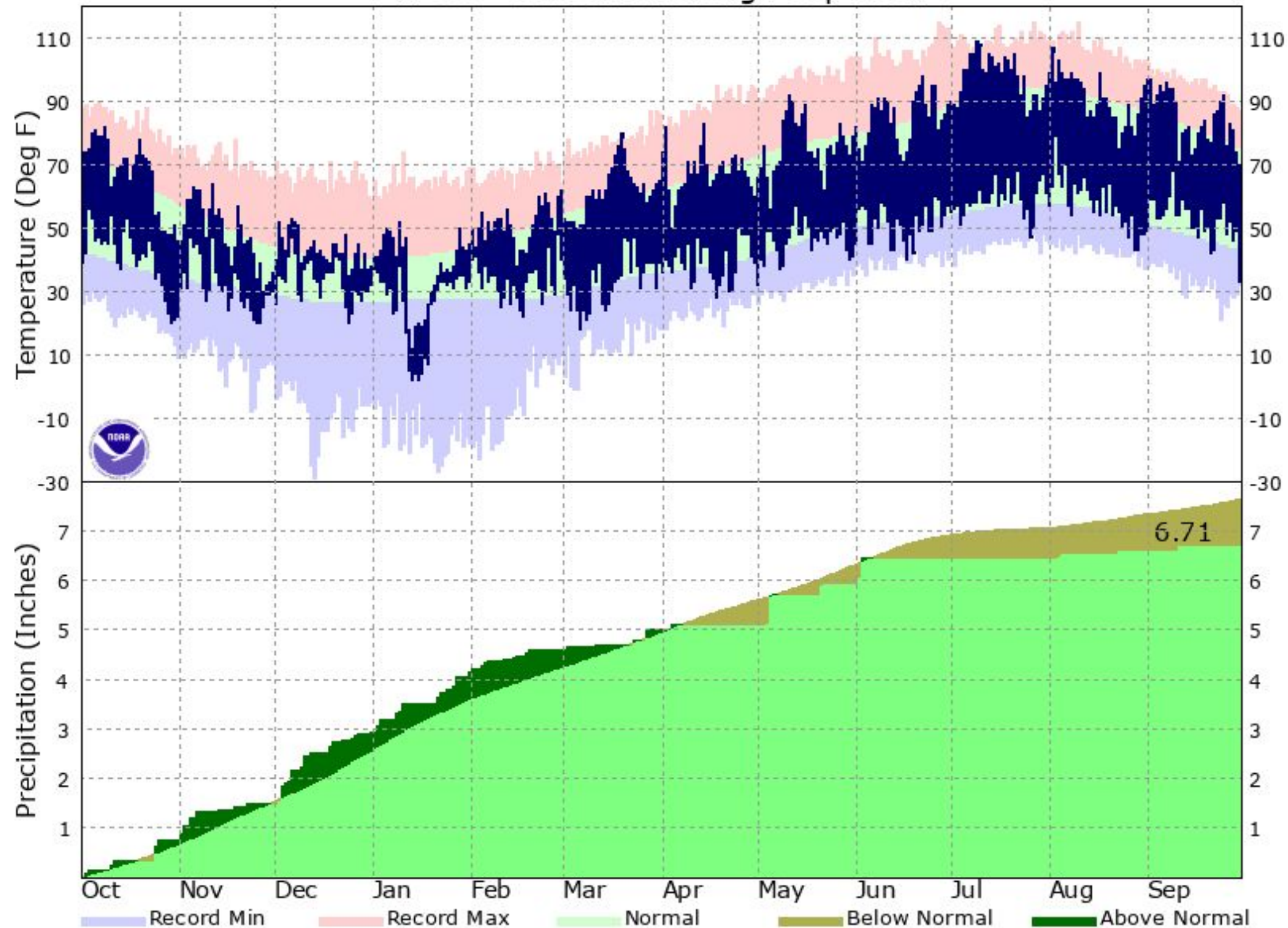
The latest graphs are located here:  
<https://www.weather.gov/pdt/CliPlot>



# Water Year Climate Graphs - Pasco ASOS

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

KPSC - Oct 2023 Through Sep 2024



During the 2023-2024 water year, Pasco observed below-normal precipitation.

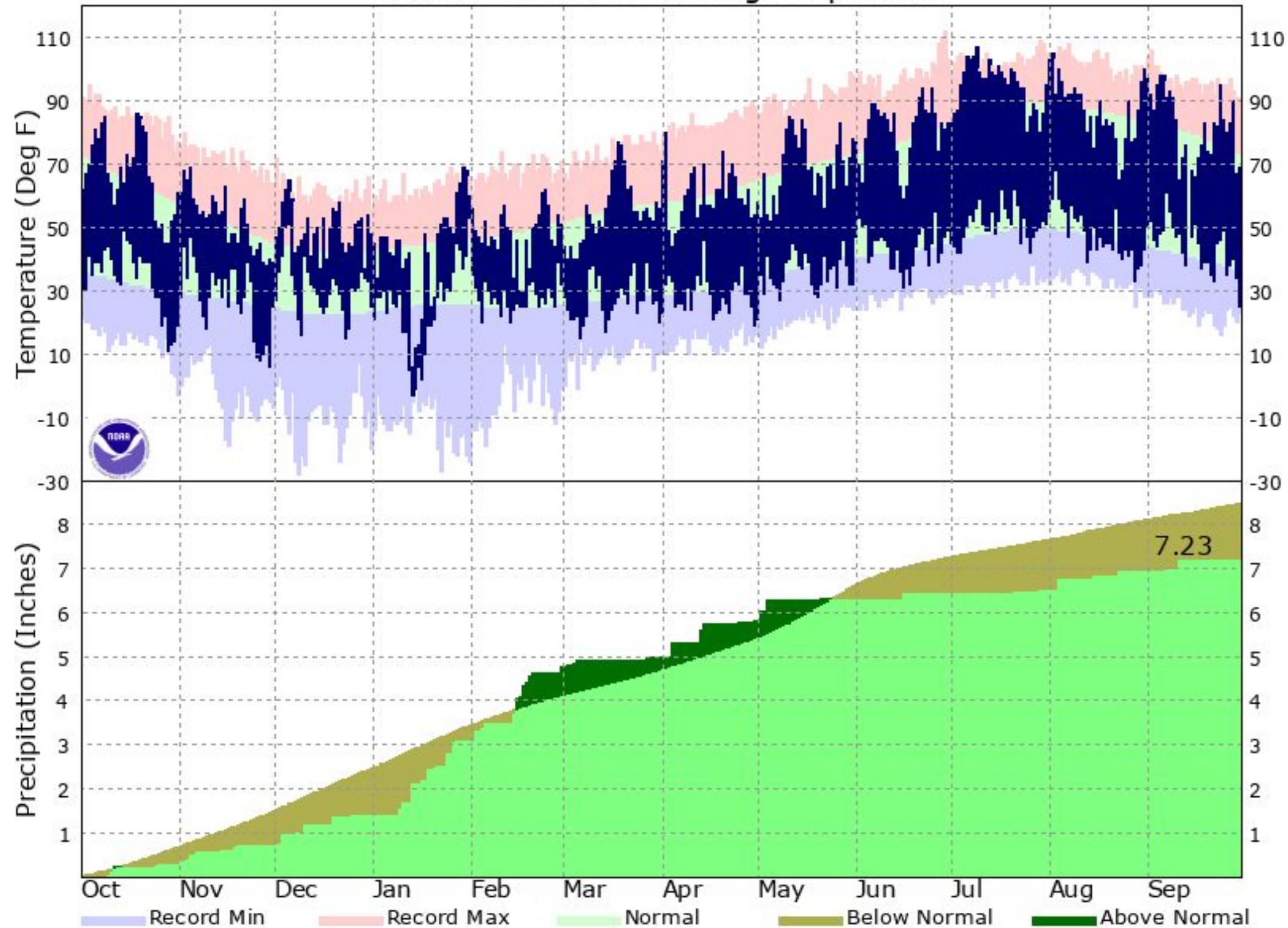
The latest graphs are located here:  
<https://www.weather.gov/pdt/CliPlot>



# Water Year Climate Graphs - Redmond ASOS

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

KRDM - Oct 2023 Through Sep 2024



During the 2023-2024 water year, Redmond recorded below-normal precipitation.

The latest graphs are located here:  
<https://www.weather.gov/pdt/CliPlot>

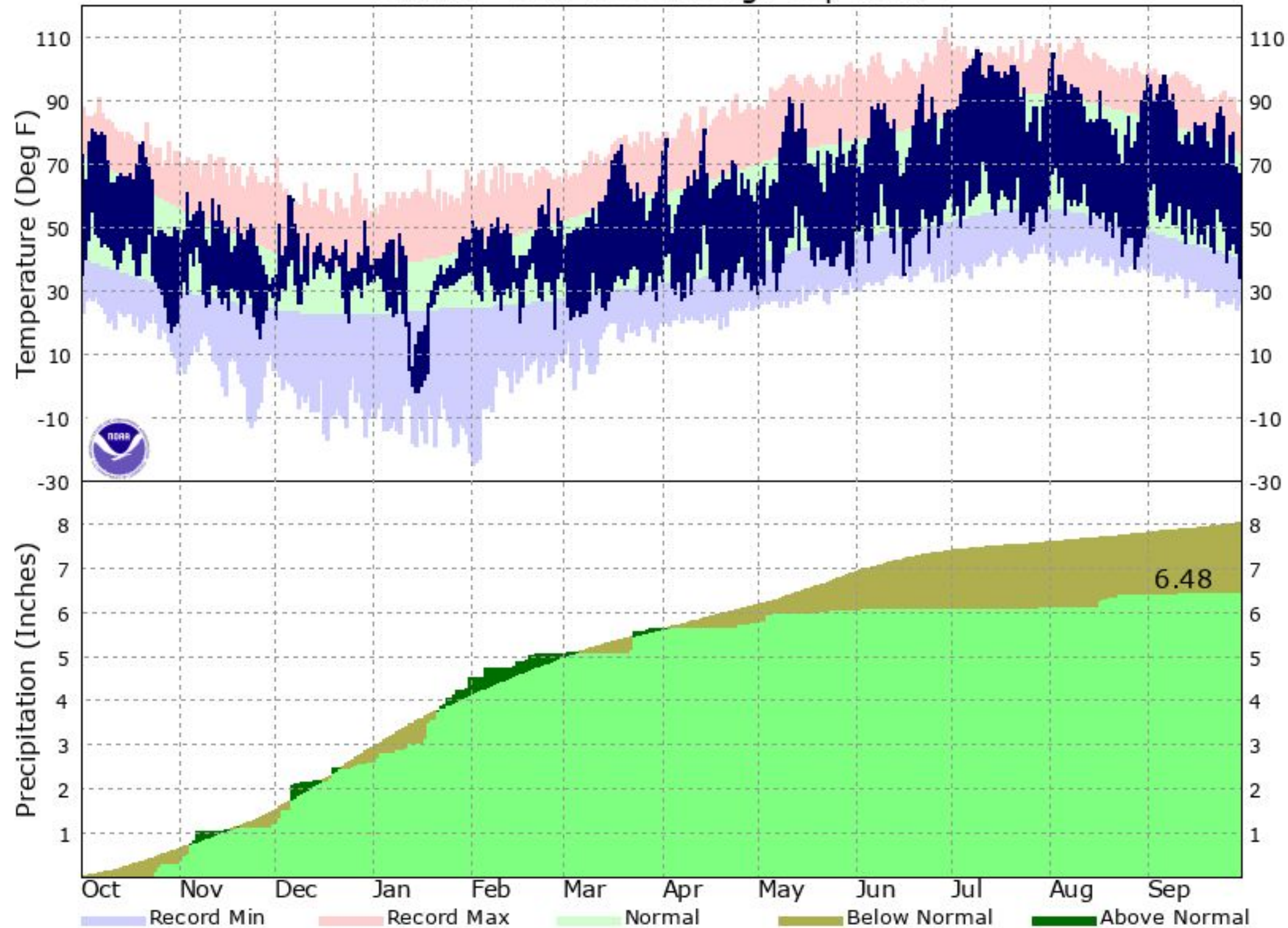




# Water Year Climate Graphs - Yakima ASOS

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

KYKM - Oct 2023 Through Sep 2024



During the 2023-2024 water year, Yakima recorded below-normal precipitation.

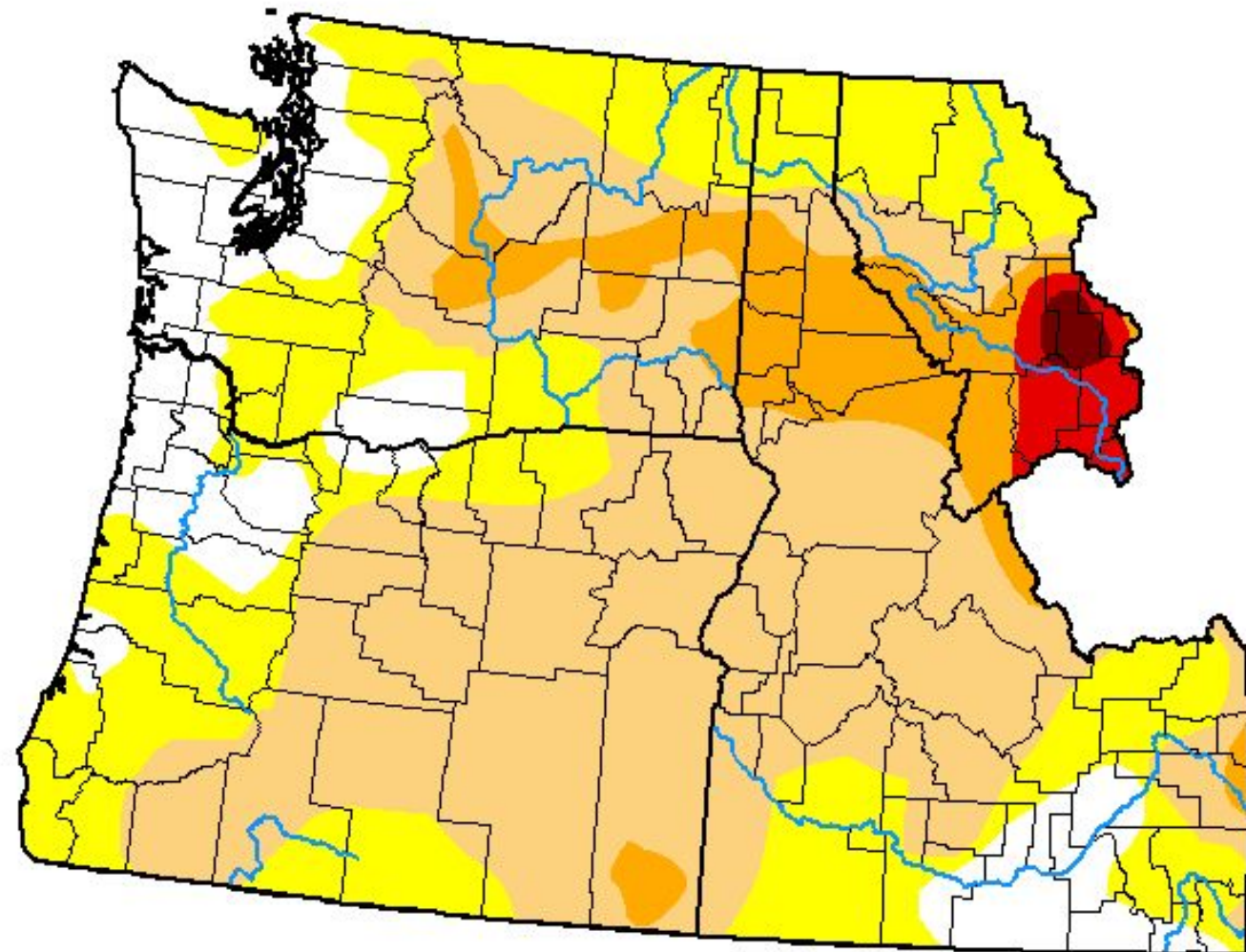
The latest graphs are located here:  
<https://www.weather.gov/pdt/CliPlot>



# Drought Status: Early October

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

## U.S. Drought Monitor Pacific Northwest DEWS



**October 1, 2024**  
(Released Thursday, Oct. 3, 2024)  
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	13.07	86.93	56.26	11.40	2.27	0.49
<b>Last Week</b> 09-24-2024	13.13	86.87	56.31	11.40	2.27	0.49
<b>3 Months Ago</b> 07-02-2024	40.07	59.93	23.52	5.18	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> 10-03-2023	34.73	65.27	49.48	27.83	5.59	0.00

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 Tinker  
CPC/NOAA/NWS/NCEP



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

D4 (Exceptional Drought): None.

D3 (Extreme Drought): None.

D2 (Severe Drought): Part of eastern Kittitas County.

D1 (Moderate Drought): Portions of Kittitas, Yakima, Benton, Franklin, Columbia, Wallowa, Union, Umatilla, Morrow, Gilliam, Sherman, Wasco, Jefferson, Crook, Wheeler, Grant, and Deschutes counties.

D0 (Abnormally Dry): Portions of all counties are at least D0.

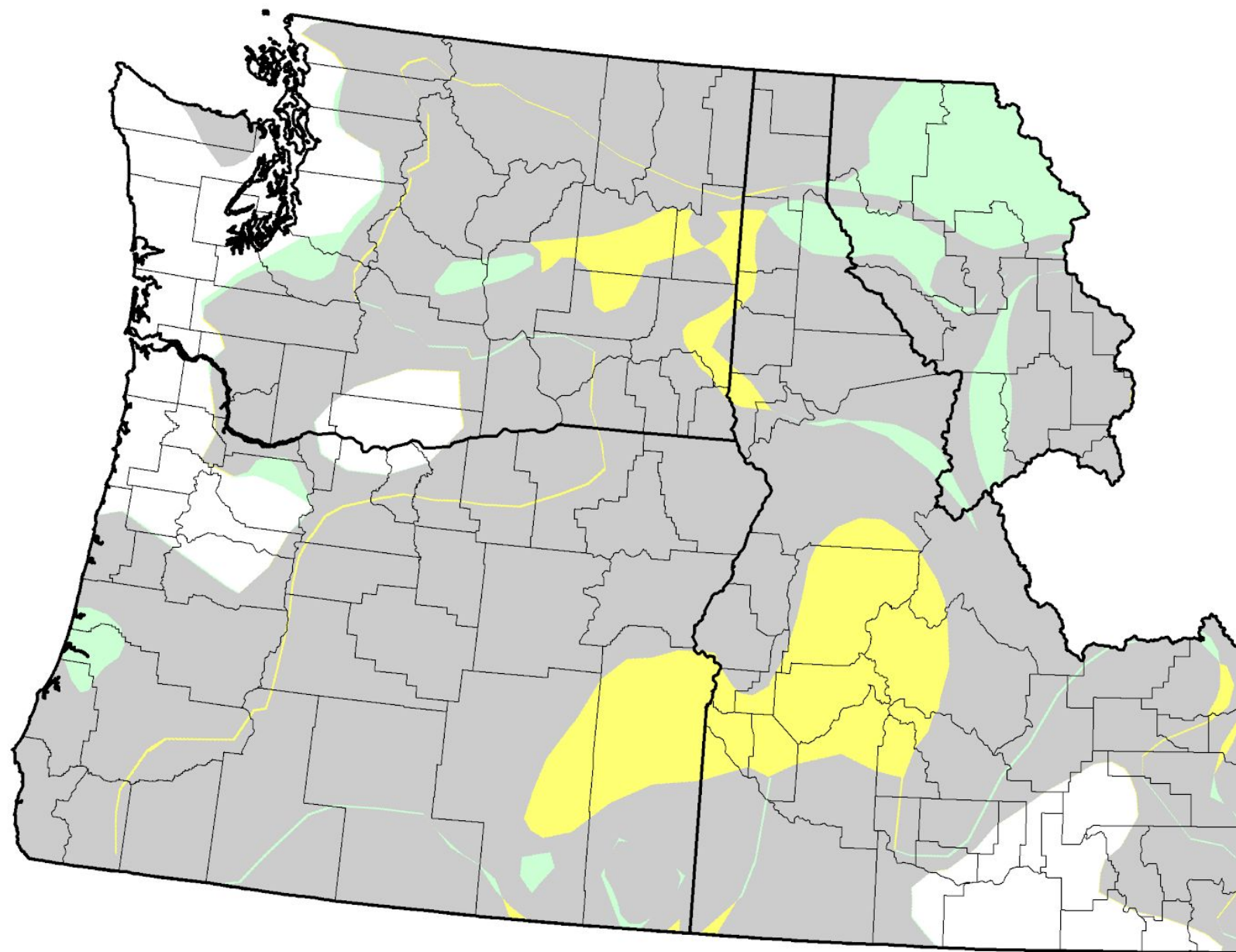
**For the latest conditions, please see [droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)**



# Drought Evolution: 4-Week Change during September

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

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



- 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

October 1, 2024  
compared to  
September 3, 2024

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

Improved: Parts of eastern Kittitas County.

Degraded: None.

No change: Portions of all counties.



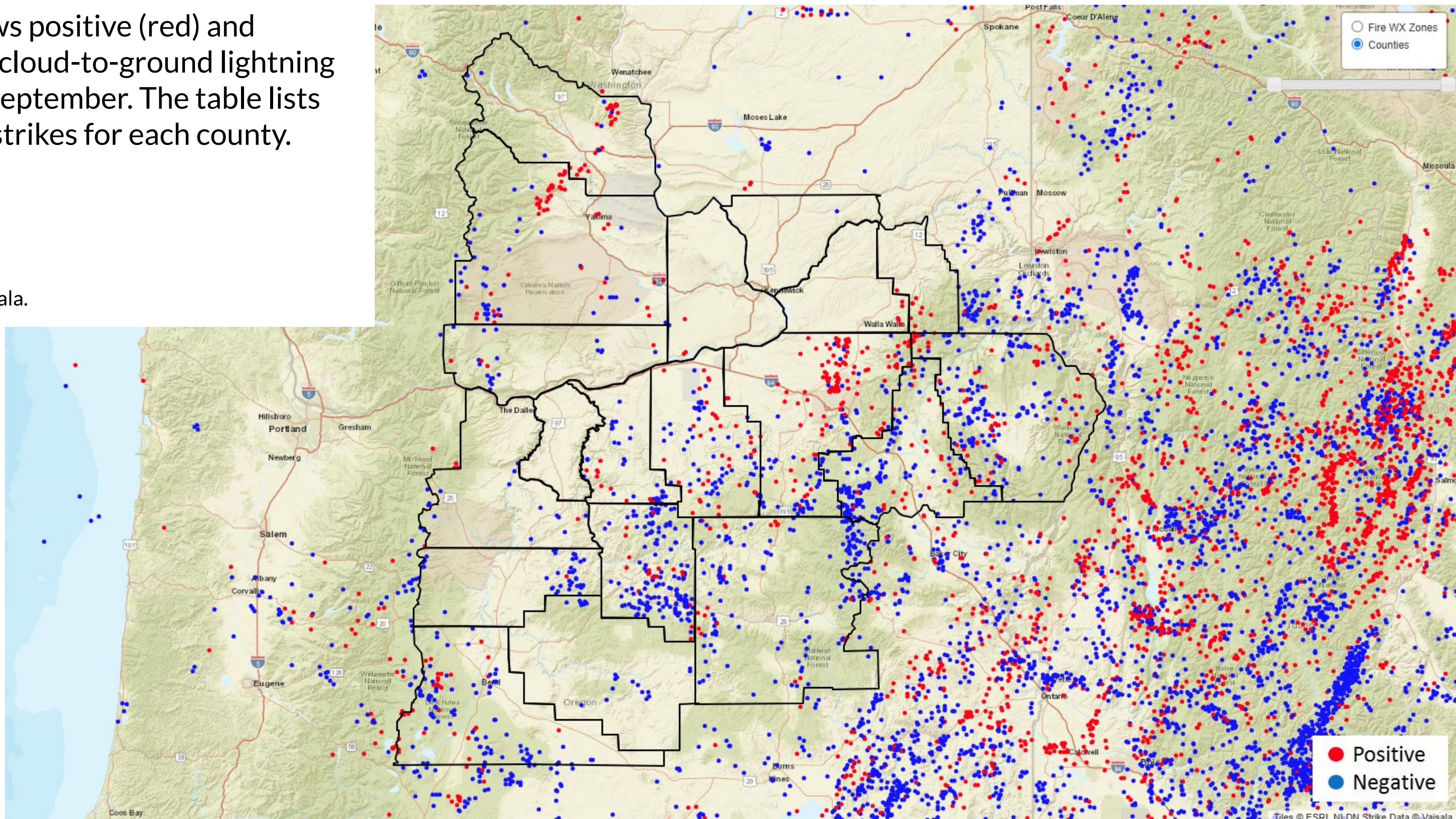
# Lightning - September

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

The image shows positive (red) and negative (blue) cloud-to-ground lightning strikes during September. The table lists the number of strikes for each county.

Data provided by Vaisala.

County	Strikes
Deschutes OR	110
Crook OR	21
Wasco OR	13
Wheeler OR	171
Grant OR	171
Morrow OR	97
Gilliam OR	43
Umatilla OR	192
Klickitat WA	22
Benton WA	4
Wallowa OR	216
Union OR	166
Jefferson OR	41
Walla Walla WA	5
Yakima WA	90
Kittitas WA	34
Franklin WA	1
Columbia WA	11



● Positive  
● Negative



# Summary

Weather Forecast Office  
Pendleton, OR  
Monday, October 28

- Mean (average) temperatures were predominantly above normal (relative to the 1991-2020 climate reference period) across the forecast area during September.
- Generally below- or much-below-normal precipitation was recorded across the western half of the forecast area including the Cascades and their eastern slopes, central Oregon, and portions of the Columbia Basin. A mix of above- and below-normal precipitation was observed for the Blue Mountains region, overall near normal.
- Drought conditions improved in eastern Kittitas County with no change elsewhere.



[nws.pendleton@noaa.gov](mailto:nws.pendleton@noaa.gov)



(541) 276-7832



[weather.gov/pendleton](https://weather.gov/pendleton)

