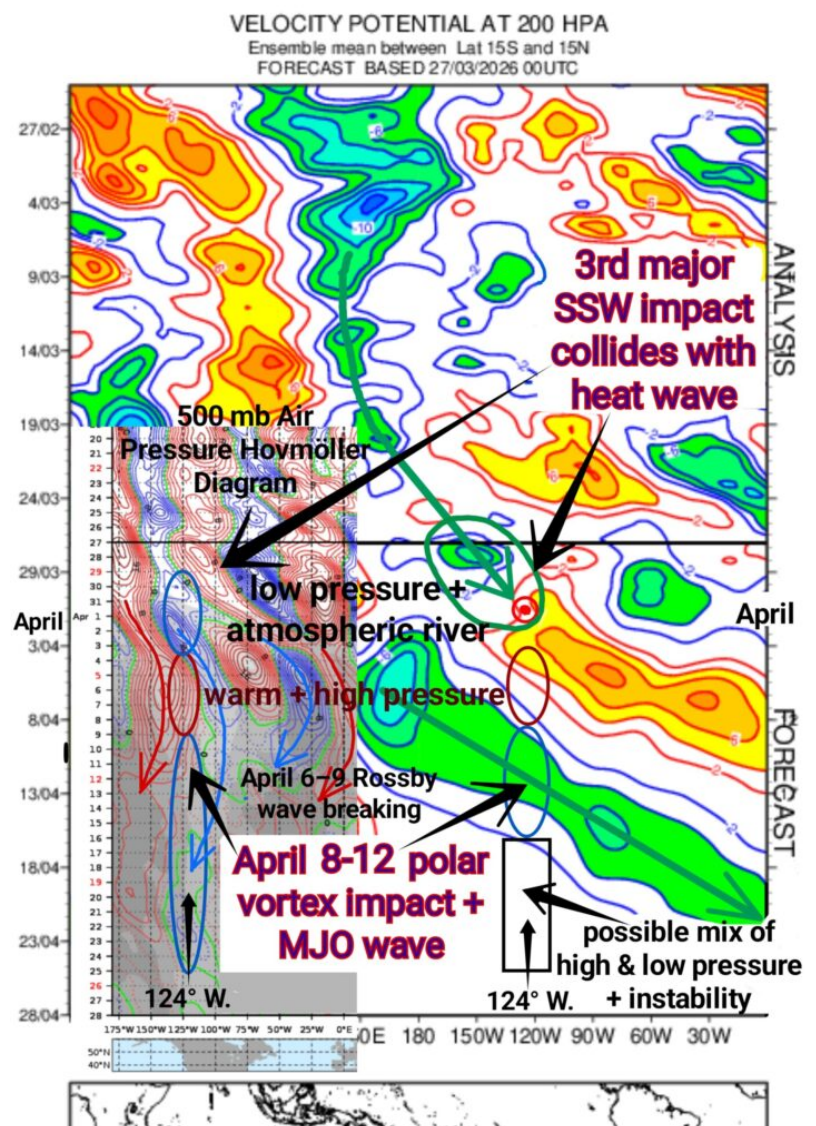


QUICK SUMMARY

Temperatures will begin to drop this weekend. A **strong atmospheric river** arrives Tuesday night, March 31. Every other night this coming week could reach 29–38°, with patchy fog and frost on some nights.

The first half of April will probably be **noticeably more rainy** than the second half, but uncertainty increases by mid-April, partly because of an uncertain forecast of average global wind speeds.



FOUR WEEK FORECAST

A March 16–20 stratospheric **polar vortex (SPV) disruption** will begin to impact western Oregon by Sunday evening, March 29, accompanied by a **very weak frontal system**. I'm giving Sunday evening a **~25%** chance of brief light showers, but we might not get **ANY** precipitation.

That same **polar vortex** impact has the potential to maintain generally **colder than average** temperatures through the coming week, possibly keeping temperatures subdued through next Friday, maybe even Saturday, April 4.

*Every other night for the next week could reach 29–38°. **Patchy fog and frost** are likely on the coldest nights, especially on Monday night.

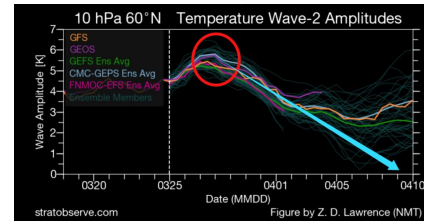
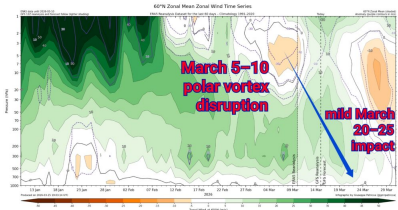
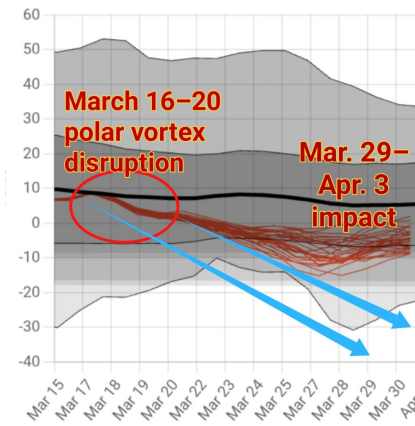
Similar to last time, this **SPV disruption** will also be interrupted by a **robust atmospheric river** expected to arrive late Tuesday night, March 31. Total 60-hour rainfall could range from **1.00–1.35 inches**.

20–25+ mph wind gusts are likely across parts of the south Willamette Valley on Wednesday, April 1st. And the high central Oregon Cascades could receive around 12 inches of **SNOW**, maybe more, with **at least 6 inches at the pass levels**.

Post-frontal showers could linger through Thursday evening as the **atmospheric river** drops southeast, maintaining a colder, unsettled pattern overnight. **Widely scattered showers** should decrease late Thursday night into Friday morning, April 3, as high pressure and gradual clearing ensue.

A brief period of warmer, drier weather should begin next weekend, followed by Rossby wavebreaking and possibly quite a substantial period of colder, rainier weather.

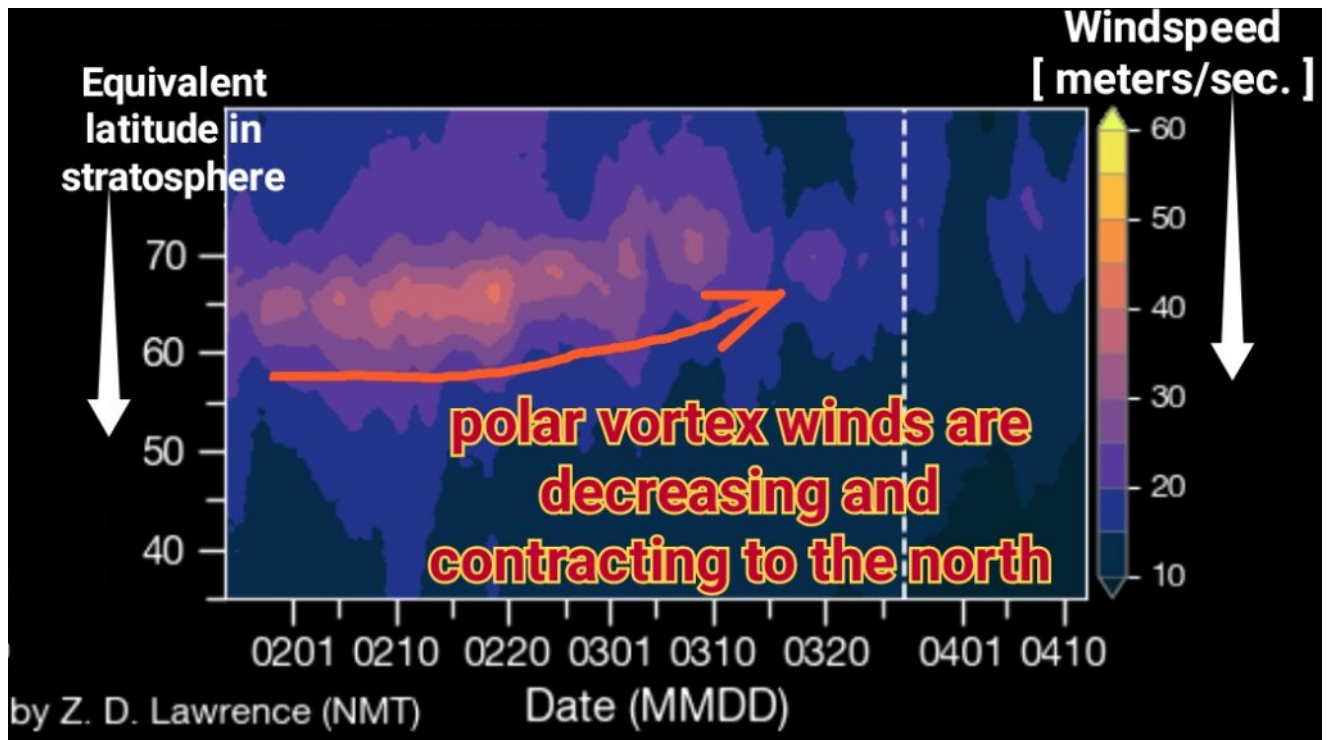
Conditions will hopefully improve after April 15.



POLAR VORTEX FORECAST

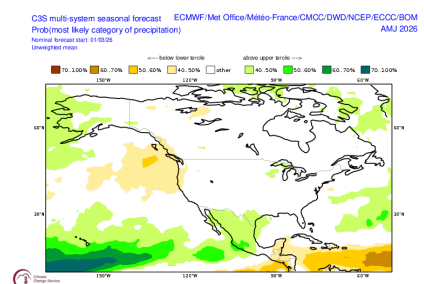
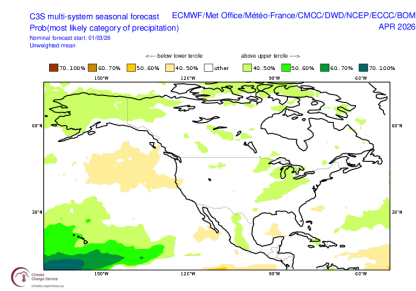
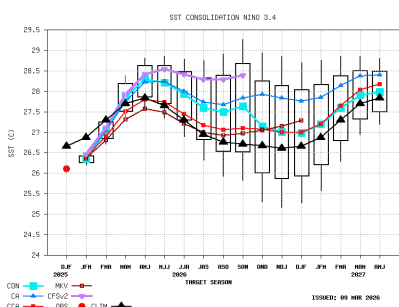
A March 5–12 **polar vortex (SPV) disruption** almost blended into the most recent **SPV disruption** from March 16–20– BOTH of which combined to produce our **THIRD major sudden stratospheric warming (SSW)** of the season around March 23.

But, the **SSW** was/is mainly centered on March 26–29 as the **polar night jet stream** has reversed direction in the polar stratosphere (see 2nd chart). The high amplitude Wave-2 (meaning two waves) aspect is an indication that the **SSW** is also splitting the vortex.



Adding 13–14 days to March 26–29 gets us to **April 8–12**, which will almost certainly be **unusually cold** for early April. But, the **polar vortex** is also getting weaker and smaller, and will probably undergo a **Final Warming** (warm season wind reversal) from April 4–10 (starting next weekend).

Any impacts on western Oregon would probably occur roughly in the **April 16–25** timeframe and this could dovetail with a Pacific Jet Stream extension enhanced by east Asian mountain torque. My hunch is that period will see a mix of rain and sunny days, possibly with a chance for thunderstorms.



SEASONAL MJO and EL NIÑO FORECAST

The signal for yet another **strong El Niño (possibly a Super El Niño)** continues to grow. El Niños typically depress rainfall over the Pacific Northwest, as can be seen in the monthly April and April-May-June C3S seasonal precipitation forecast.

The **Madden-Julian Oscillation** and associated equatorial Rossby wave pulse are expected to cause a “**Westerly Wind Burst**” (**WWB**) soon which will help push the tropical Pacific towards strong **El Niño** conditions this summer. Dual tropical cyclones are predicted to develop, thereby enhancing the upcoming **WWB**, which will also help strengthen the upcoming **El Niño**.

Lastly, as I discussed last month, the potential for a resurging El Niño is still being predicted for winter and early Spring 2027.

chart sources:

- (Chart #1) Center For Western Weather and Water Extremes (CW3E)
- (#2) European Center for Medium-Range Weather Forecasting
- (#3) Guiseppe Petricca at hebweather.net
- (#4) Guiseppe Petricca at hebweather.net
- (#5) stratobserve.com
- (#6) stratobserve.com
- (#7) Center For Western Weather and Water Extremes (CW3E)
- (#8) Center For Western Weather and Water Extremes (CW3E)
- (#9) Climate Prediction Center