

Winter 2025-2026 Weather Forecast

33rd Winter Weather Forecast Meeting, OMSI and Oregon AMS, Portland



Kyle Dittmer, P.H. (AIH 07-1699)

Hydrologist-Meteorologist

Columbia River Inter-Tribal Fish Commission
Portland, Oregon, USA



Earth Science Instructor

Clark College, Vancouver, Washington



PCC – Southeast Campus, Portland, Oregon

October 18th, 2025

Columbia River Inter-Tribal Fish Commission - CRITFC



The screenshot shows the CRITFC website with a header featuring the logo, navigation links (Jobs, Calendar, Donate, Contact, Press Room), a search bar, and a tagline 'putting fish back in the rivers'. Below the header is a main navigation bar with categories: FISH AND WATERSHEDS, TRIBAL TREATY FISHING RIGHTS, EDUCATION, FISHER SERVICES, and Buy Salmon. The main content area includes a large image of a person in traditional regalia holding a fishing net, with text about 'Sharing Salmon Culture'. To the right is a section for '2013 Bonneville Fish Count' with a note about unavailable data. Below this are two columns: 'Currents' with an article on 'Tribal Restoration Efforts Paying Off' and a 'Subscribe' button, and 'Advocacy Issues' with a 'Resident Fish Consumption Advisory' and a 'Continue Reading' link. A footer contains links for CRITFC Home, Resources, Research, Activities, and Connect.

Columbia River Inter-Tribal Fish Commission
putting fish back in the rivers

Jobs • Calendar • Donate • Contact • Press Room

Search CRITFC

About CRITFC | Salmon Culture | Member Tribes | Blog | Buy Salmon | [Twitter](#) | [Facebook](#)

FISH AND WATERSHEDS | **TRIBAL TREATY FISHING RIGHTS** | **EDUCATION** | **FISHER SERVICES**

Sharing Salmon Culture

Wy-Kan-Ush-Pum means "salmon people" and all residents of the Columbia River Basin are "Salmon People." It focuses on the importance of salmon and the environment in which salmon live.

2013 Bonneville Fish Count

The daily fish counts are provided by the Corps of Engineers. Due to the federal government shutdown, these counts are unavailable.

Currents

Tribal Restoration Efforts Paying Off

Back in the 1970s, salmon runs were declining so quickly that there was a real worry that they would go extinct in some areas. In 1980, only 470,000 salmon passed Bonneville Dam—and that's adding up chinook, sockeye, and coho. In 1995, the tribes released the... [Continue Reading »](#)

[Subscribe](#) | [CRITFC Blog »](#)

Advocacy Issues

Resident Fish Consumption Advisory

Oregon and Washington have issued two fish consumption advisories on 9/23/13 for **RESIDENT FISH** in the Columbia River caught between Bonneville and McNary dams due to high to moderate levels of mercury and PCBs. The Oregon Health Authority and Washington State Department of Health issued this advisory to limit people's exposure.

[Continue Reading »](#) | [More Advocacy Issues »](#)

CONSUMPTION ADVISORY

CRITFC Home | Contact CRITFC | Sitemap | CRITFC RESOURCES | [Jobs](#) | [Calendar](#) | RESEARCH | [Scientific Reports](#) | [Data Resources](#) | ACTIVITIES | [Fisheries Management](#) | [Fish Restoration Projects](#) | CONNECT | [Facebook](#) | [Twitter](#)



CRITFC website, <http://www.critfc.org>



2024-2025 Portland Climate Forecast Performance

PORTLAND							
Month:	Temperature (mean monthly):	Avg. (n=20)	Observed	Precipitation (% normal):	Avg. (n=20)	Observed	
November	Near Normal (-1.8 to + 1.8 degF)	1	3.2	Near Normal (90 - 110%)	107%	114%	
December	Near Normal (-1.8 to + 1.8 degF)	-0.1	3.7	Below Normal (70 - 90%)	89%	123%	
January	Above Normal (> +1.8 degF)	2	2.9	Near Normal (90 - 110%)	101%	58%	
February	Near Normal (-1.8 to + 1.8 degF)	-0.6	-0.8	Below Normal (70 - 90%)	86%	118%	
March	Near Normal (-1.8 to + 1.8 degF)	-1.1	2.9	Below Normal (70 - 90%)	89%	112%	
	average:	0.2	2.4	average:	94%	105%	

...but what about Snow events?!

Forecasted four events: two moderate and two minor (5.5-inch seasonal total), December to March.

Observed one snow event: February 13-14 (plus three trace snowfall events)... a **3-inch** seasonal total.



2024-2025 Hood River Forecast Performance



Month:	Temperature (mean monthly):	Avg. (n=20)	Observed	Precipitation (% normal):	Avg. (n=20)	Observed
November	Near Normal (-1.8 to + 1.8 degF)	1	0.3	Above Normal (110 - 130%)	111%	76%
December	Near Normal (-1.8 to + 1.8 degF)	-0.2	2.1	Near Normal (90 - 110%)	96%	139%
January	Above Normal (> +1.8 degF)	3	-1.7	Near Normal (90 - 110%)	95%	57%
February	Near Normal (-1.8 to + 1.8 degF)	-0.1	-2.8	Near Normal (90 - 110%)	95%	85%
March	Near Normal (-1.8 to + 1.8 degF)	-1	1	Below Normal (70 - 90%)	88%	135%
	average:	0.5	-0.2	average:	97%	98%



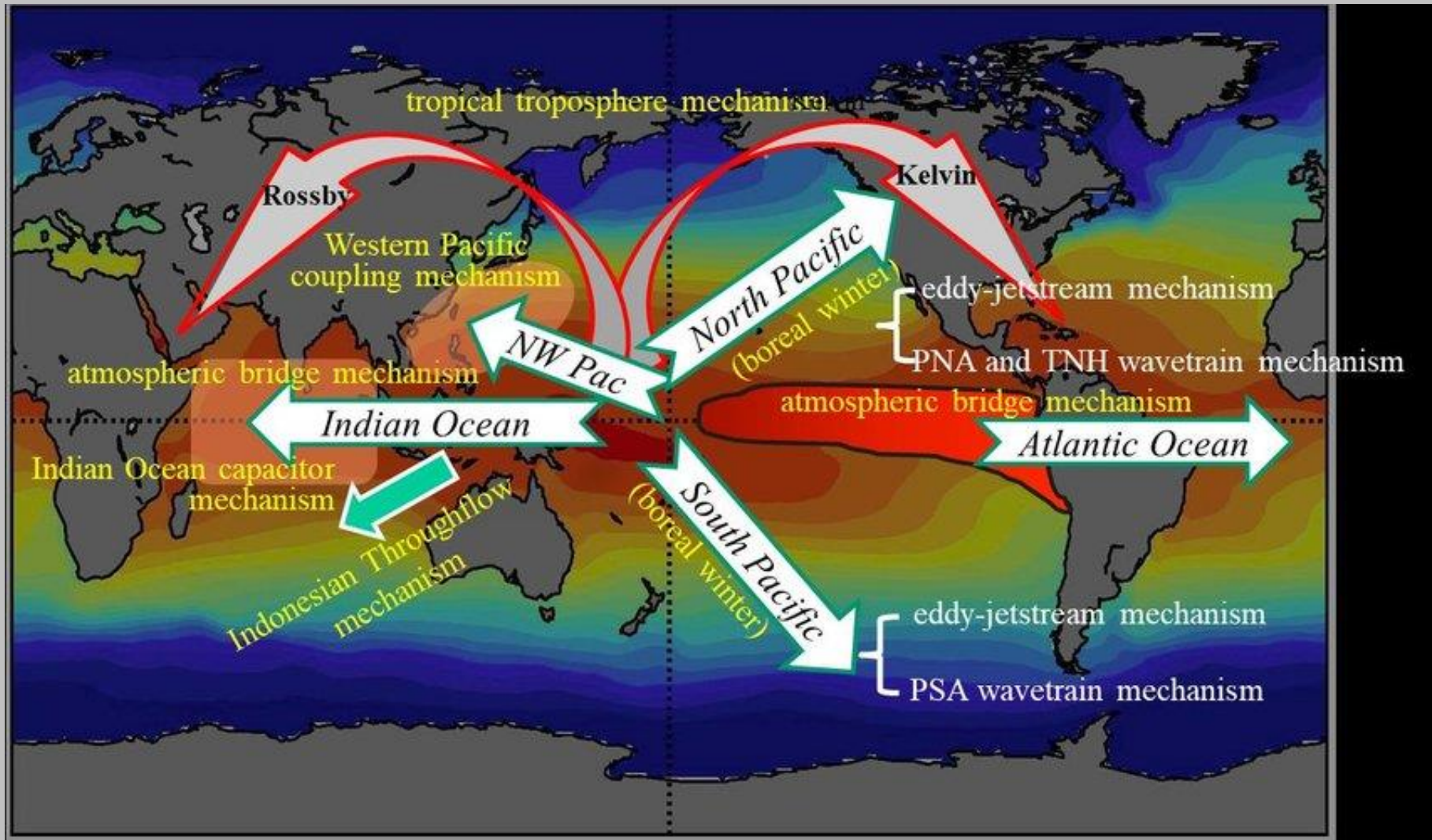
2024-2025 Government Camp Climate Forecast Performance



Month:	Temperature:	Observed	Precipitation:	Observed	Snowfall	Observed	Forecast	Observed
November	0.8	-1.1	109%	95%	32	29.5	123%	96%
December	-0.5	4.1	105%	83%	59	47.5	129%	92%
January	1.6	1.1	112%	25%	61	14	113%	29%
February	-1.3	-3.5	111%	89%	54	50	130%	127%
March	-1.5	0.8	99%	94%	50	47.5	123%	133%
April	-0.8	2.8	98%	15%	29	1.5	145%	9%
May	-0.5	0.6	99%	72%	7	0	177%	0%
average:	-0.3	0.7	105%	68%	292	190	134%	69%

Water Supply Forecast (MEI method): Columbia R. at The Dalles, Jan.-July:
 103 MAF (issued Oct. 2024), 101%. Observed: 81 MAF. Error $\pm 27\%$.
 109 MAF (issued April 2025), 106%. Observed: 81 MAF. Error $\pm 35\%$.

WHAT IS A "TELECONNECTION"?



AN OCEANIC-ATMOSPHERIC COUPLING THAT EXTENDS LONG DISTANCES



Introduction – Methods

- CRITFC forecast uses a holistic, integrated big picture view.
- Big-picture: **Solar Forcing** (e.g., sunspot cycles) does influence our global weather patterns over the long term (decades).
In memoriam: Dr. Landscheidt, of Germany (1922 – 2004).
- Track ENSO with the Multi-variable ENSO Index: **MEI**.
- NOAA's Sea-Surface Temperature Departure Forecasts.
- Hydro-Climate approach: Use a regression: Multi-variable ENSO Index (1950-2025) vs. historic runoff for the Columbia River at The Dalles, then compute a **2026** Water Supply Forecast.
- Select the "right" mixture of 20 past Water Years (next slide).
- Pattern recognition is key: *La Niña* years and ENSO-neutral years.

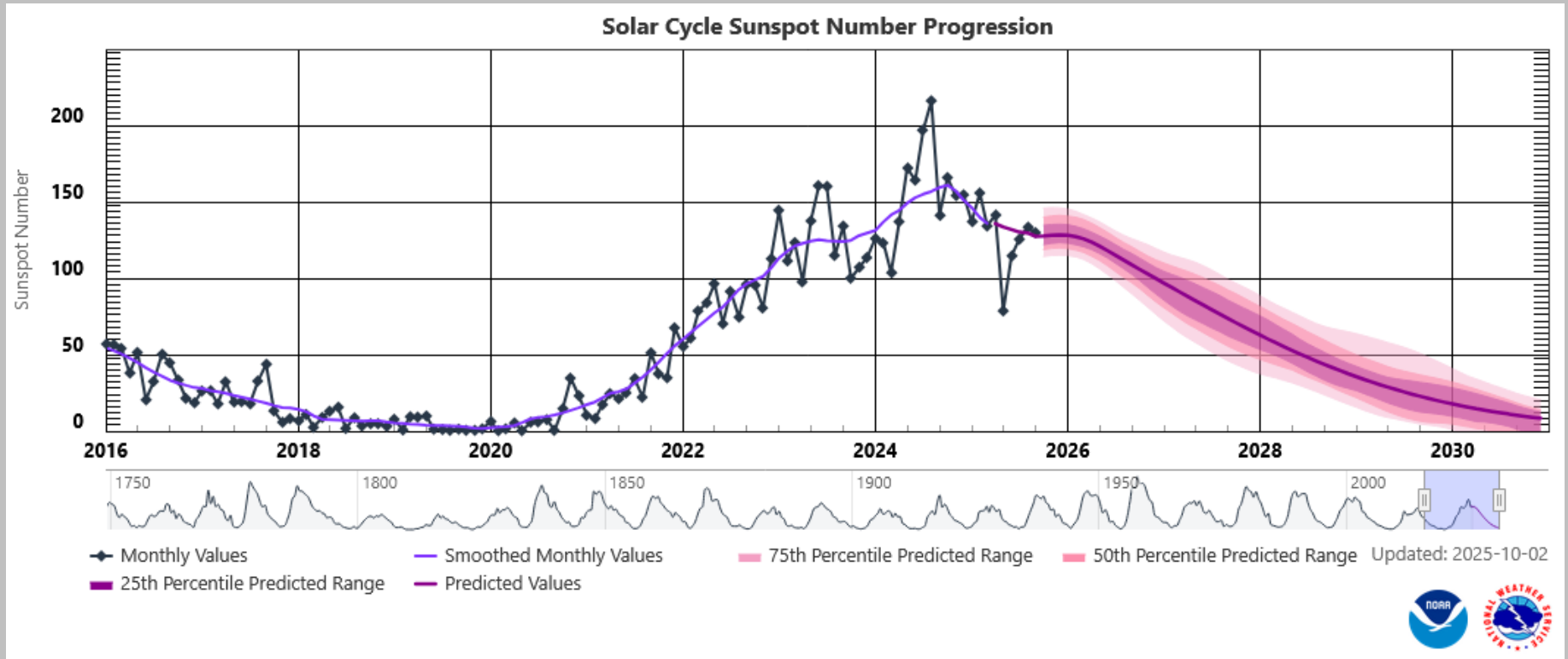


Introduction – Methods

Ensemble forecasting – 20 past water years:

WY2026	TDA runoff	PDO-warm	PDO-cold	El Nino	E-neutral	La Nina
1933	108.4	x			X	
1945	83.3	x				X
1955	96.9		x			X
1960	102.5		x		X	
1961	111.4		x		X	
1967	113.7		x		X	
1968	95.5		x			X
1975	111.9		x			X
1981	104.5	x			X	
1985	90.5	x				X
1989	93.2	x				X
1990	99.7	x			X	
1991	107.1	x			X	
2000	98		x			X
2002	103.8		x		X	
2009	90.2		x			X
2013	97.7		x		X	
2014	108.1		x		X	
2021	82.1		x			X
2022	105.3		x			X
	(MAF)					
Average:	100.2		La-Nina:			10
STDEV:	8.9		ENSO neutral:			10
			ENSO-neutral/LaNina border:			8

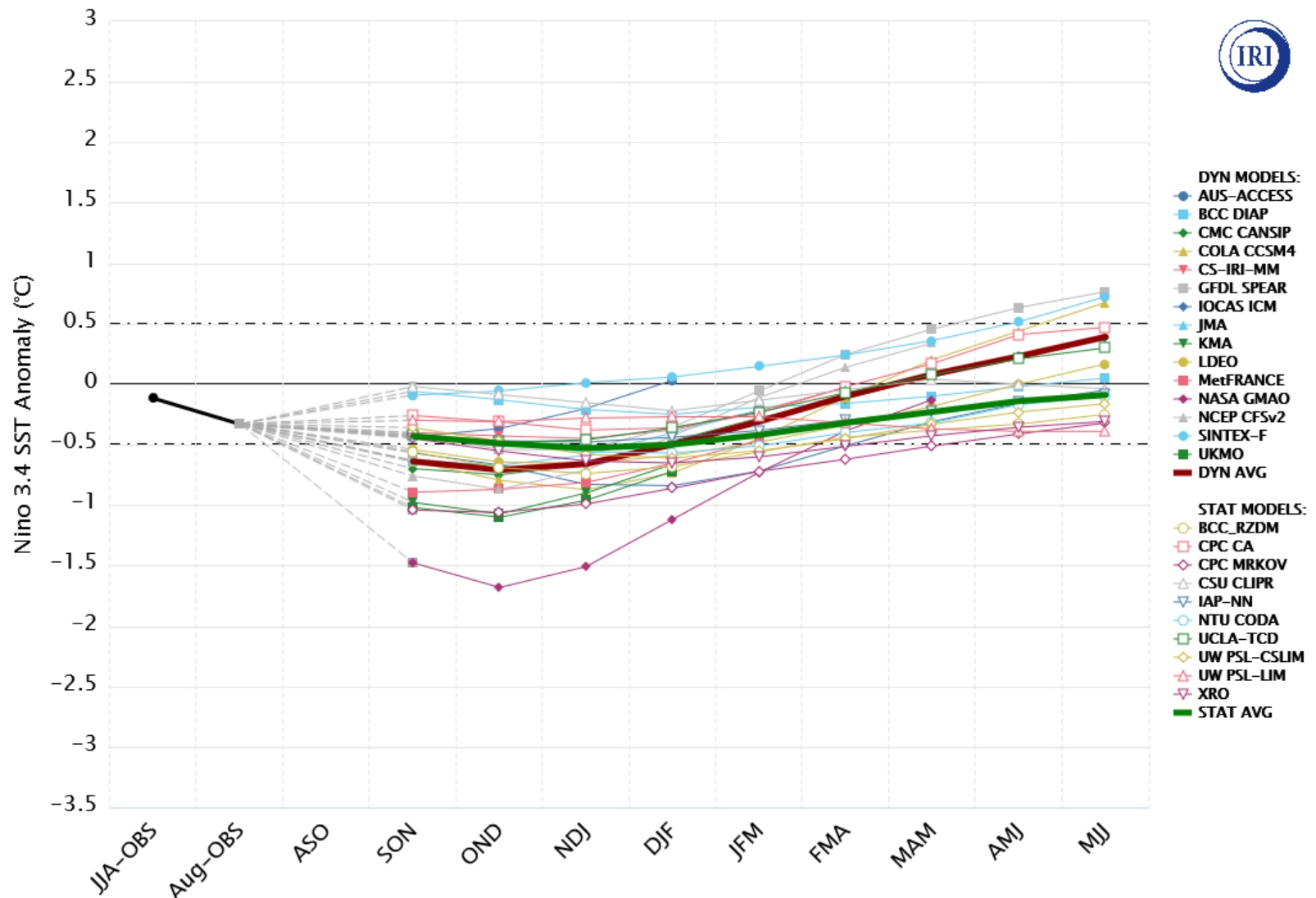
SUNSPOT COUNTS – moving towards “*La Niña* winter”



<https://www.swpc.noaa.gov/products/solar-cycle-progression>

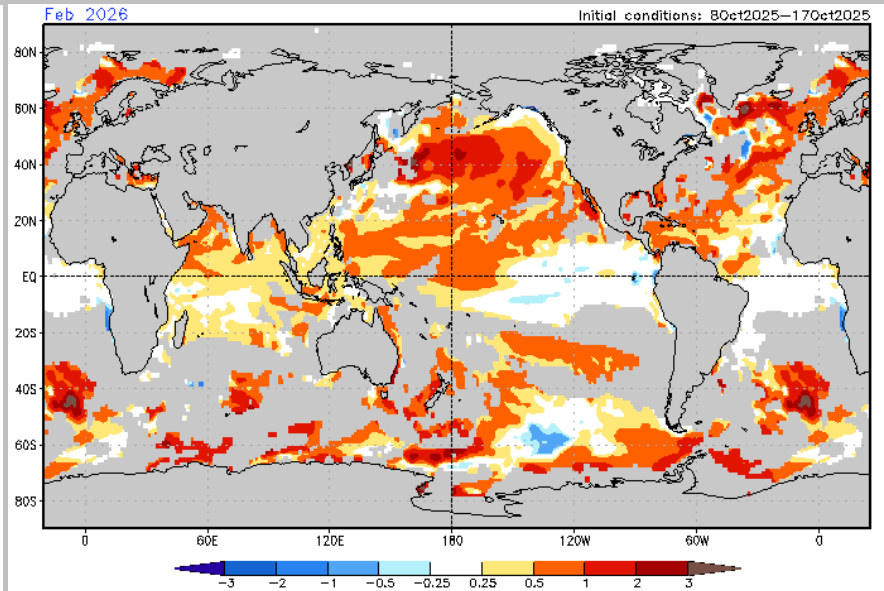
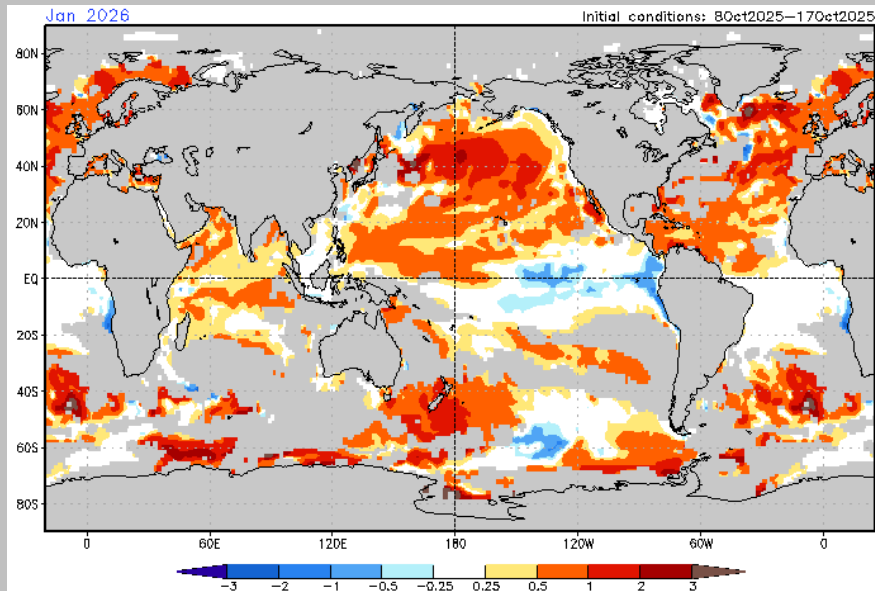
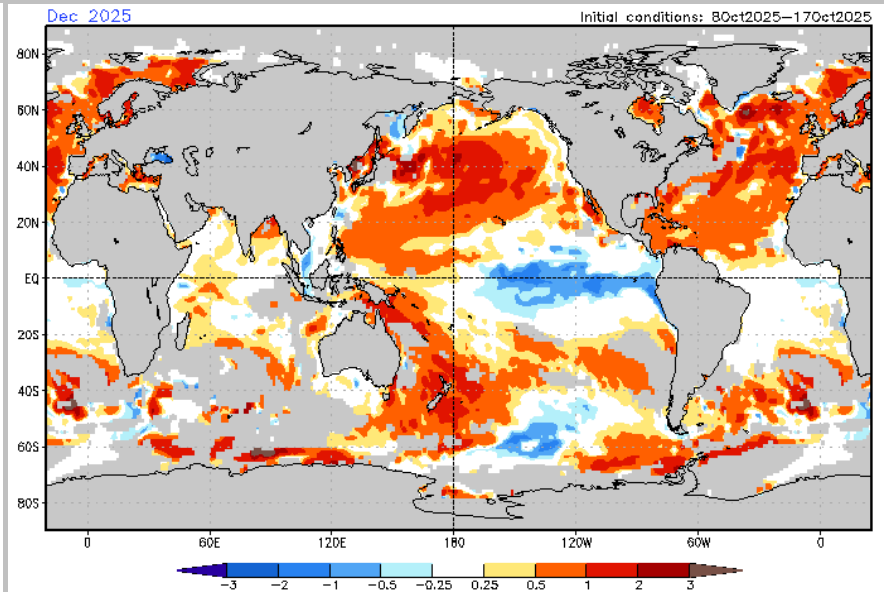
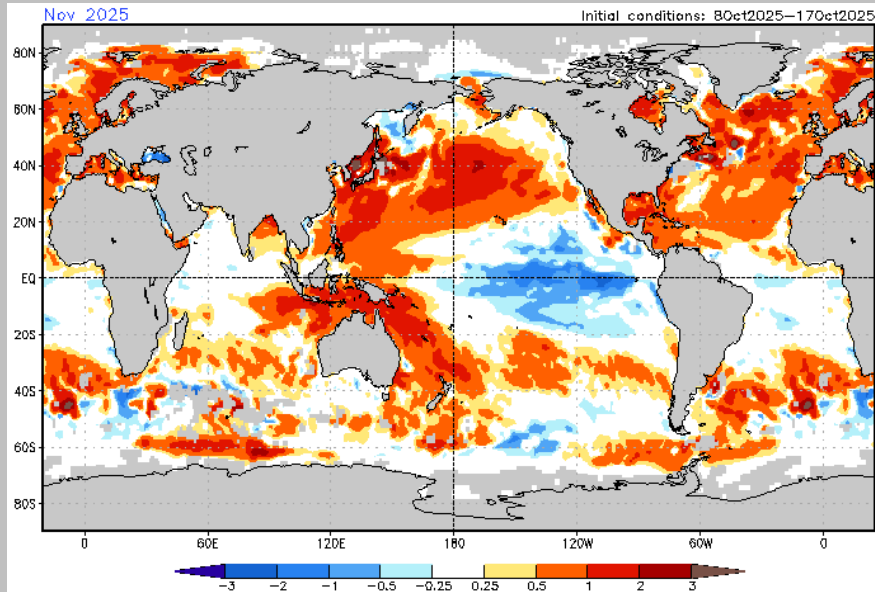
COLUMBIA U. IRI & NOAA's CPC ENSO FORECAST

Model Predictions of ENSO from Sep 2025

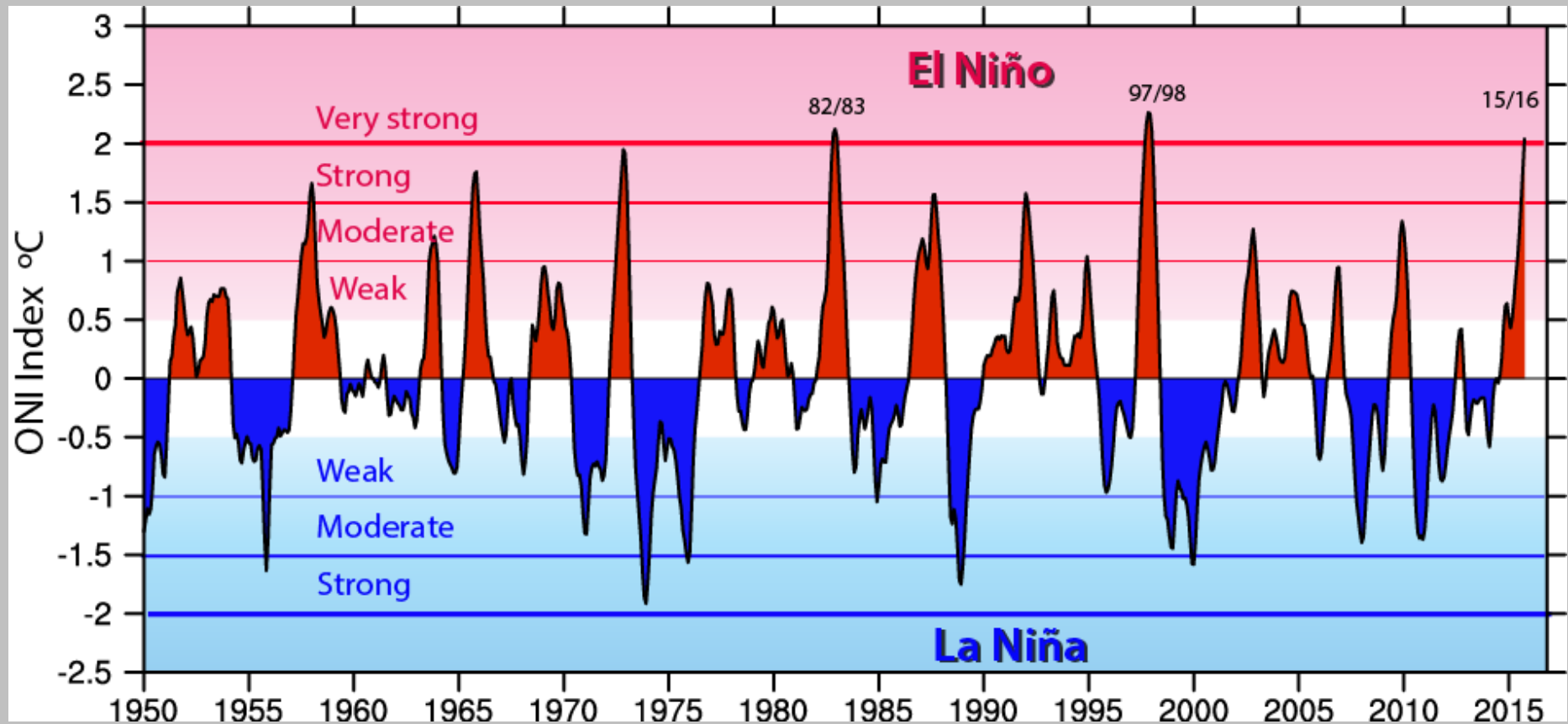


Highcharts.com

NOAA SEA SURFACE TEMPERATURES - "*La Niña* winter"

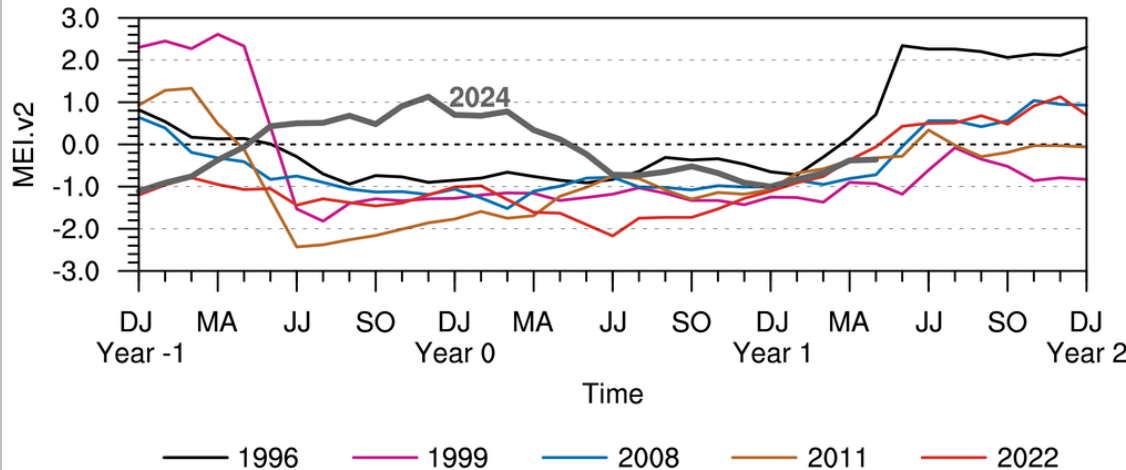


NINO SEA SURFACE TEMPERATURE INDICES



MEI SIGNAL SUGGESTS “*La Niña* winter”

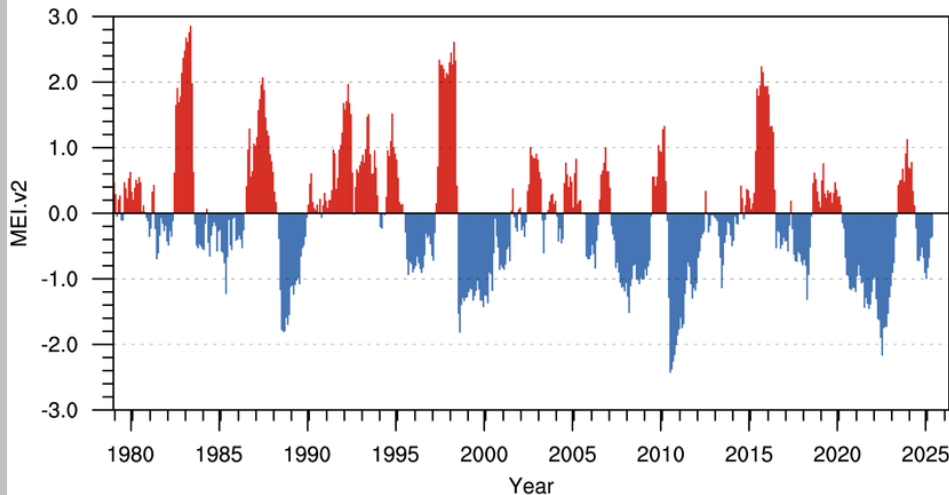
MEI.v2 Evolution of Current ENSO Event in Historical Context



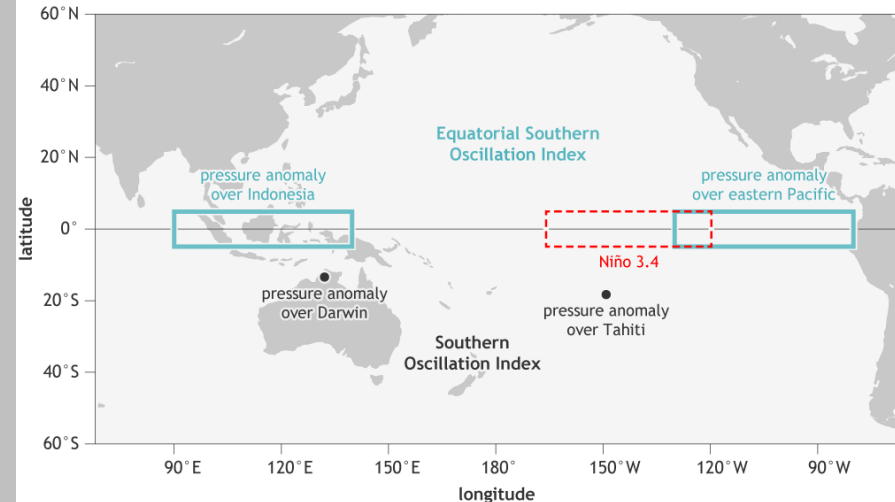
MEI – one index that tracks:

- Sea-Level Pressure
- Surface winds (2D)
- Sea-surface Temperature
- Surface Air Temperature
- Fraction of Cloud cover

Multivariate ENSO Index Version 2 using JRA3Q



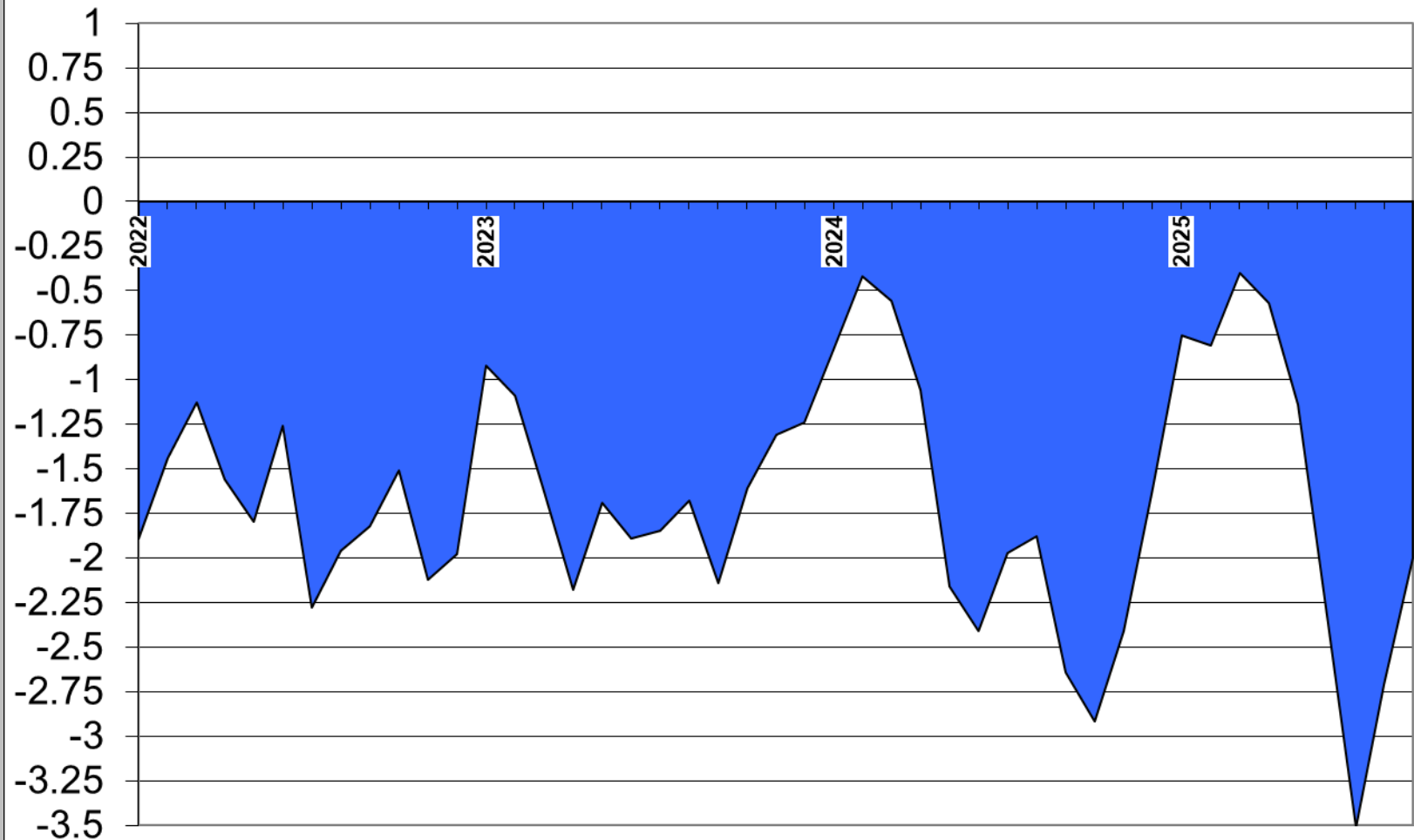
ENSO indexes



Source: <https://www.esrl.noaa.gov/psd/enso/mei>

PDO SIGNAL: COLD PHASE...STRONGLY NEGATIVE

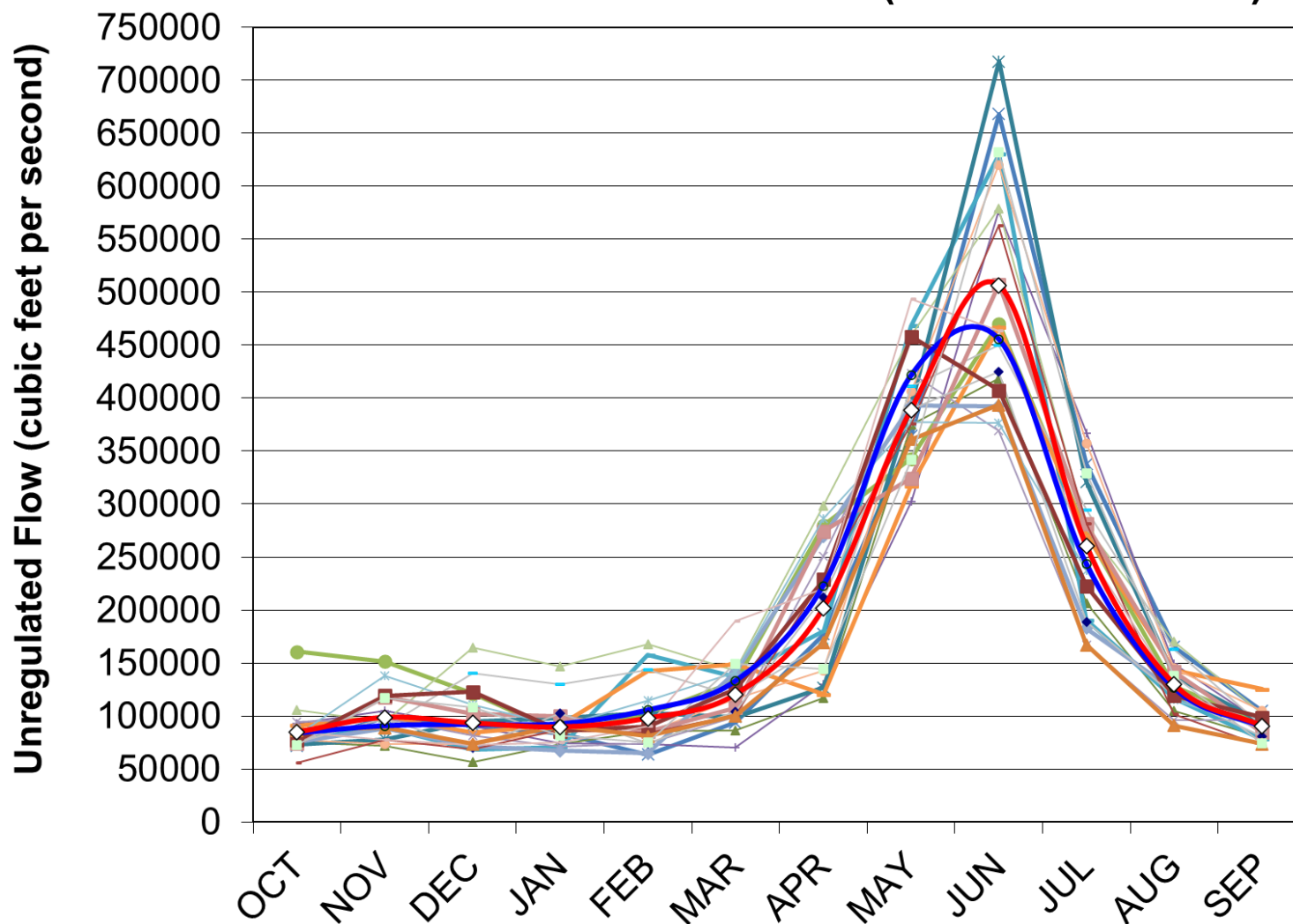
PACIFIC DECADAL OSCILLATION (PDO), v.5



Source: Dr. Nate Mantua, NOAA (formerly UW-Climate Impacts Group)

ENSEMBLE STREAMFLOW FORECAST

Columbia River at The Dalles (red line WY 2026)



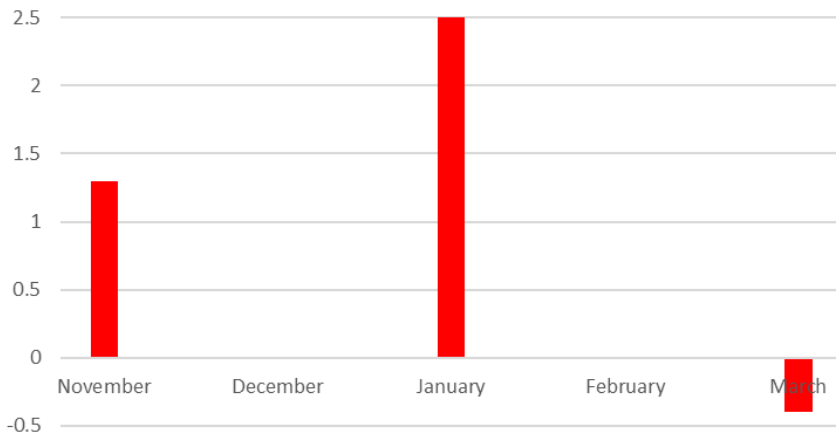
Blue line = long-term average (WY 1929-2025)



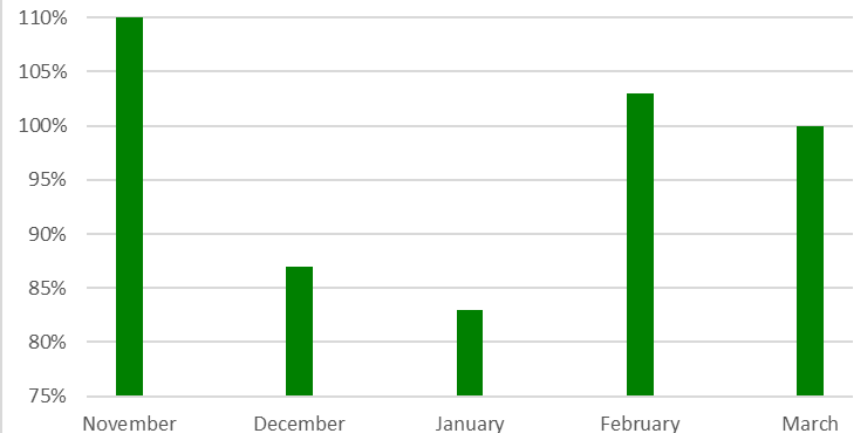
Summary: Columbia R. Gorge

Hood River, Oregon

TEMPERATURE DEPARTURE FORECAST



PRECIPITATION FORECAST



Expect many snow events: **100%** of normal (NOV-MAR); seasonal total **23-inches**.

NOV 0-inch, DEC 6-inch (up to 14), JAN 7-inch (up to 16), FEB 7-inch (up to 19), MAR 2-inch (up to 7)

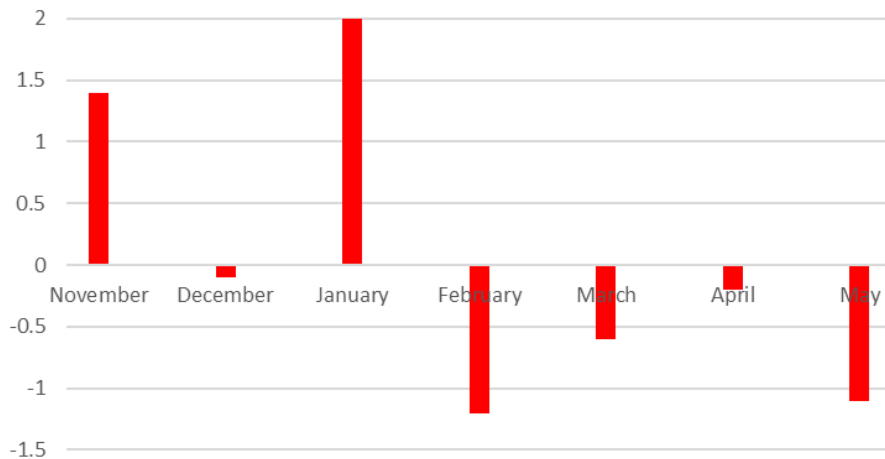




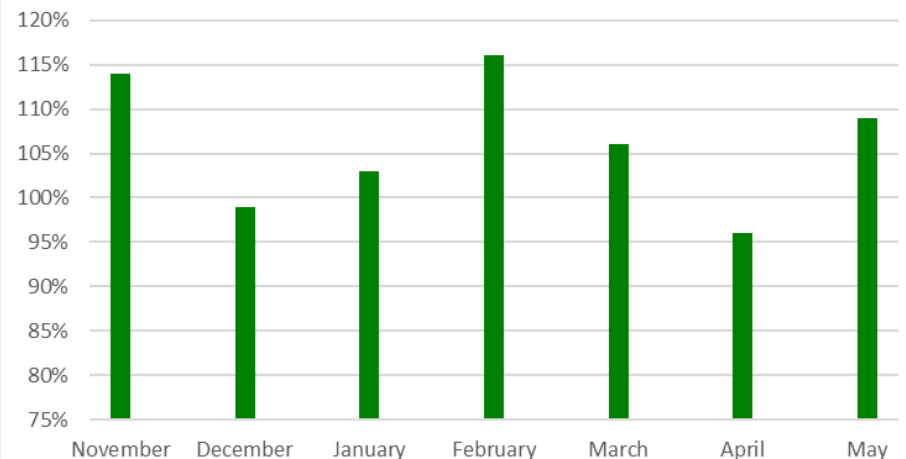
Summary: the mountains

Government Camp, Oregon

TEMPERATURE DEPARTURE FORECAST



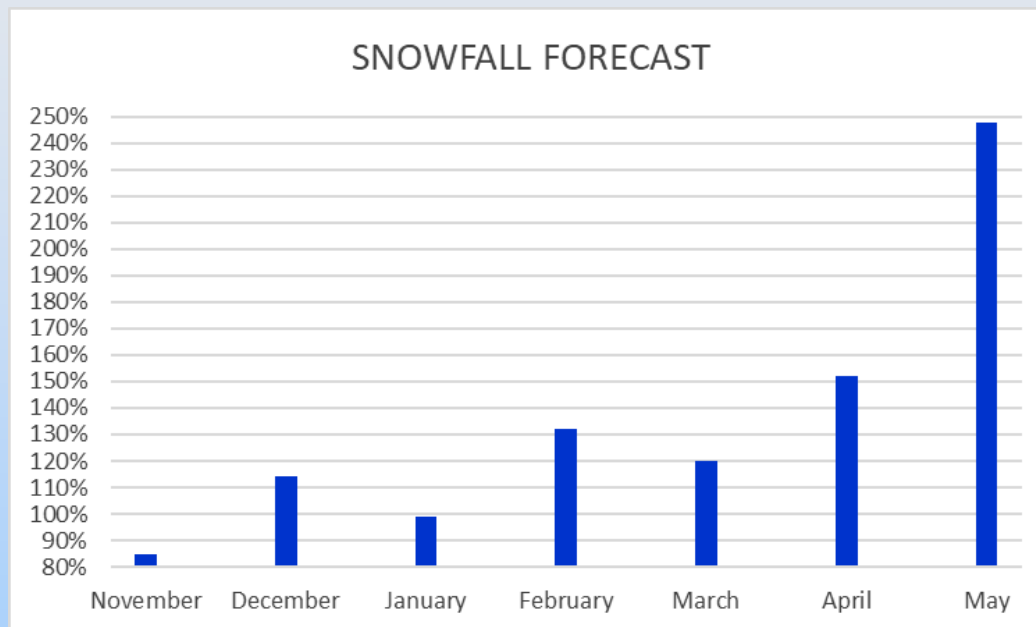
PRECIPITATION FORECAST



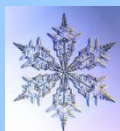


Summary: the mountains

Government Camp, Oregon



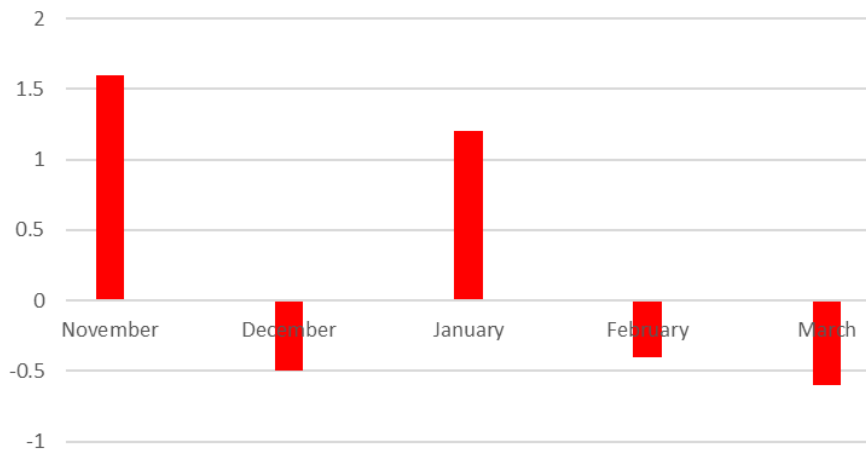
Expect a seasonal snow total: **263**-inches or **136%** of normal (NOV-MAY).



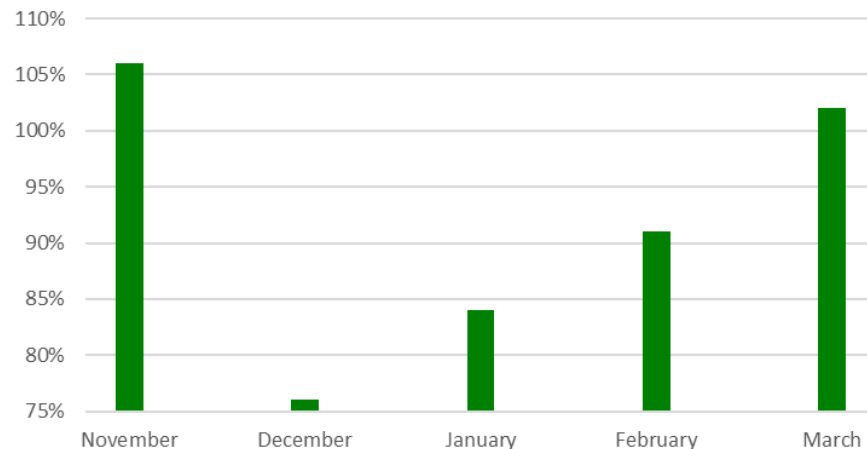


Summary: the Portland Forecast

TEMPERATURE DEPARTURE FORECAST



PRECIPITATION FORECAST



EXPECT HIGH VARIABILITY – HARD RAIN EVENTS, FLOODS, FOG, WIND-STORMS, GORGE WIND, FREEZING RAIN, etc.

WATER SUPPLY FORECAST: **100 MAF** (± 9 MAF) or **99%**, COLUMBIA RIVER AT THE DALLES, JANUARY - JULY.

...but what about Snow events?!

Expect **THREE** events: 1 moderate (2-3 inch), 2 minor (1 inch or less).

NOV 0-inch, DEC 2-inch (up to 6), JAN 1.5-inch (up to 5), FEB 1.5-inch (up to 4), and MAR 0.25-inch (up to 1).

(65% - 80% likely) Season: **5-inches**

