

# Winter 2025-2026 Weather Forecast

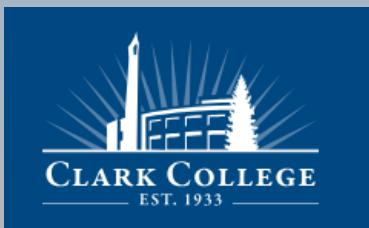
*33<sup>rd</sup> Winter Weather Forecast Meeting, OMSI and Oregon AMS, Portland*



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October 18th, 2025



# Columbia River Inter-Tribal Fish Commission - CRITFC



**Columbia River Inter-Tribal Fish Commission**

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**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](#)

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**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.

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**CONSUMPTION ADVISORY**

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# 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	<b>3.2</b>	Near Normal (90 - 110%)	107%	<b>114%</b>
December	Near Normal (-1.8 to + 1.8 degF)	-0.1	<b>3.7</b>	Below Normal (70 - 90%)	89%	<b>123%</b>
January	Above Normal (> +1.8 degF)	2	<b>2.9</b>	Near Normal (90 - 110%)	101%	<b>58%</b>
February	Near Normal (-1.8 to + 1.8 degF)	-0.6	<b>-0.8</b>	Below Normal (70 - 90%)	86%	<b>118%</b>
March	Near Normal (-1.8 to + 1.8 degF)	-1.1	<b>2.9</b>	Below Normal (70 - 90%)	89%	<b>112%</b>
	average:	0.2	<b>2.4</b>	average:	94%	<b>105%</b>

## *...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	<b>0.3</b>	Above Normal (110 - 130%)	111%	<b>76%</b>
December	Near Normal (-1.8 to + 1.8 degF)	-0.2	<b>2.1</b>	Near Normal (90 - 110%)	96%	<b>139%</b>
January	Above Normal ( > +1.8 degF)	3	<b>-1.7</b>	Near Normal (90 - 110%)	95%	<b>57%</b>
February	Near Normal (-1.8 to + 1.8 degF)	-0.1	<b>-2.8</b>	Near Normal (90 - 110%)	95%	<b>85%</b>
March	Near Normal (-1.8 to + 1.8 degF)	-1	<b>1</b>	Below Normal (70 - 90%)	88%	<b>135%</b>
	average:	0.5	<b>-0.2</b>		average:	<b>97%</b>



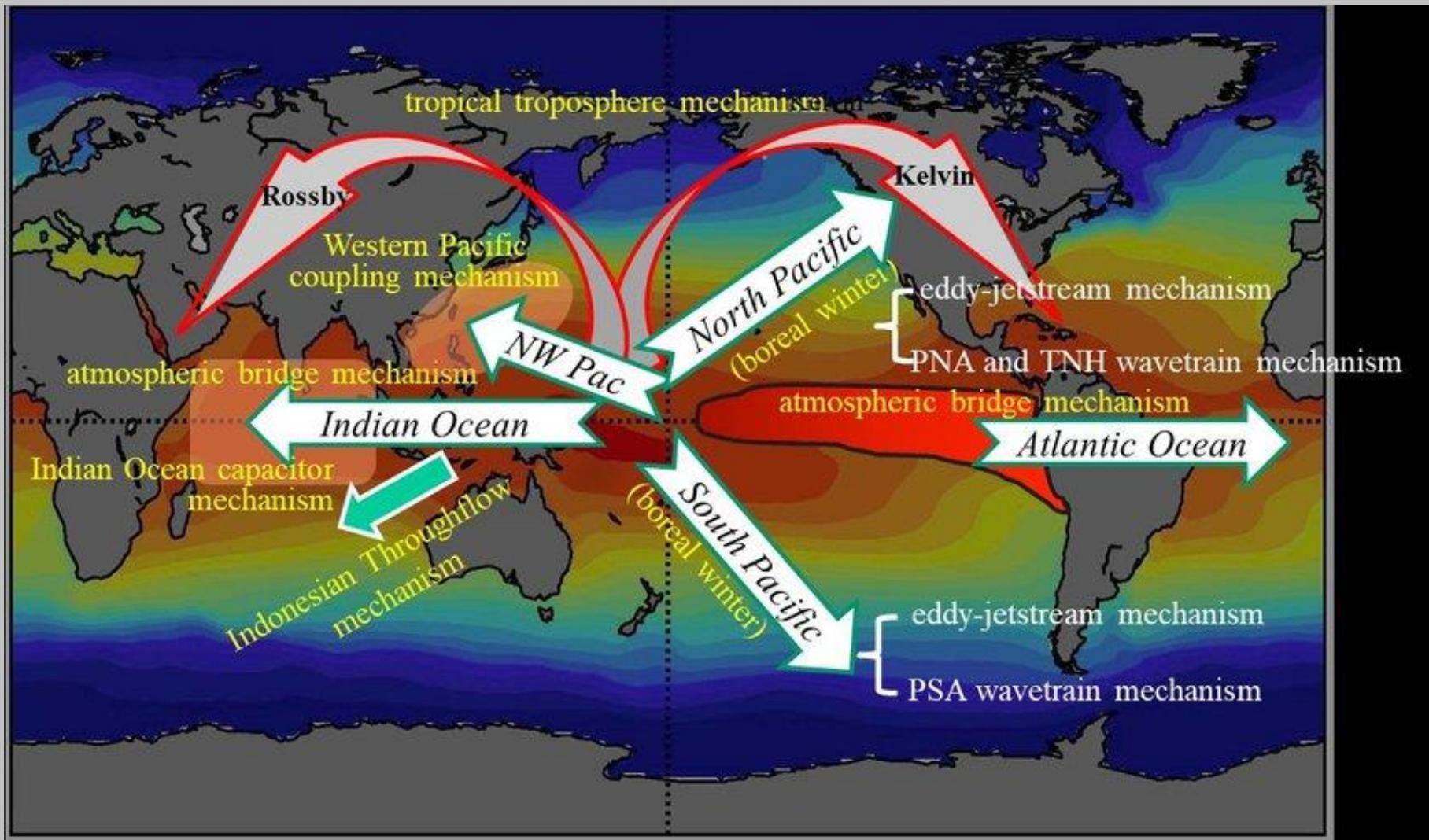
# 2024-2025 Government Camp Climate Forecast Performance



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.

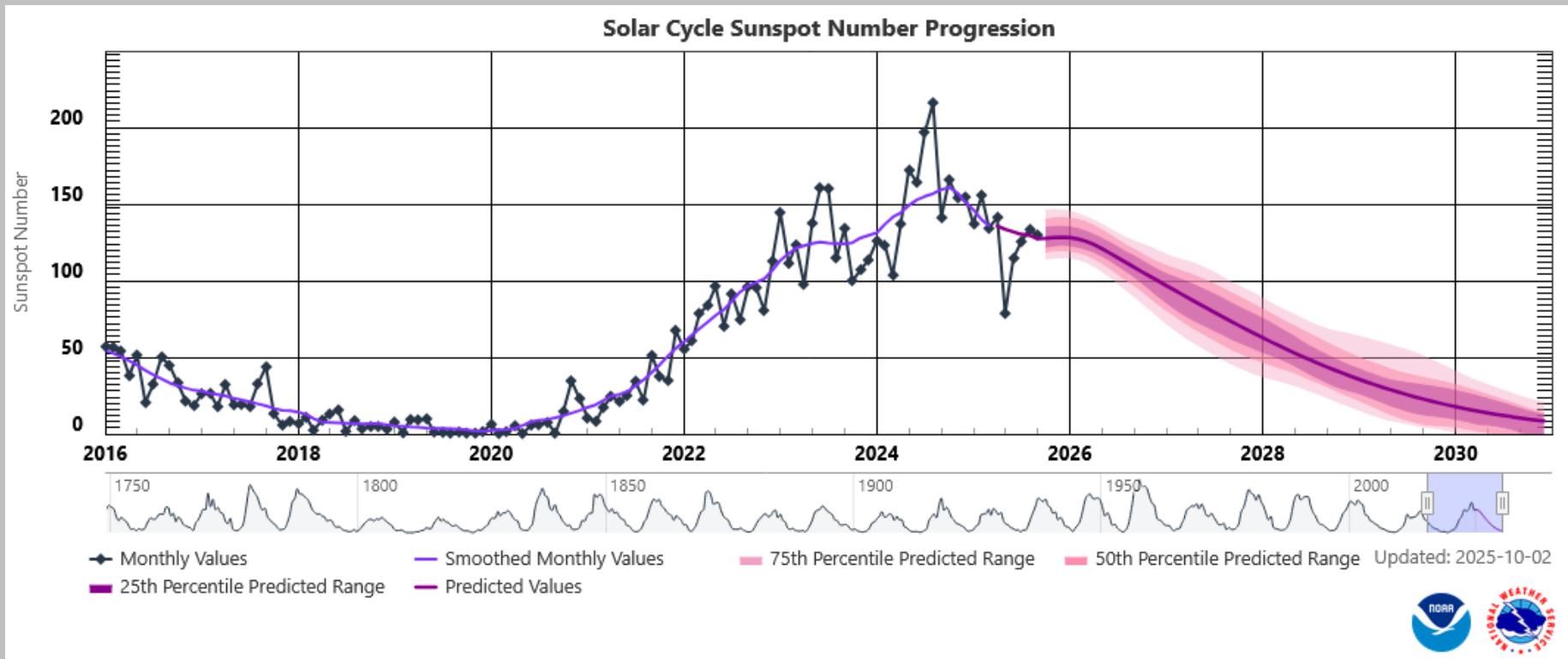


# Introduction – Methods

Ensemble forecasting – 20 past water years:

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

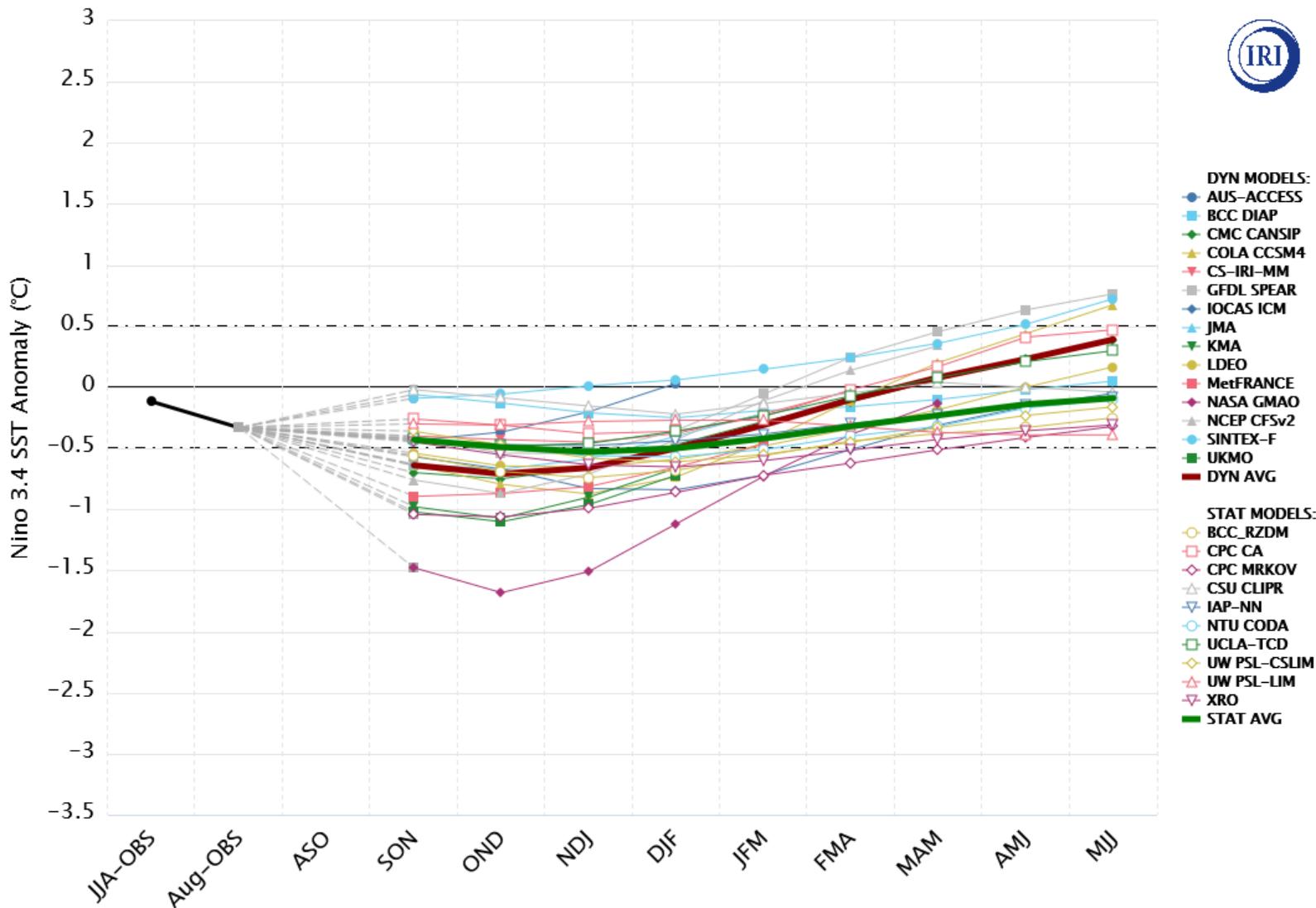
# SUNSPOT COUNTS – moving towards “*La Niña* winter”



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

# COLUMBIA U. IRI & NOAA's CPC ENSO FORECAST

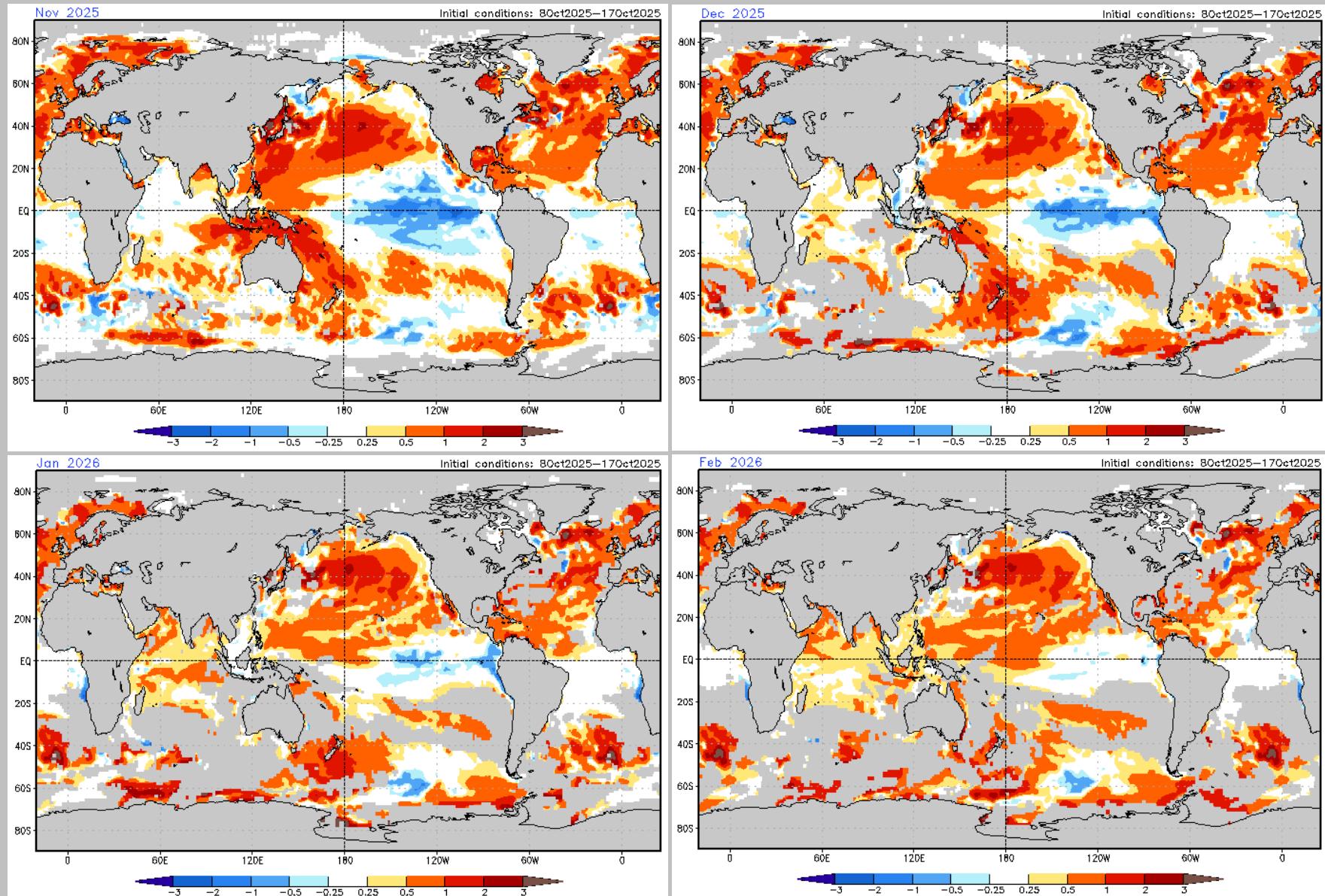
## Model Predictions of ENSO from Sep 2025



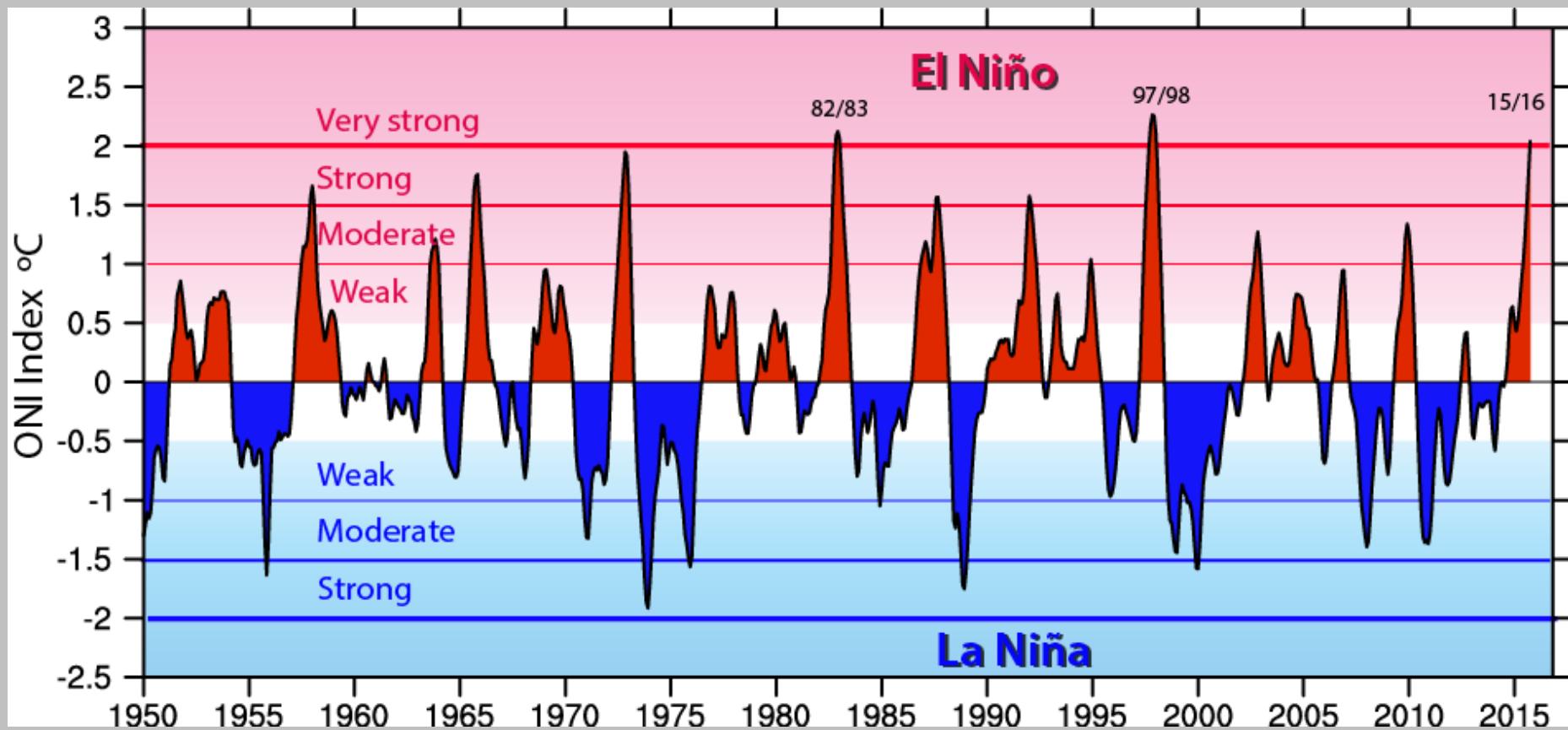
Highcharts.com

[https://iri.columbia.edu/our-expertise/climate/forecasts/enso/current/?enso\\_tab=enso-sst\\_table](https://iri.columbia.edu/our-expertise/climate/forecasts/enso/current/?enso_tab=enso-sst_table)

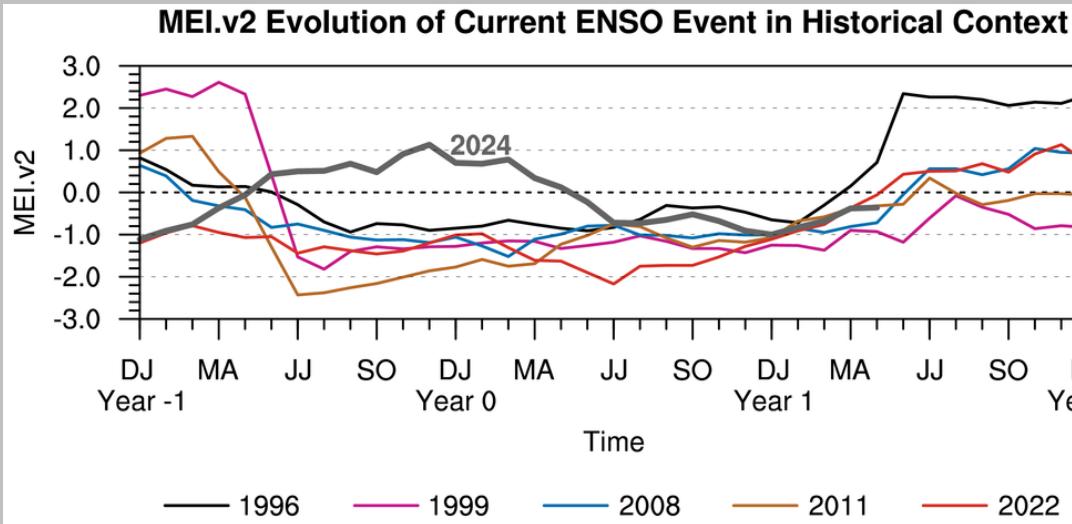
# NOAA SEA SURFACE TEMPERATURES - “*La Niña* winter”



# NINO SEA SURFACE TEMPERATURE INDICES

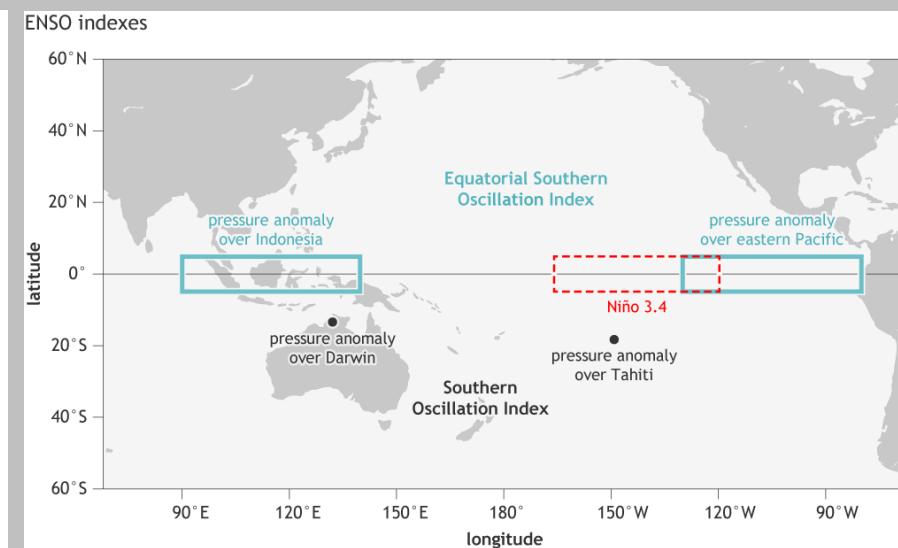
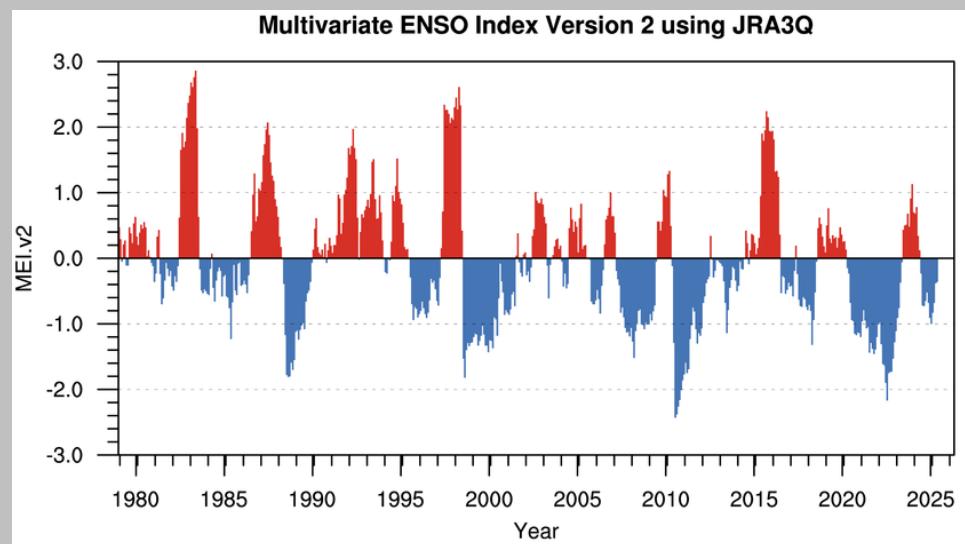


# MEI SIGNAL SUGGESTS “*La Niña* winter”



**MEI** – one index that tracks:

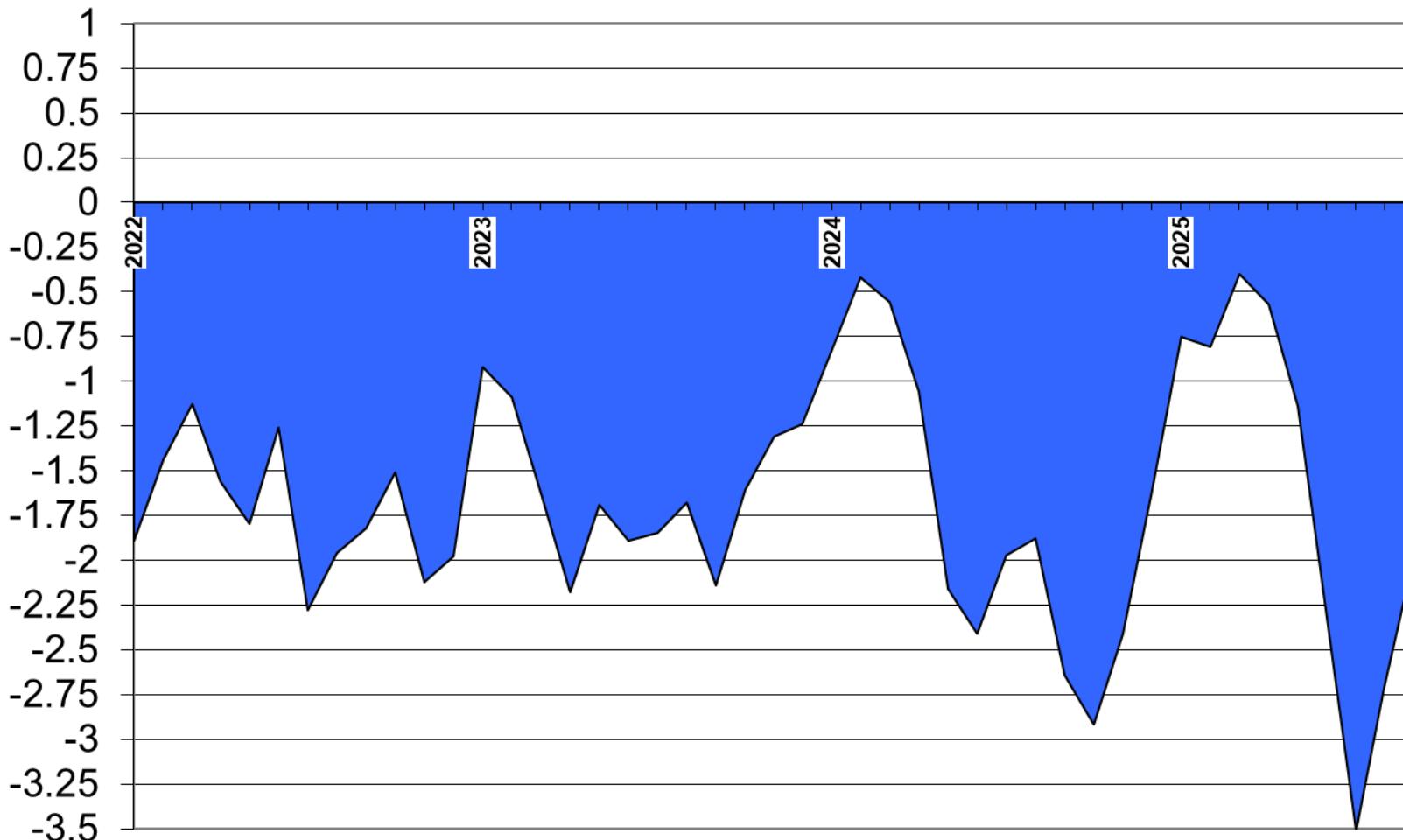
- Sea-Level Pressure
- Surface winds (2D)
- Sea-surface Temperature
- Surface Air Temperature
- Fraction of Cloud cover



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

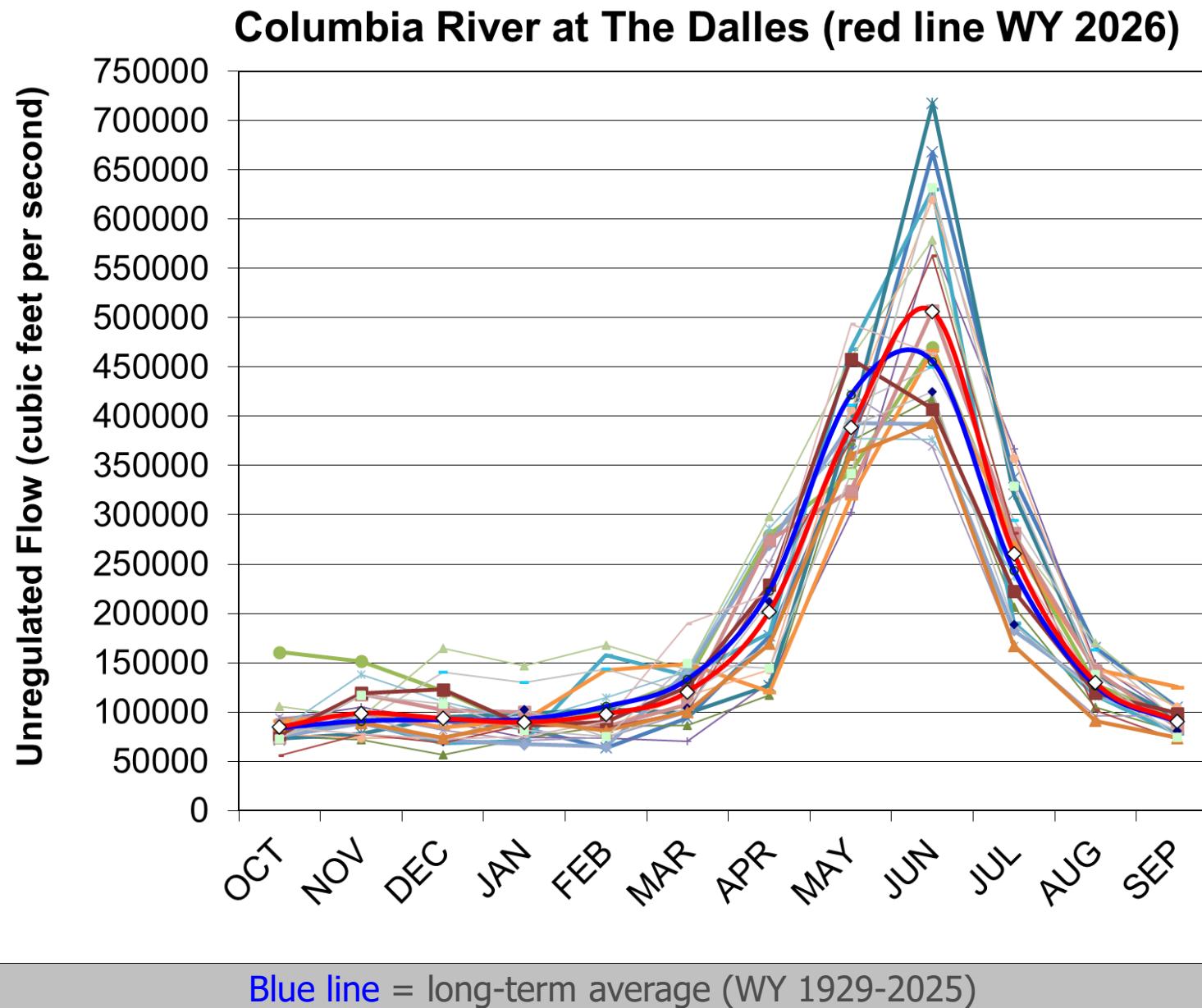
# PDO SIGNAL: COLD PHASE...STRONGLY NEGATIVE

## PACIFIC DECadal OSCILLATION (PDO), v.5



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

# ENSEMBLE STREAMFLOW FORECAST

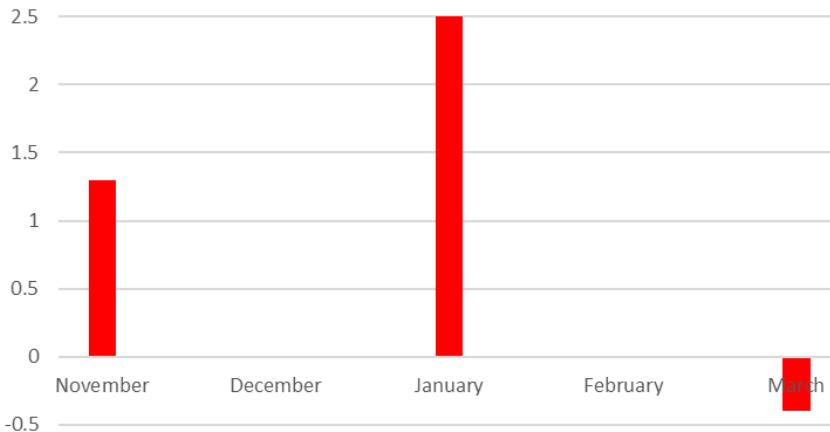


# Summary: Columbia R. Gorge

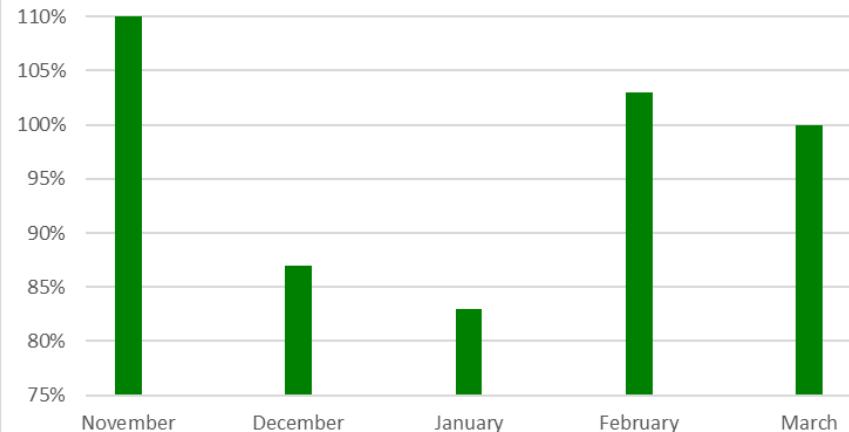
## Hood River, Oregon



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)





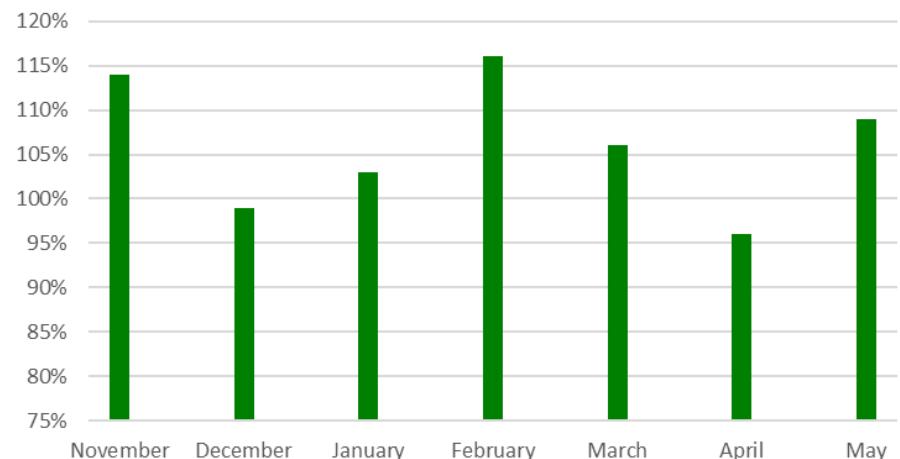
# Summary: the mountains

## Government Camp, Oregon

TEMPERATURE DEPARTURE FORECAST



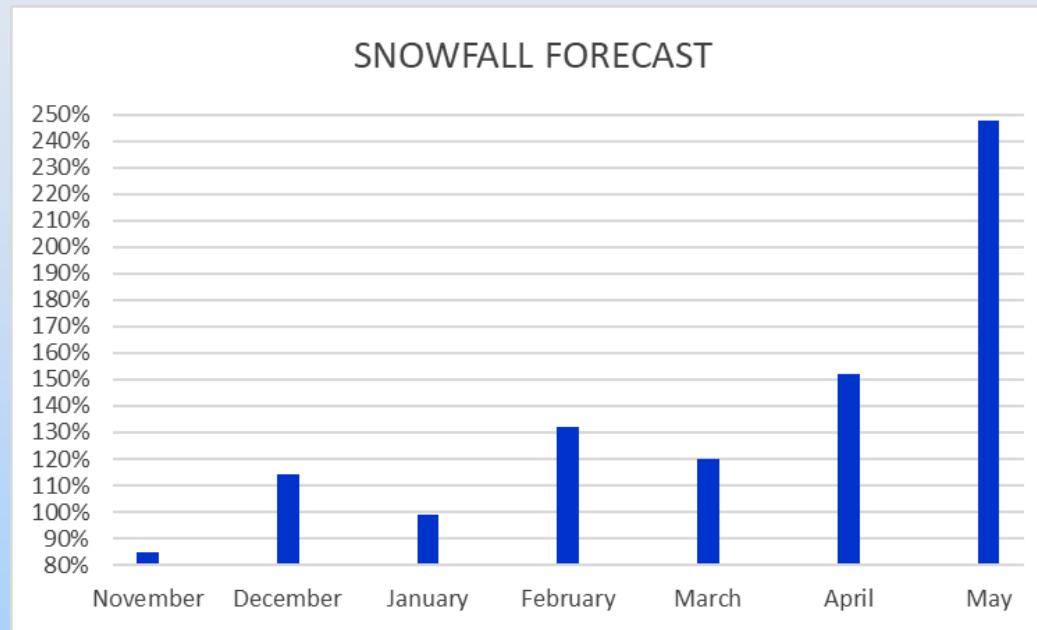
PRECIPITATION FORECAST





# Summary: the mountains

## Government Camp, Oregon



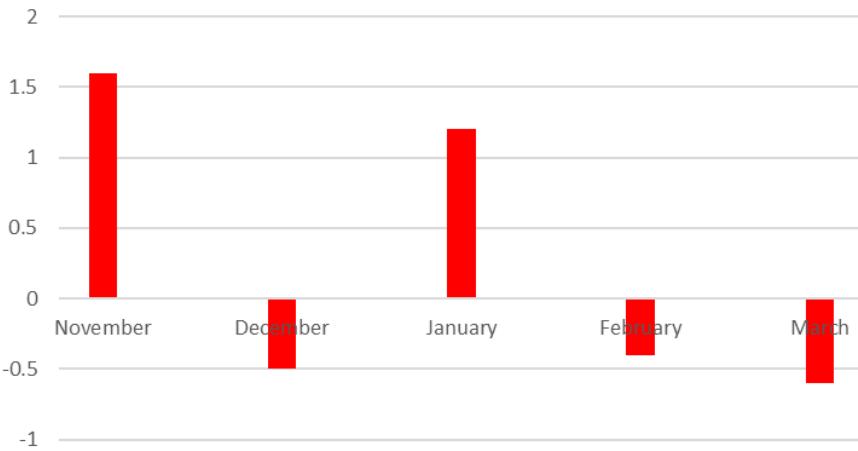
Expect a seasonal snow total: **263-inches** or **136%** of normal (NOV-MAY).



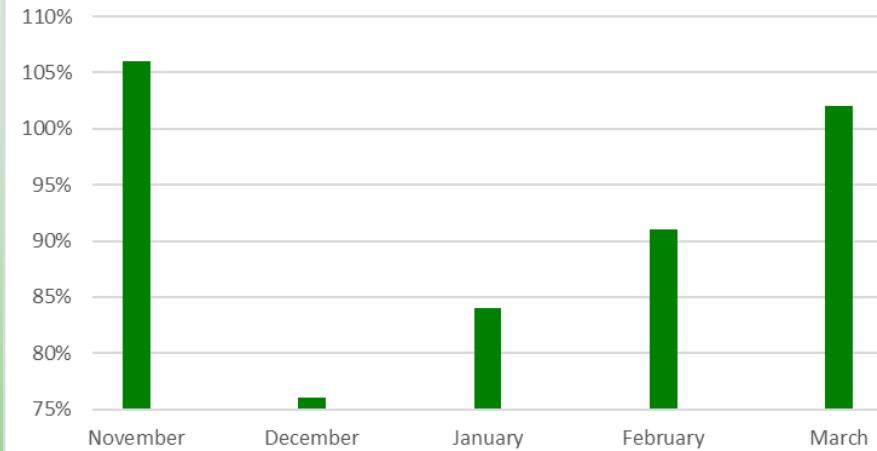


# Summary: the Portland Forecast

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** ( $\pm 9$  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**

