

Water Supply Outlook For - The Future

WSAC October 17 , 2019
Brent Bower NWS Seattle

Climate Prediction Center

Winter Outlook:

Precipitation: Equal Chances

Temperatures: greater odds for warmer than normal

El Nino/La Nina: best odds for neutral, potentially a little on the warm side

Warm Northeast Pacific Ocean – ‘marine heat wave’

Search

Enter NWS ID:

GO

Map Overlays

- ☒ NWRFC Boundary
- ☐ NWRFC Basins
- ☐ NWS HSAs
- ☐ Counties

ESP Natural Forecast

- ☐ Natural Status
- ☒ Natural % of Normal
- ☐ Rank (ASC)
- ☐ Rank (DESC)
- ☐ Exceedance (%)
- ☐ Percentile (%)

Natural Runoff

- ☐ Runoff Status
- ☐ Runoff % of Normal

ESP Natural Forecast

Period: APR-SEP

Forecast (% Normal)

- ☐ No Normal, No Data
- ☐ < 25
- ☐ 25-50
- ☐ 50-75
- ☐ 75-90
- ☐ 90-110
- ☐ 110-125
- ☐ 125-150
- ☐ 150-175
- ☐ > 175



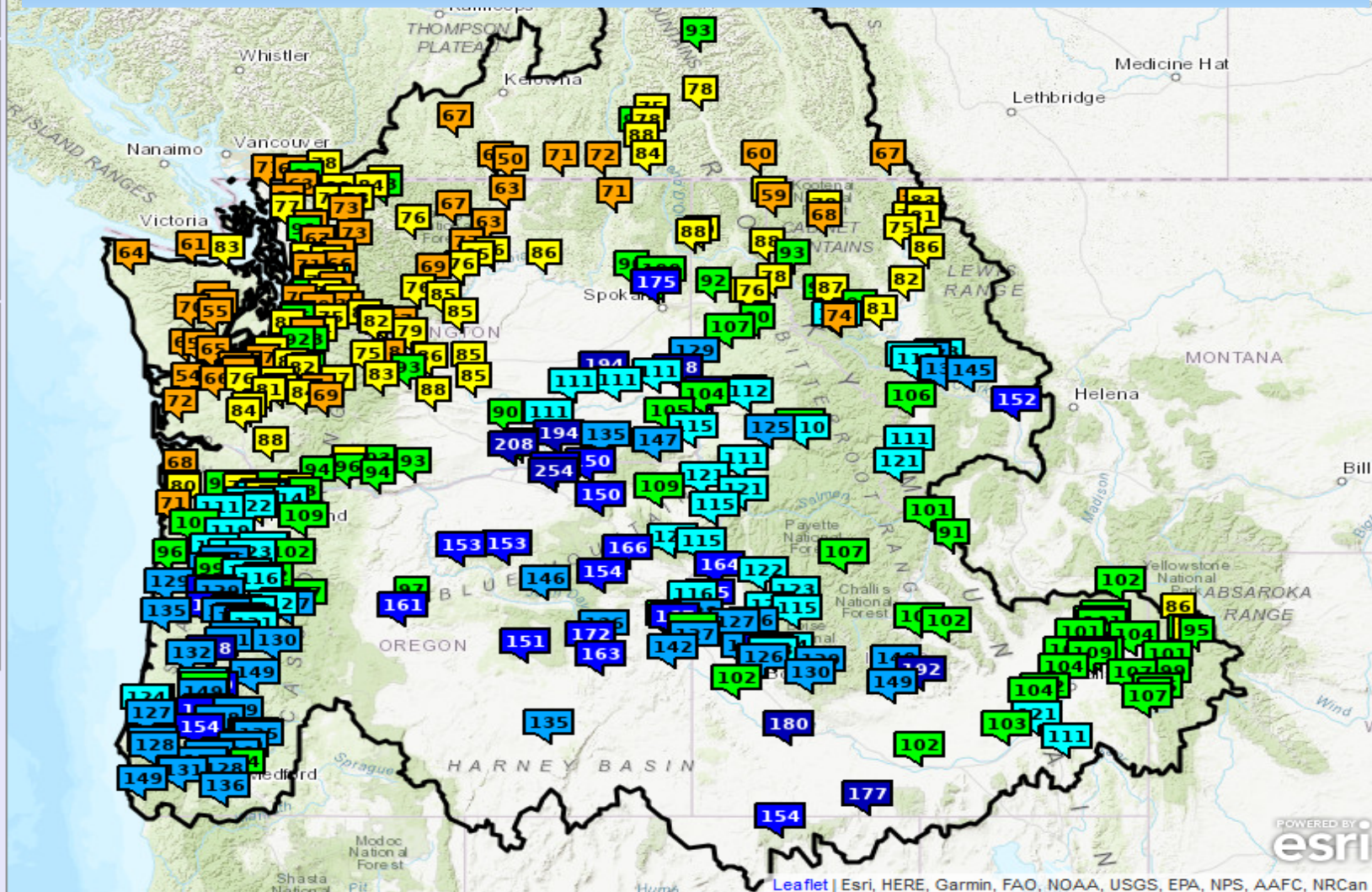
Stations Displayed:

357

Natural Links

- [Forecast Listing](#)
- [Forecast Report](#)
- [Forecast Report CSV](#)

Percent of Normal WY 2019 April – September Volumes

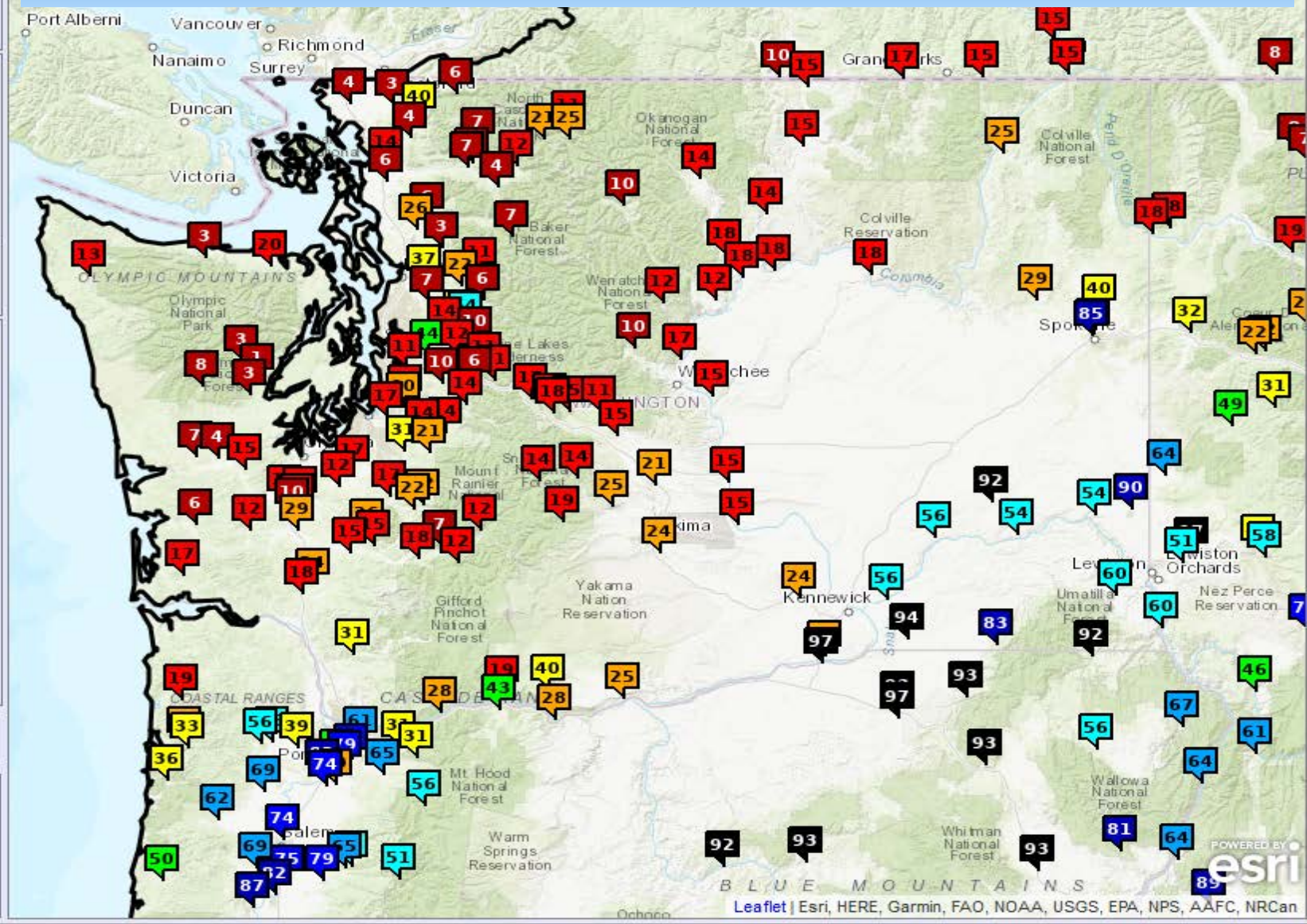
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Disclaimer

Percentiles WY 2019

April – September Volumes



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Natural Runoff

- ☐ Runoff Status
- ☐ Runoff % of Normal

ESP Natural Forecast

Period: APR-SEP

Percentile Probability(%)

- ☐ No Data
- ☒ 0-10
- ☐ 10-20
- ☐ 20-30
- ☐ 30-40
- ☐ 40-50
- ☐ 50-60
- ☐ 60-70
- ☐ 70-80
- ☐ 80-90
- ☐ 90-100



Stations Displayed:

203

Natural Links

- [Forecast Listing](#)
- [Forecast Report](#)
- [Forecast Report CSV](#)

Rank By Years WY 2019

April – September Volumes

Search
Enter NWS ID:

GO

Map Overlays

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- ☐ Counties

ESP Natural Forecast

- ☐ Natural Status
- ☐ Natural % of Normal
- ☐ Rank (ASC)
- ☒ Rank (DESC)
- ☐ Exceedance (%)
- ☐ Percentile (%)



Natural Runoff

- ☐ Runoff Status
- ☐ Runoff % of Normal

ESP Natural Forecast

Period: APR-SEP
Rank (Descending)
‡Marker Color Shows Percentile (%)

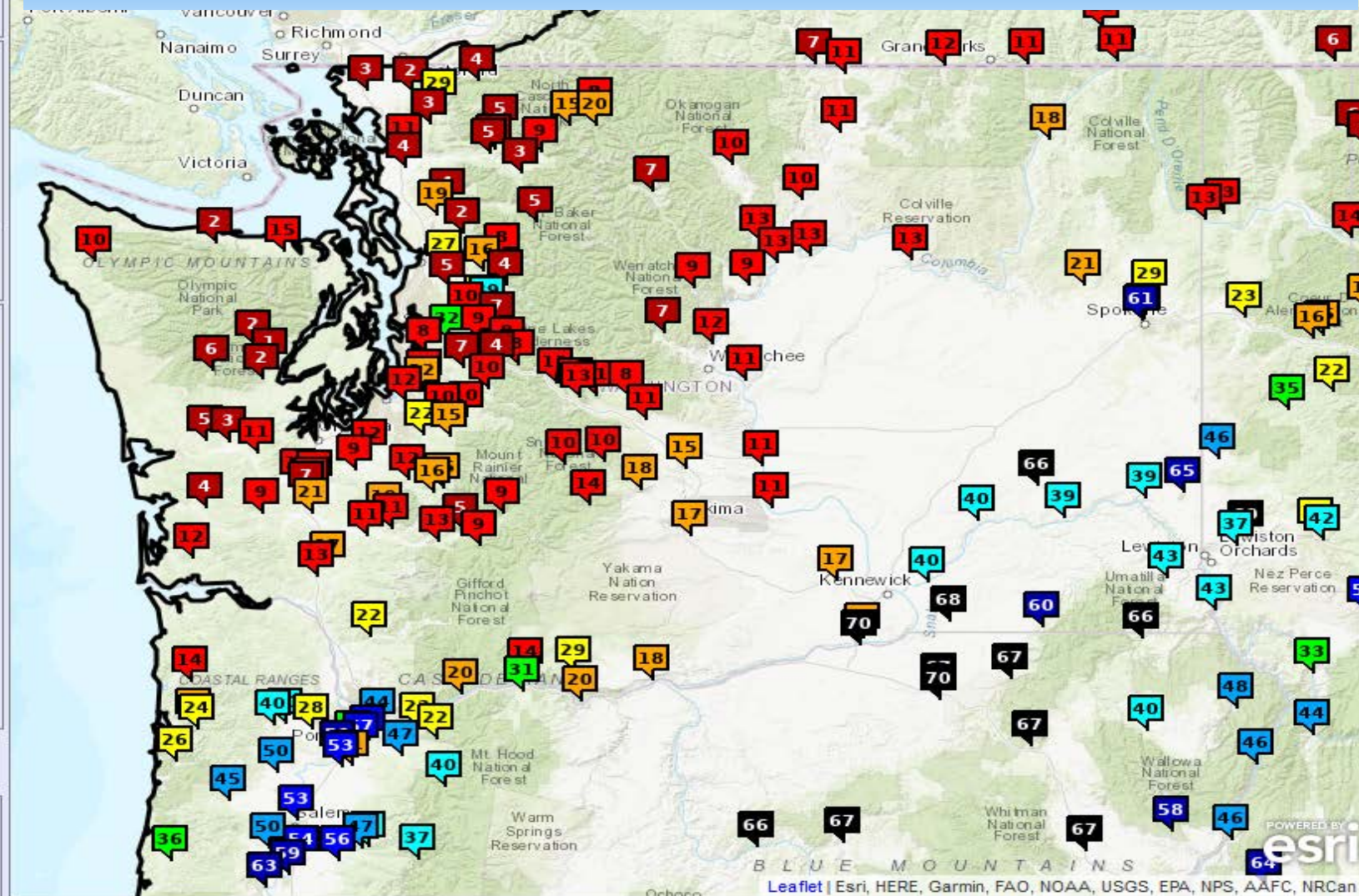
○ No Data
● 0-10
● 10-20
● 20-30
● 30-40
● 40-50
● 50-60
● 60-70
● 70-80
● 80-90
● 90-100

Stations Displayed:
203

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Northwest River Forecast Center

ESP Natural Forecast

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Notice of WY2020 Updates to Ensemble Forecast Products and Services

(Posted: Thursday, October 3, 2019 to Friday, November 1, 2019)

We are making some changes for the coming water year! [Click here for more detail.](#)

[Home](#)[Zoom Out](#)[--- Quick Zooms ---](#)

ESP Issued: 2019-10-16

Ensemble Date: 2019-10-16

[Permalink](#)

Search

Enter NWS ID:

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- ☐ Counties

ESP Natural Forecast

- ☐ Natural Status
- ☒ Natural % of Normal
- ☐ Rank (ASC)
- ☐ Rank (DESC)
- ☐ Exceedance (%)
- ☐ Percentile (%)

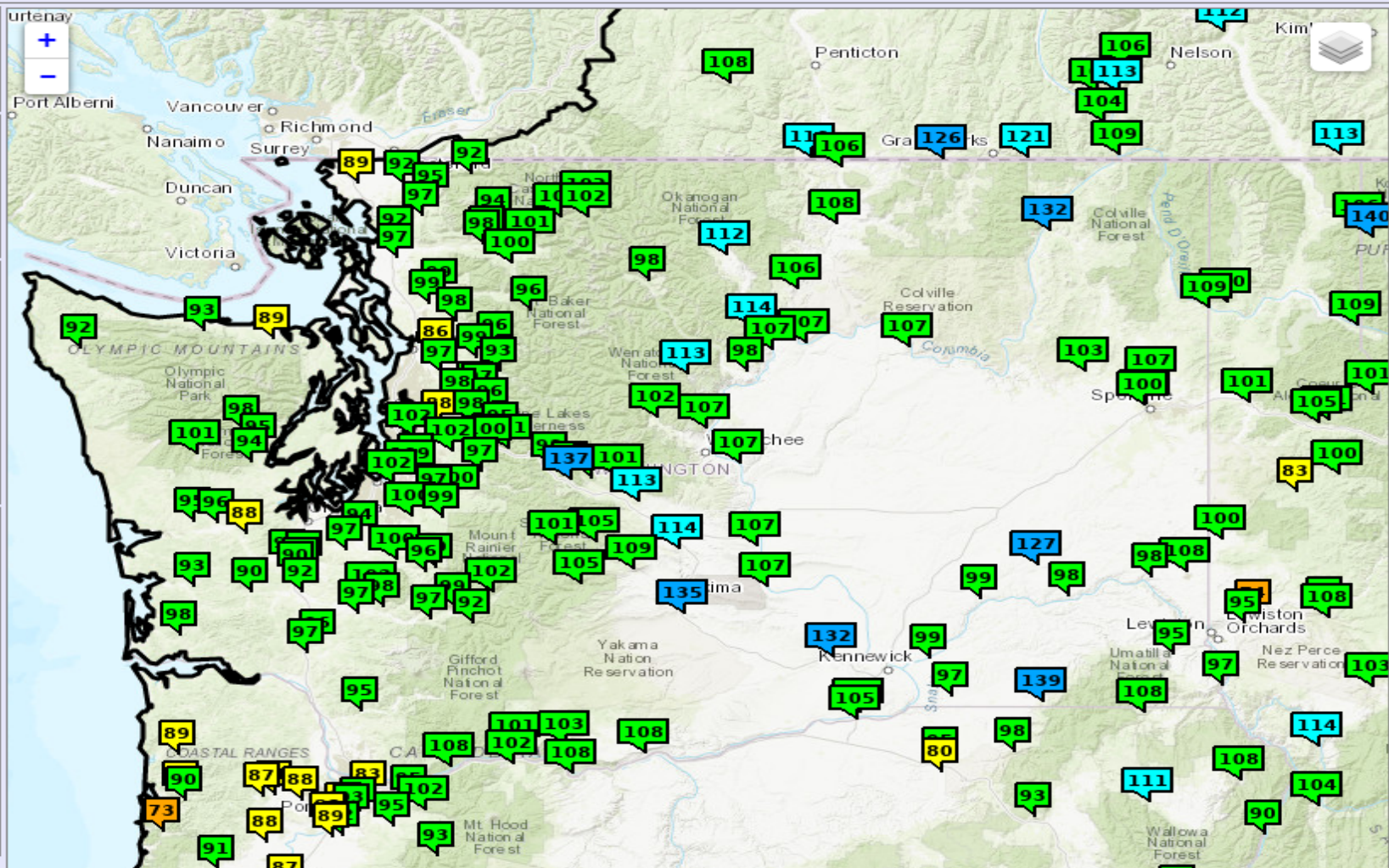
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Northwest River Forecast Center

ESP Natural Forecasts

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METHOW - NEAR PATEROS (PATW1)

Forecasts for Water Year **2019**

ESP Natural Forecast

☐ 10 days QPF: Ensemble: 2019-05-08 Issued: 2019-05-08

Forecast Period	Forecasts Are in KAF				30 Year Average (1981-2010)
	90 %	50 %	% Average	10 %	
APR-SEP	580	632	71	702	895
APR-JUL	534	589	71	657	833
JAN-SEP	648	700	71	769	985
JAN-JUL	602	656	71	725	923
OCT-SEP	723	775	72	844	1075

☐ 5 days QPF: Ensemble: 2019-05-08 Issued: 2019-05-08

APR-SEP	565	618	69	700	895
APR-JUL	517	575	69	653	833
JAN-SEP	632	686	70	767	985
JAN-JUL	585	642	70	721	923
OCT-SEP	707	761	71	842	1075

☐ 0 days QPF: Ensemble: 2019-05-08 Issued: 2019-05-08

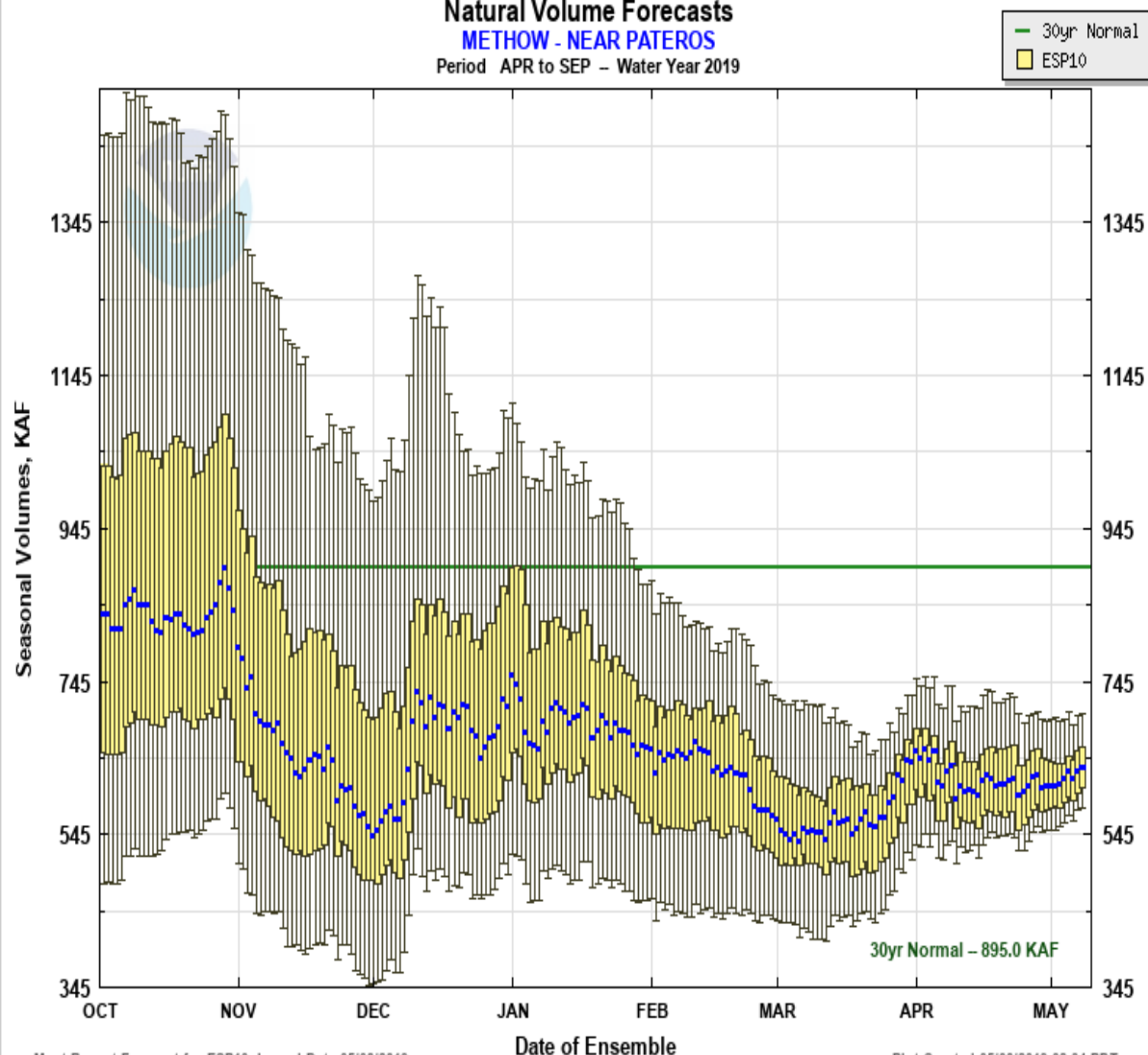
APR-SEP	549	617	69	697	895
APR-JUL	503	574	69	646	833
JAN-SEP	617	685	70	764	985
JAN-JUL	570	642	70	714	923
OCT-SEP	692	760	71	839	1075

Move the mouse over the desired "Forecast Period" to display a graph.

Natural Volume Forecasts

METHOW - NEAR PATEROS

Period APR to SEP - Water Year 2019



Most Recent Forecast for ESP10: Issued Date 05/08/2019

Plot Created 05/08/2019 02:34 PDT



Northwest River Forecast Center

ESP Natural Forecasts

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METHOW - NEAR PATEROS (PATW1)

Forecasts for Water Year 2020

Official Water Supply

ESP with 10 Days QPF Ensemble: 2019-10-16 Issued: 2019-10-16

Forecast Period	Forecasts Are in KAF				30 Year Average (1981-2010)
	90 %	50 %	% Average	10 %	
APR-SEP	735	1024	114	1666	895
APR-JUL	690	970	116	1583	833
JAN-SEP	828	1131	115	1735	985
JAN-JUL	784	1084	117	1653	923
OCT-SEP	952	1320	123	1861	1075

Experimental Water Supply

HEFS with 15 days EQPF Ensemble: 2019-10-16 Issued: 2019-10-16

APR-SEP	647	928	104	1576	895
APR-JUL	604	872	105	1481	833
JAN-SEP	735	1030	105	1688	985
JAN-JUL	691	982	106	1593	923
OCT-SEP	837	1162	108	1790	1075

Reference

ESP with 0 Days QPF Ensemble: 2019-10-16 Issued: 2019-10-16

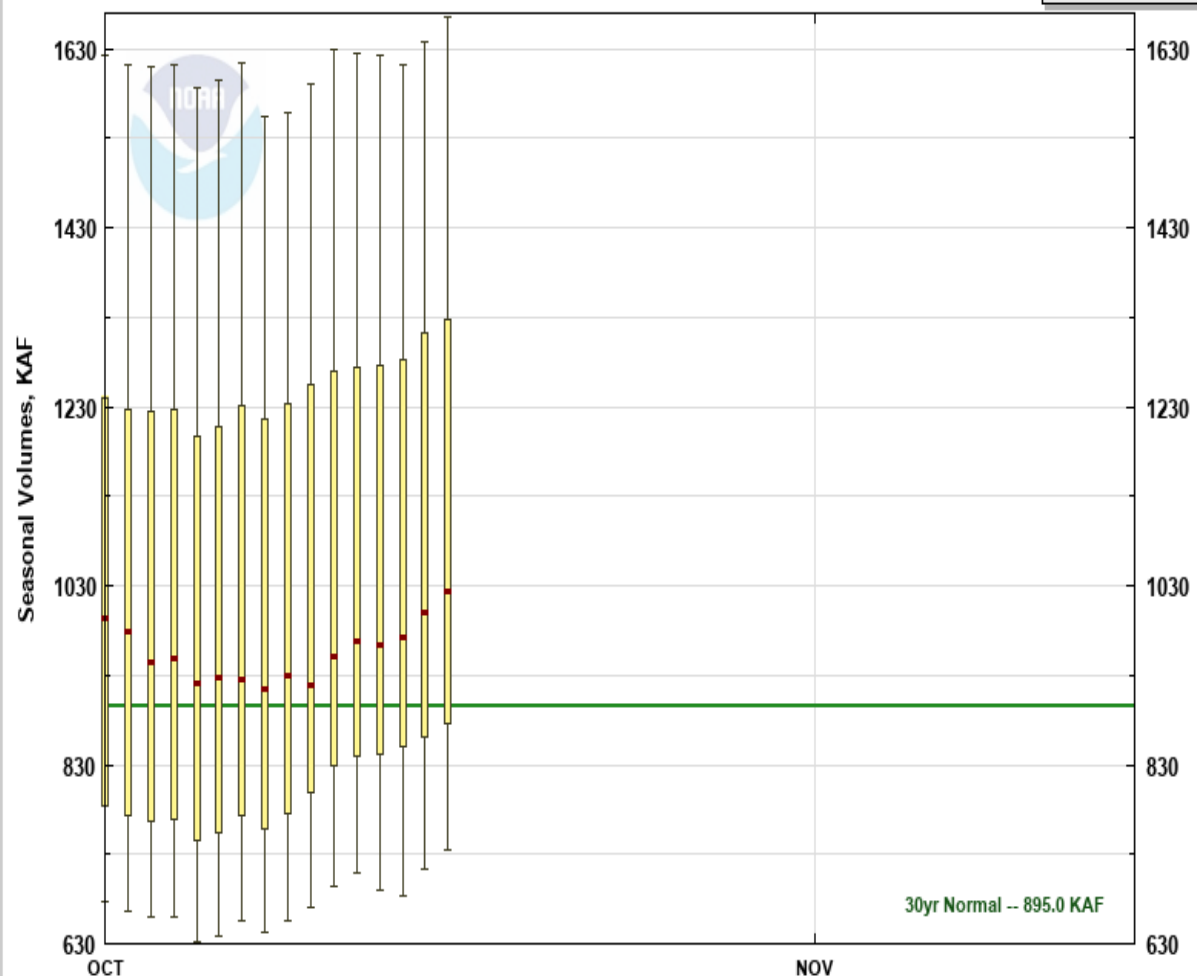
APR-SEP	624	917	103	1582	895
APR-JUL	582	870	104	1486	833
JAN-SEP	711	1024	104	1666	985
JAN-JUL	669	974	106	1584	923
OCT-SEP	807	1186	110	1756	1075

Move the mouse over the desired "Forecast Period" to display a graph.

Natural Volume Forecasts

METHOW - NEAR PATEROS

Period APR to SEP -- Water Year 2020



Most Recent Forecast for ESP10: Issued Date 10/16/2019

Date of Ensemble

Plot Created 10/16/2019 04:06 PDT

NWS Water Supply Forecasts

- Water supply forecasts at this early in the season have little information to go on other than climatology and the general outlook.
- NWS's NWRFC has made changes to ensemble models used for water supply forecasting
 - ESP5 retired; ESPM (HEFS) replaces it
 - Based on HEFS with 15-day weather forecast ensemble (GEFS + MEFP)
 - Exceedance probabilities 70/30% now 75/25%. (90/75/50/25/10%)
 - Will include max/min volumes as well
 - Ensemble historical period now WY 1981 to WY 2019