

Water Supply Outlook For - Spring-Summer 2020

WSAC January 24 , 2020
Brent Bower NWS Seattle

Climate Prediction Center

Winter Outlook:

Precipitation: Above normal rest of Jan;
Equal Chances for Feb to Apr; below normal
May to July

Temperatures: Warmer near term; 3-month
Equal chances then greater odds for warmer
than normal

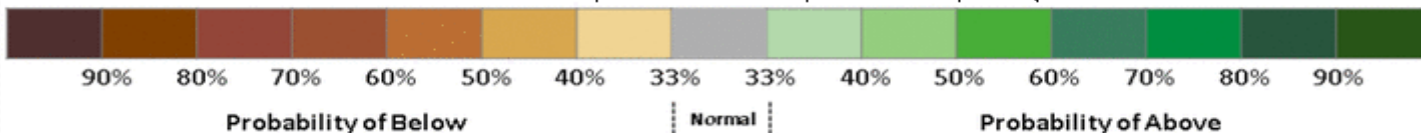
El Nino/La Nina: Currently neutral; best odds
for neutral through spring

Warm Northeast Pacific Ocean – ‘marine heat
wave’



6-10 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 23 JAN 2020
VALID JAN 29 - FEB 02, 2020

DASHED BLACK LINES ARE CLIMATOLOGY
(10THS OF INCHES) SHADED AREAS ARE FCS
VALUES ABOVE (A) OR BELOW (B) NORMAL
GRAY AREAS ARE NEAR-NORMAL



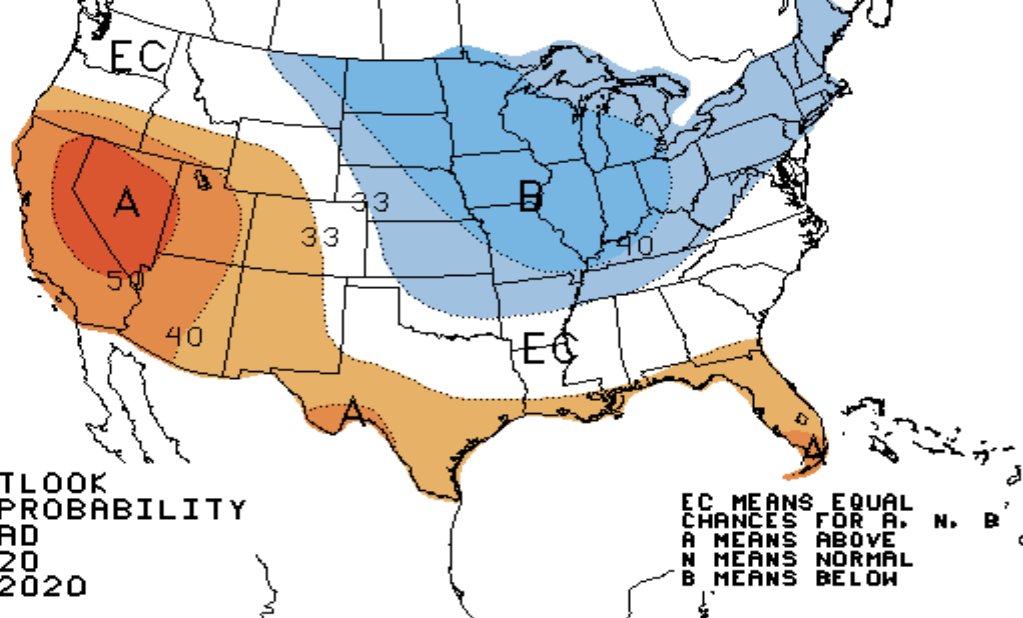
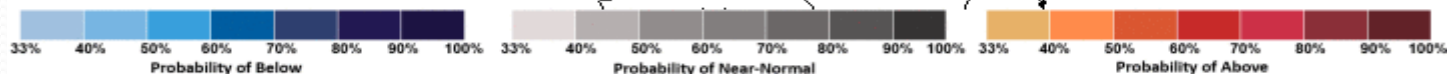
8-14 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 23 JAN 2020
VALID JAN 31 - FEB 06, 2020

DASHED BLACK LINES ARE CLIMATOLOGY
(10THS OF INCHES) SHADED AREAS ARE FCS
VALUES ABOVE (A) OR BELOW (B) NORMAL
GRAY AREAS ARE NEAR-NORMAL

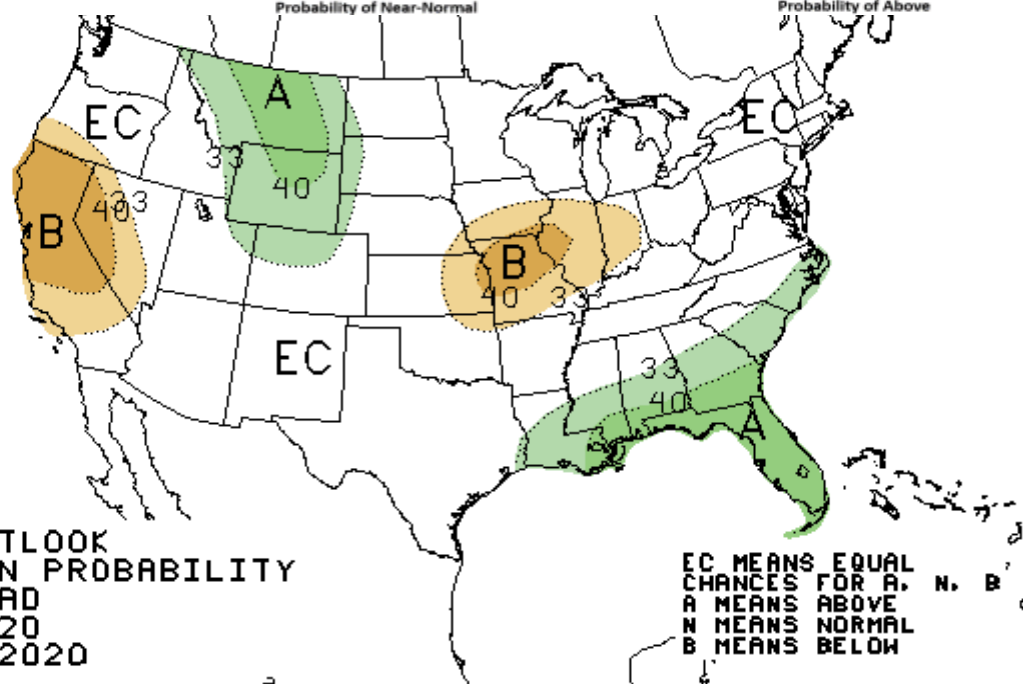
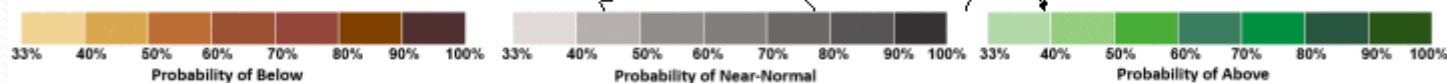




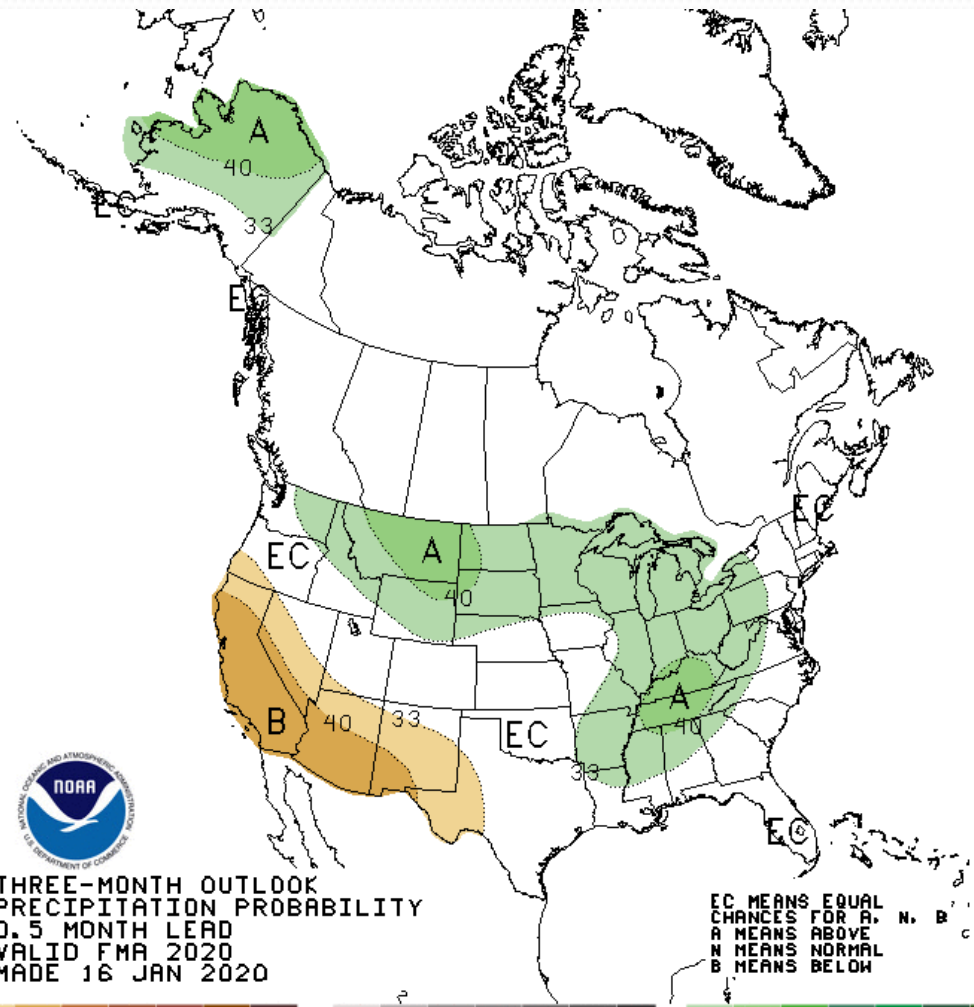
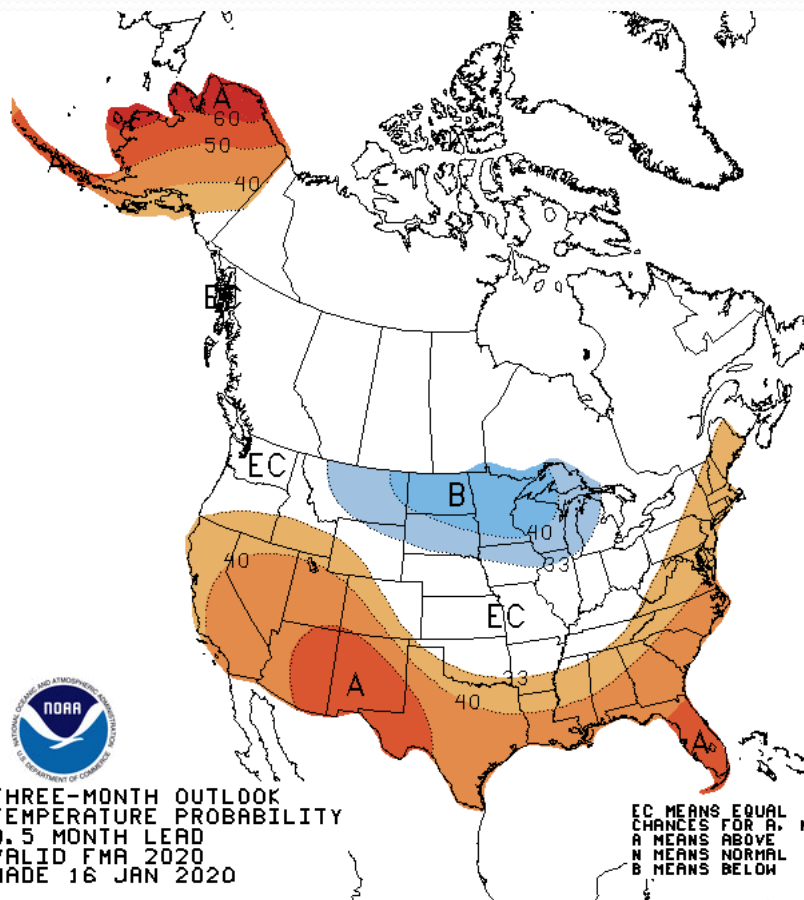
ONE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.5 MONTH LEAD
VALID FEB 2020
MADE 16 JAN 2020



ONE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.5 MONTH LEAD
VALID FEB 2020
MADE 16 JAN 2020



Feb – Apr 2020 Outlook





Northwest River Forecast Center

Current Station Snow Conditions



River and Hydrology

Water Supply

Observations

Weather Forecasts

Climate

NWRFC

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--- Quick Zooms ---

[Refresh Data](#)

Last Refresh: 2019-12-13 07:41:34 PST

Elevation
Filter: ☐

[Permalink](#)

Search by NWS ID:

[GO](#)

Map Overlays

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

Map Type

- ☐ SWE
- ☐ Snow Status
- ☐ Snow % of Avg
- ☐ Seasonal Peak Status
- ☐ Snow Density
- ☐ Basin Obs Status
- ☐ Basin Sim Status
- ☐ Diff

Legend

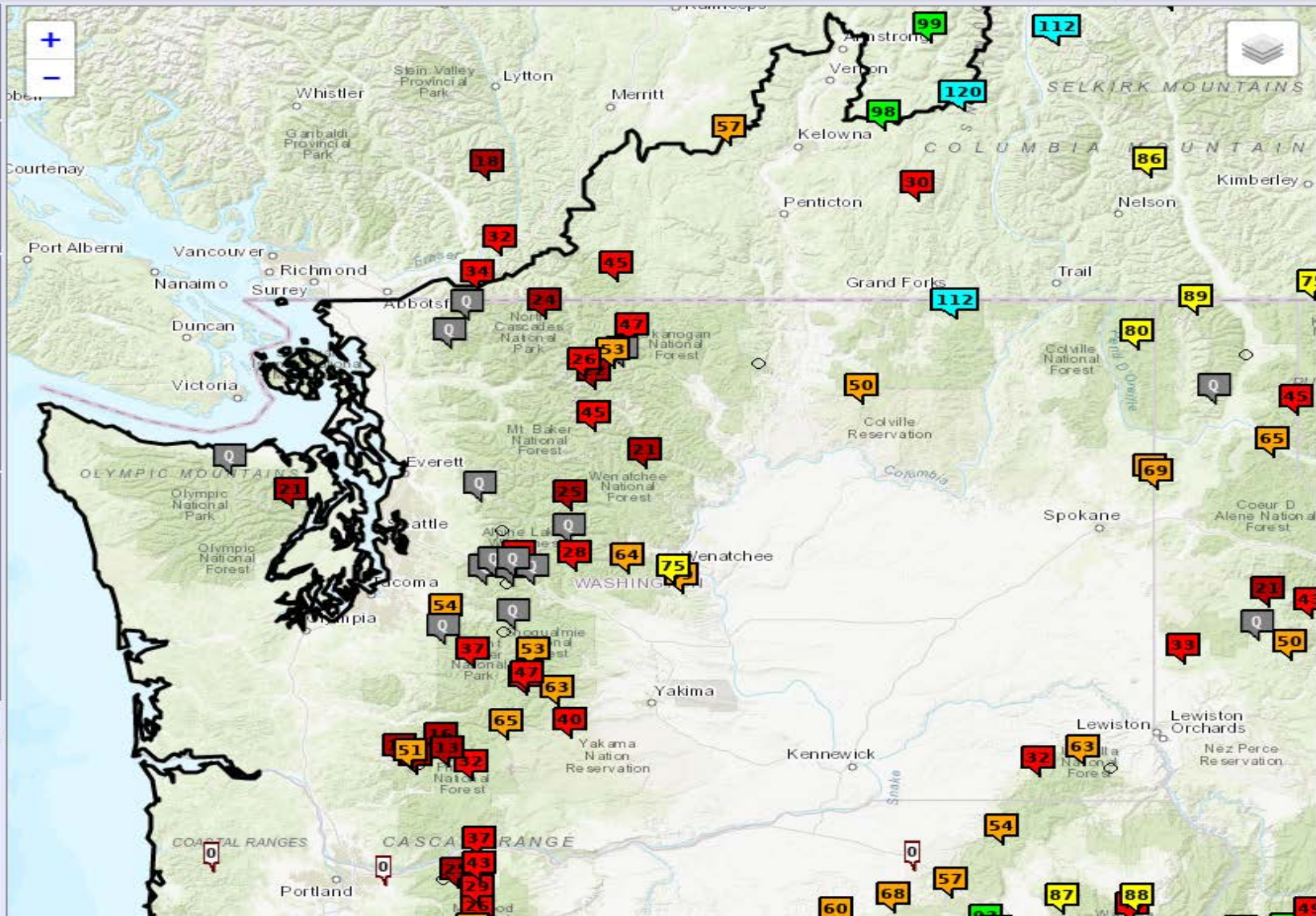
SWE (% Avg)

- ☐ Questionable
- ☐ Not Available
- ☐ Zero
- ☐ < 25
- ☐ 25-50
- ☐ 50-75
- ☐ 75-90
- ☐ 90-110
- ☐ 110-125
- ☐ 125-150
- ☐ 150-175
- ☐ > 175

Stations Displayed: 109

Related Links

[Station Summary List](#)
[Basin Summary List](#)





Northwest River Forecast Center

Current Station Snow Conditions



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Refresh Data

Last Refresh: 2020-01-24 05:12:35 PST

Elevation

Filter:

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Map Overlays

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

Map Type

- ☐ SWE
- ☐ Snow Status
- ☒ Snow % of Avg
- ☐ Seasonal Peak Status
- ☐ Snow Density
- ☐ Basin Obs Status
- ☐ Basin Sim Status
- ☐ Diff

Legend

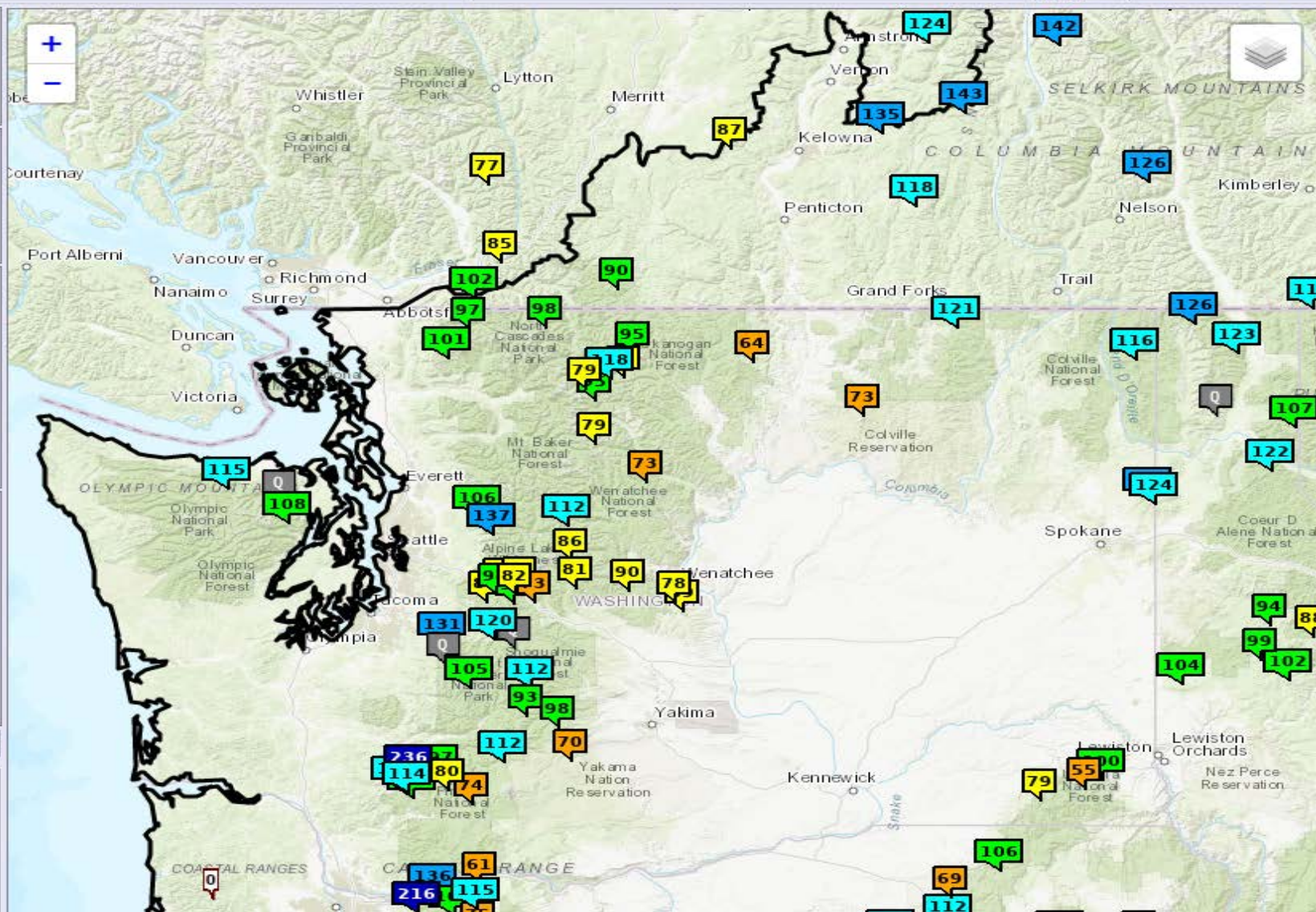
SWE (% Avg)

- Questionable
- Not Available
- Zero
- < 25
- 25-50
- 50-75
- 75-90
- 90-110
- 110-125
- 125-150
- 150-175
- > 175

Stations Displayed: 110

Related Links

[Station Summary List](#)
[Basin Summary List](#)

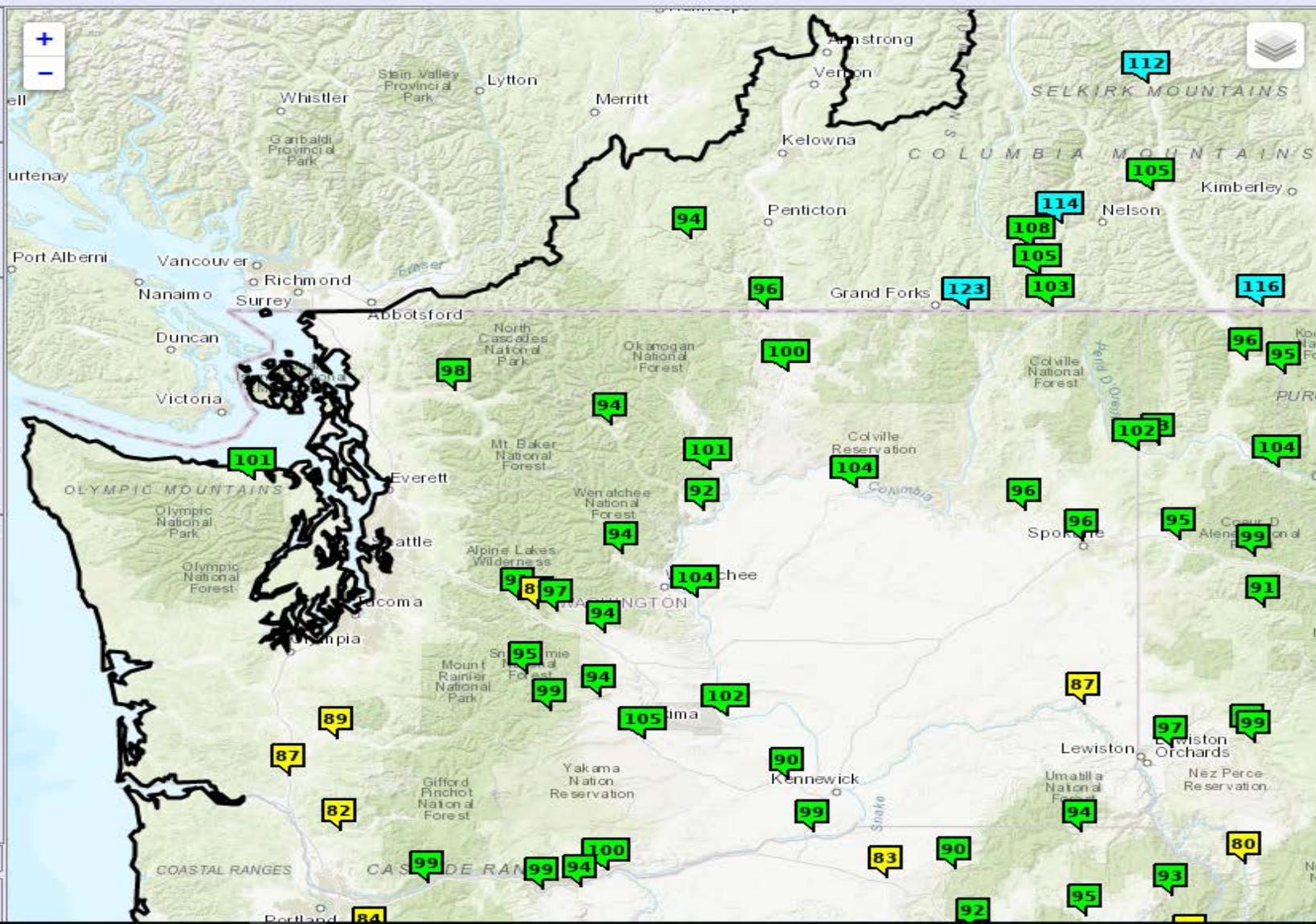




River and Hydrology	Water Supply	Observations	Weather Forecasts	Climate	NWRFC
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 [Permalink](#)

Forecast Listing





Northwest River Forecast Center

ESP Natural Forecast



River and Hydrology

Water Supply

Observations

Weather Forecasts

Climate

NWRFC

[Home](#)

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--- Quick Zooms ---

ESP Issued: 2020-01-23

Ensemble Date: 2020-01-23

[Permalink](#)

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

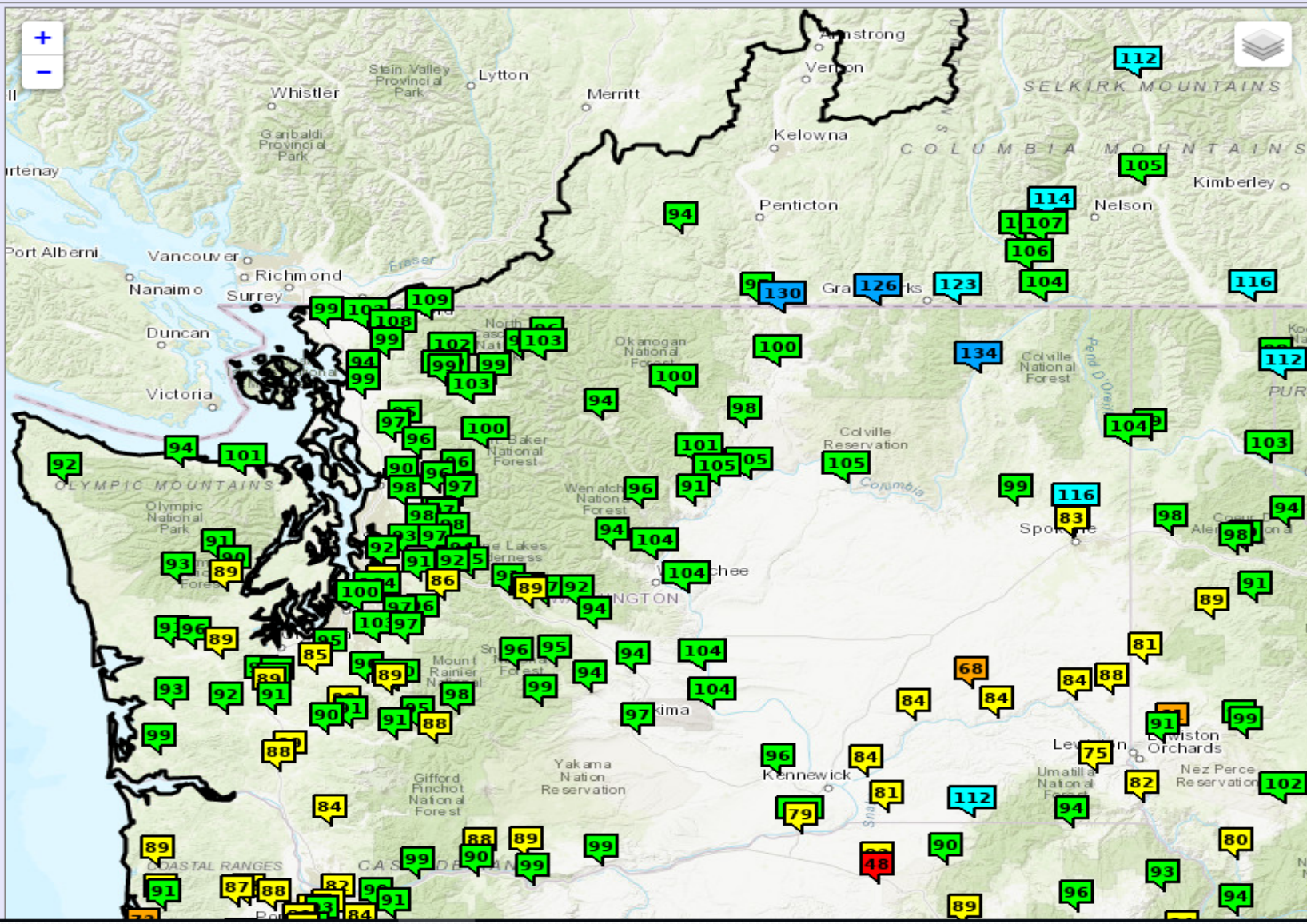


Stations Displayed:

196

Natural Links

[Forecast Listing](#)





Northwest River Forecast Center

ESP Natural Forecasts

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COLUMBIA - THE DALLES DAM (TDAO3) Forecasts for Water Year 2020

Official Water Supply

ESP with 10 Days QPF Ensemble: 2020-01-23 Issued: 2020-01-23

Forecast Period	Forecasts Are in KAF				30 Year Average (1981-2010)
	90 %	50 %	% Average	10 %	
APR-SEP	85170	94963	99	113231	96012
APR-JUL	69989	77288	94	93832	82019
APR-AUG	79548	88099	97	106028	90465
JAN-SEP	101320	114115	98	134715	116431
JAN-JUL	86184	95666	93	115315	102438
OCT-SEP	115188	127982	97	148582	132349

Experimental Water Supply

HEFS with 15 days EQPF Ensemble: 2020-01-23 Issued: 2020-01-23

APR-SEP	87388	100749	105	118093	96012
APR-JUL	72725	82623	101	99649	82019
APR-AUG	81343	94592	105	112121	90465
JAN-SEP	105803	119967	103	140331	116431
JAN-JUL	91962	103690	101	118585	102438
OCT-SEP	119670	133834	101	154199	132349

Reference

ESP with 0 Days QPF Ensemble: 2020-01-23 Issued: 2020-01-23

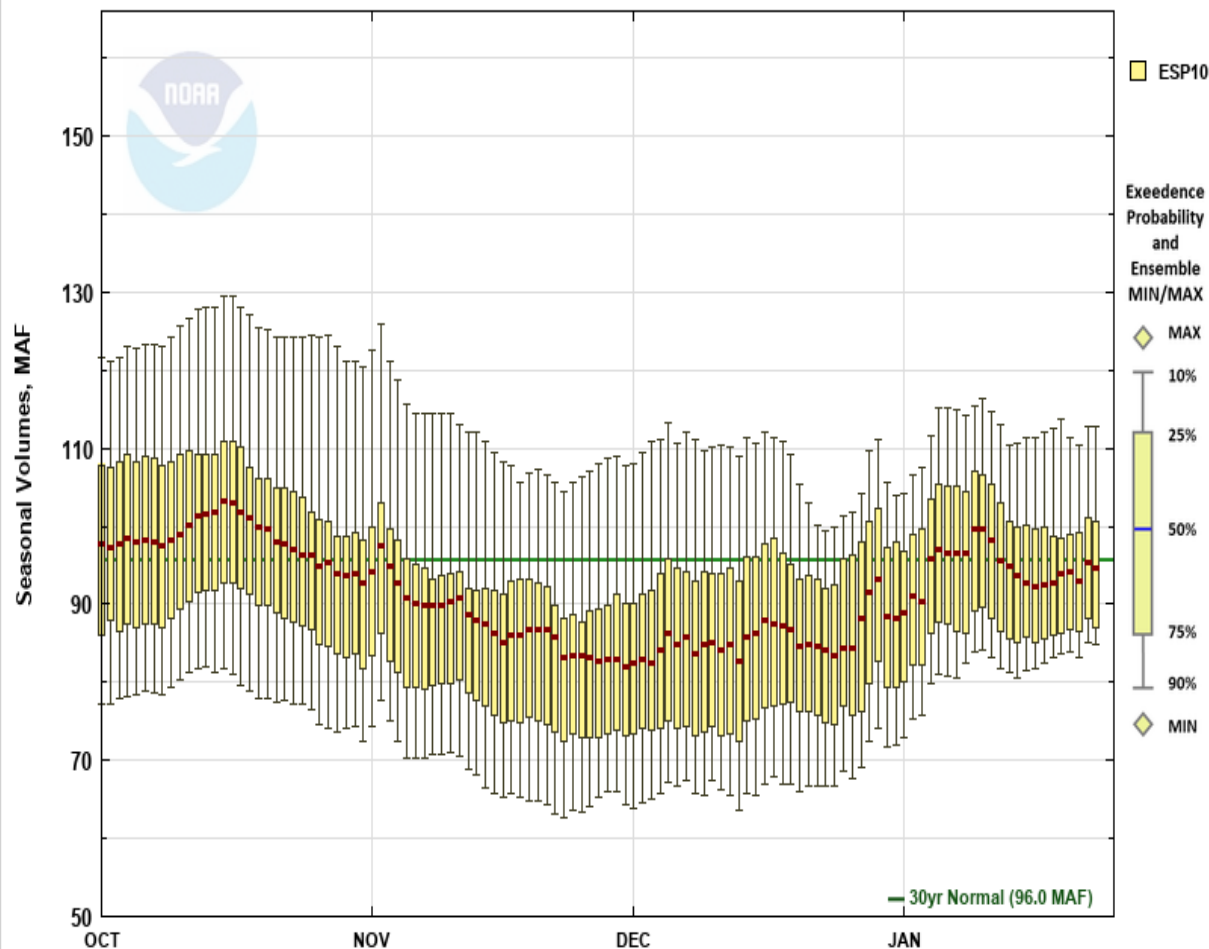
APR-SEP	83761	97131	101	112831	96012
APR-JUL	68981	77972	95	93674	82019
APR-AUG	77317	89698	99	105695	90465
JAN-SEP	99325	114174	98	133633	116431
JAN-JUL	86053	97150	95	112754	102438
OCT-SEP	113193	128041	97	147501	132349

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

Natural Volume Forecasts

COLUMBIA - THE DALLES DAM

Period APR to SEP -- Water Year 2020



Most Recent Forecast for ESP10: Issued Date 01/23/2020

Plot Created 01/24/2020 05:36 PST

☐ Max Scale ☒ Scale To Data ☐ Scale To Last 45 Days ☐ Show Min/Max Ensemble Volume ☐ Show Tooltips Help



Northwest River Forecast Center

ESP Natural Forecasts

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YAKIMA - NEAR PARKER (PARW1) Forecasts for Water Year 2020

Official Water Supply

ESP with 10 Days QPF Ensemble: 2020-01-23 Issued: 2020-01-23

Forecasts Are in KAF

Forecast Period	90 %	50 %	% Average	10 %	30 Year Average (1981-2010)
APR-SEP	1667	1961	97	2572	2025
APR-JUL	1423	1763	96	2336	1827
JAN-SEP	2708	2983	104	3840	2868
JAN-JUL	2523	2784	104	3557	2669
OCT-SEP	3116	3391	99	4248	3419

Experimental Water Supply

HEFS with 15 days EQPF Ensemble: 2020-01-23 Issued: 2020-01-23

APR-SEP	1529	2075	102	2678	2025
APR-JUL	1330	1868	102	2447	1827
JAN-SEP	2749	3267	114	3825	2868
JAN-JUL	2550	3039	114	3568	2669
OCT-SEP	3157	3675	107	4233	3419

Reference

ESP with 0 Days QPF Ensemble: 2020-01-23 Issued: 2020-01-23

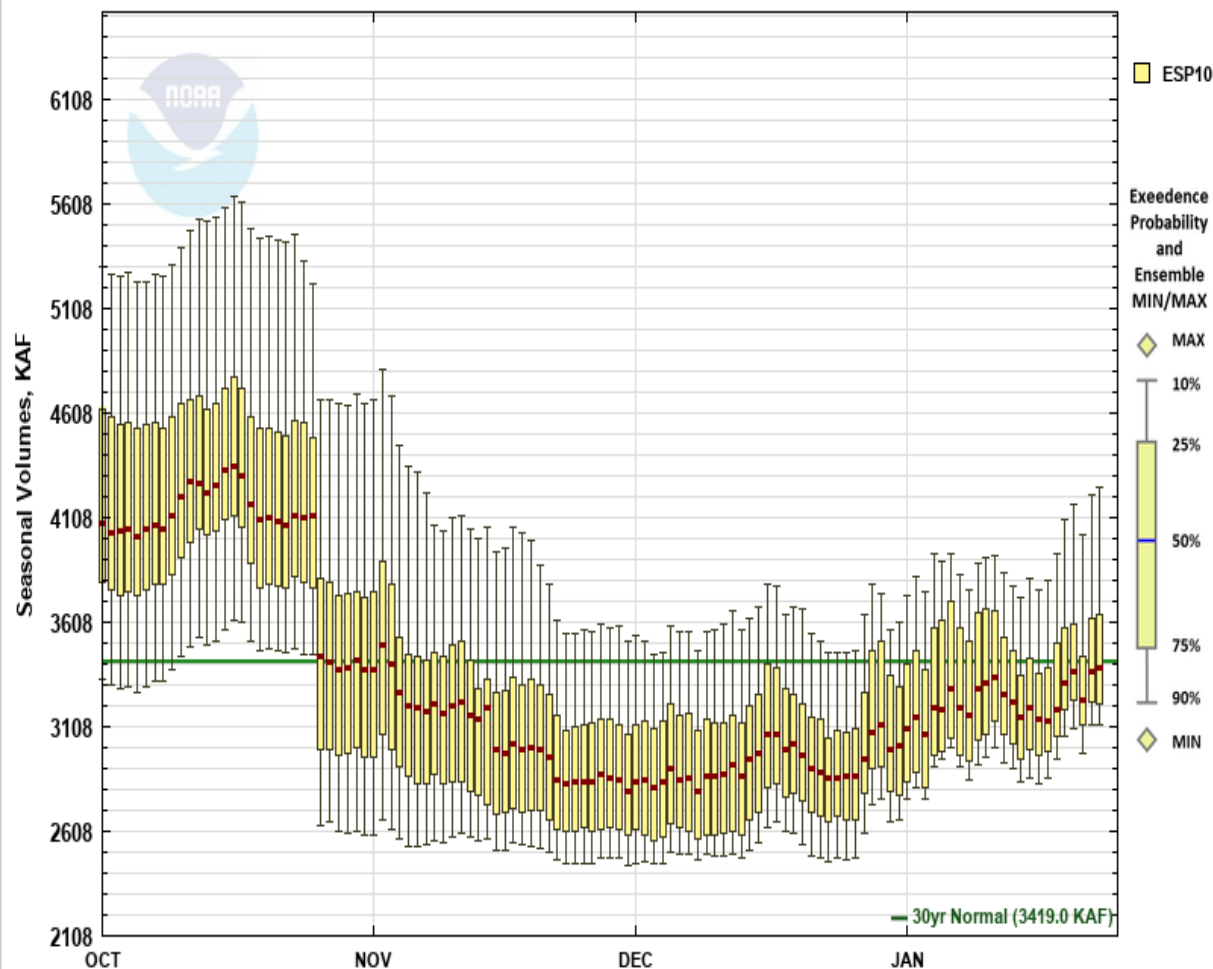
APR-SEP	1563	1950	96	2613	2025
APR-JUL	1322	1744	95	2360	1827
JAN-SEP	2522	2872	100	3431	2868
JAN-JUL	2281	2677	100	3249	2669
OCT-SEP	2930	3280	96	3839	3419

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

Natural Volume Forecasts

YAKIMA - NEAR PARKER

Period OCT to SEP -- Water Year 2020



Most Recent Forecast for ESP0: Issued Date 01/23/2020

Plot Created 01/24/2020 05:38 PST



Northwest River Forecast Center

ESP Natural Forecasts

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COLVILLE - AT KETTLE FALLS (KTFW1) Forecasts for Water Year 2020

Official Water Supply

ESP with 10 Days QPF Ensemble: 2020-01-23 Issued: 2020-01-23

Forecast Period	Forecasts Are in KAF				30 Year Average (1981-2010)
	90 %	50 %	% Average	10 %	
APR-SEP	128	176	134	281	131
APR-JUL	118	162	136	258	119
JAN-SEP	194	276	143	406	193
JAN-JUL	185	262	144	379	182
OCT-SEP	225	306	139	437	220

Experimental Water Supply

HEFS with 15 days EQPF Ensemble: 2020-01-23 Issued: 2020-01-23

APR-SEP	130	182	139	286	131
APR-JUL	118	165	139	263	119
JAN-SEP	202	293	152	414	193
JAN-JUL	191	276	152	384	182
OCT-SEP	233	323	147	445	220

Reference

ESP with 0 Days QPF Ensemble: 2020-01-23 Issued: 2020-01-23

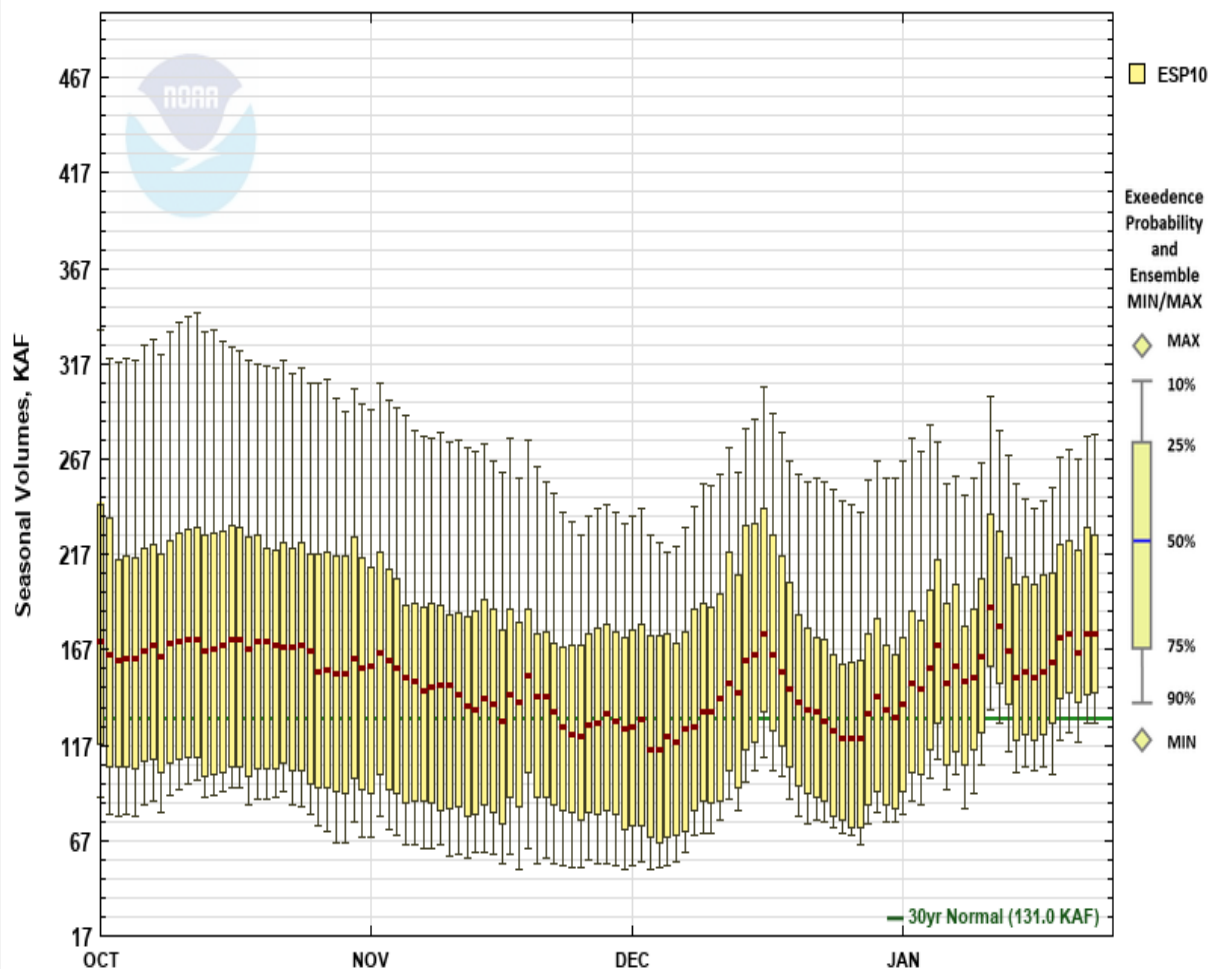
APR-SEP	111	165	126	267	131
APR-JUL	100	149	125	246	119
JAN-SEP	159	258	134	389	193
JAN-JUL	150	244	134	362	182
OCT-SEP	189	289	131	419	220

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

Natural Volume Forecasts

COLVILLE - AT KETTLE FALLS

Period APR to SEP -- Water Year 2020



Most Recent Forecast for ESP10: Issued Date 01/23/2020

Plot Created 01/24/2020 05:40 PST



Northwest River Forecast Center

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DUNGENESS - NEAR SEQUIM (DRSW1) Forecasts for Water Year 2020

Official Water Supply

ESP with 10 Days QPF Ensemble: 2020-01-23 Issued: 2020-01-23

Forecast Period	Forecasts Are in KAF				30 Year Average (1981-2010)
	90 %	50 %	% Average	10 %	
APR-SEP	117	147	101	190	145
APR-JUL	101	125	104	153	120
JAN-SEP	170	216	100	269	216
JAN-JUL	154	197	103	232	192
OCT-SEP	202	248	88	301	281

Experimental Water Supply

HEFS with 15 days EQPF Ensemble: 2020-01-23 Issued: 2020-01-23

APR-SEP	122	152	105	198	145
APR-JUL	101	127	106	154	120
JAN-SEP	177	239	110	307	216
JAN-JUL	159	215	112	261	192
OCT-SEP	209	271	96	339	281

Reference

ESP with 0 Days QPF Ensemble: 2020-01-23 Issued: 2020-01-23

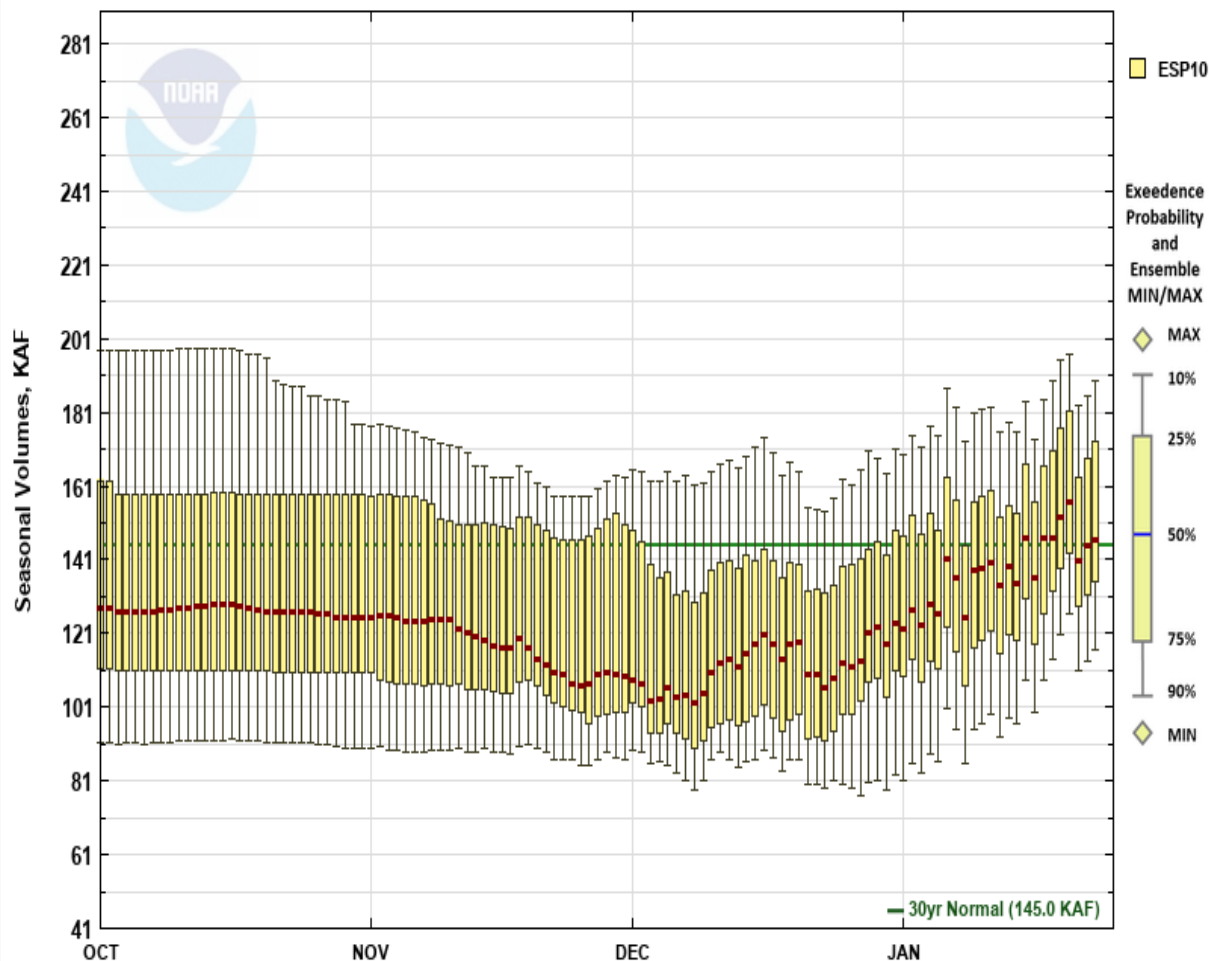
APR-SEP	105	146	101	186	145
APR-JUL	91	123	103	154	120
JAN-SEP	153	209	97	263	216
JAN-JUL	138	186	97	239	192
OCT-SEP	185	242	86	295	281

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

Natural Volume Forecasts

DUNGENESS - NEAR SEQUIM

Period APR to SEP -- Water Year 2020



Most Recent Forecast for ESP10: Issued Date 01/23/2020

Plot Created 01/24/2020 05:43 PST

NWS Water Supply Forecasts

- Mostly near normal water volumes
 - Big upward change in 5 weeks
 - Snow pack is much improved
 - Northeast above, southeast below
 - Some below normal southwest
- More improvement likely through the end of the month if snow levels stay modest