

Water Supply Outlook Spring/Summer 2019

WSAC December 7, 2018

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NWS Water Supply Forecasts

- Most locations showing below normal water volumes
- Methow River an exception with low 60% of normal
- Snow pack is dismal, much below normal
- Outlook is mixed for water supply
 - Warmer than normal likely
 - Precipitation equal chances of above or below
- It's still early in the season...



Northwest River Forecast Center

Current Station Snow Conditions



River and Hydrology

Water Supply

Observations

Weather Forecasts

Climate

NWRFC

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--- Quick Zooms ---

2018-12-05 09:30:01pt 2018-12-05 17:00:00z

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

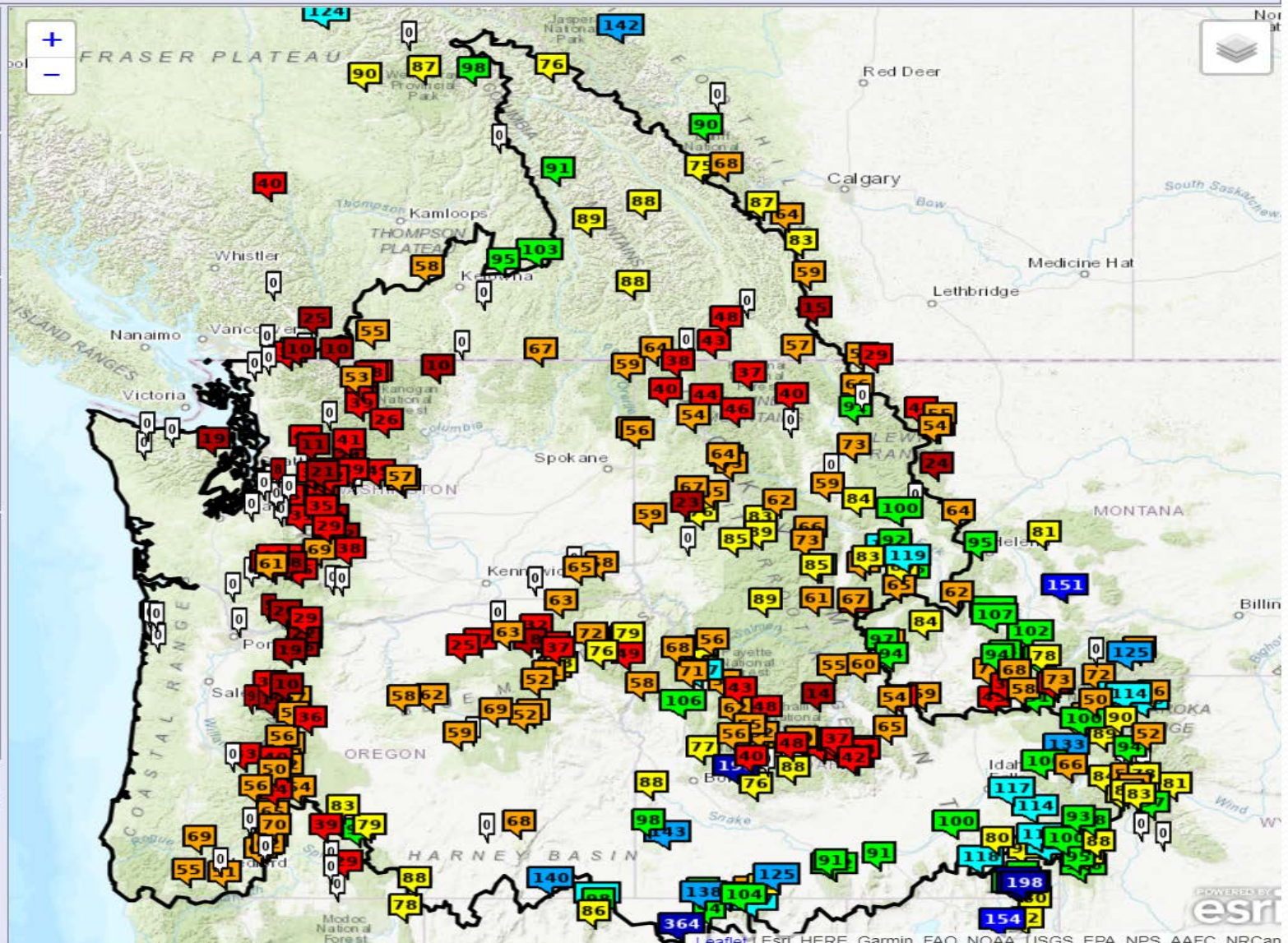
SWE (% Avg)

- ☐ Zero or No Avg
- ☐ < 25
- ☐ 25-50
- ☐ 50-75
- ☐ 75-90
- ☐ 90-110
- ☐ 110-125
- ☐ 125-150
- ☐ 150-175
- ☐ > 175

Stations Displayed: 133

Related Links

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





Northwest River Forecast Center

Water Supply Forecasts



River and Hydrology

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ESP Issued: 2018-12-06

Ensemble Date: 2018-12-06

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Search

Enter NWS ID:

GO

Map Overlays

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

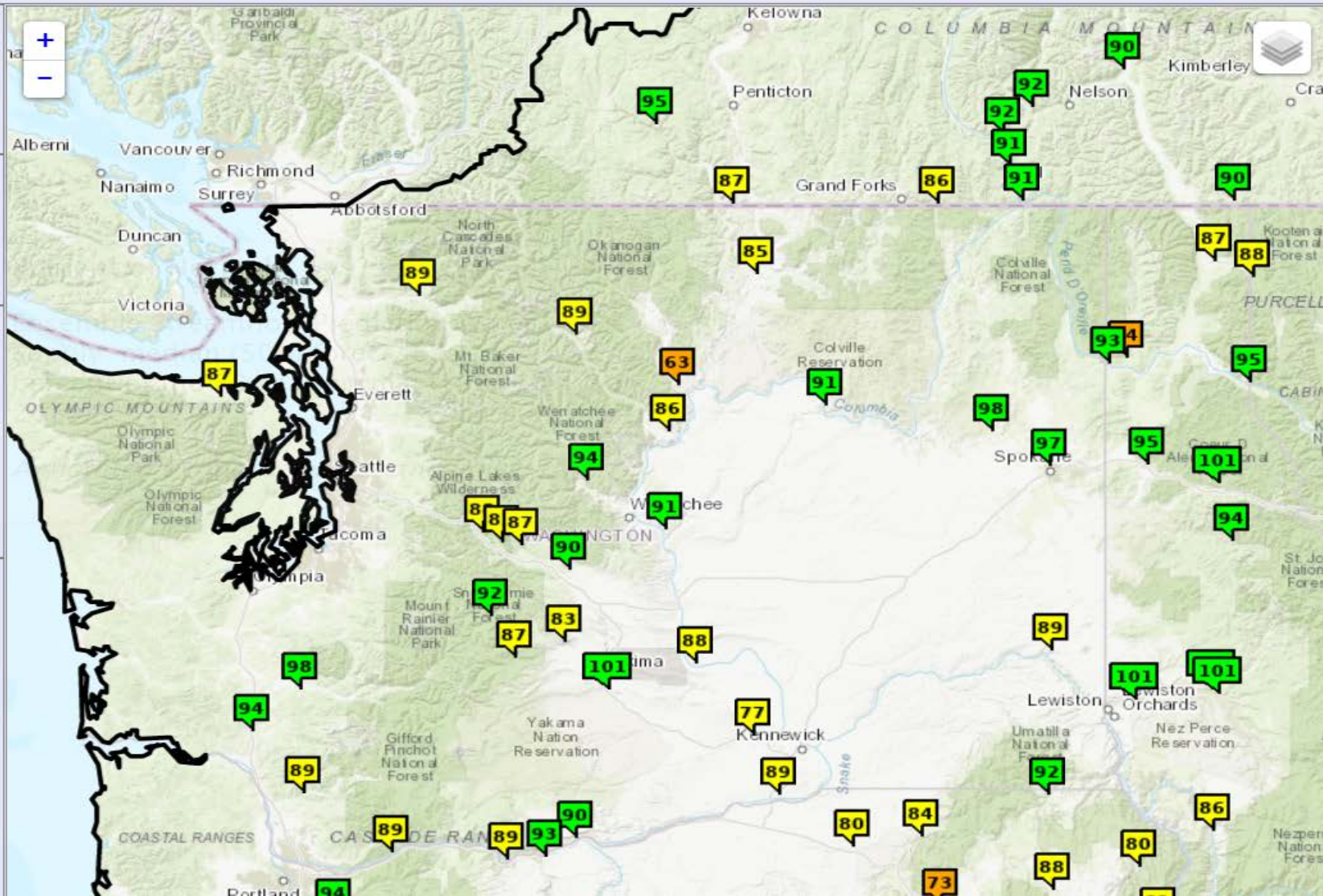
ESP WS Volumes

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

Water Supply Forecast

Period: APR-SEP
(% Normal)

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





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DUNGENESS - NEAR SEQUIM (DRSW1)

Forecasts for Water Year 2019

Official Forecast

10 days QPF: Ensemble: 2018-12-06 Issued: 2018-12-06

Forecasts Are in KAF

Forecast Period	90 %	50 %	% Average	10 %	30 Year Average (1981-2010)
APR-SEP	97	127	87	177	145
APR-JUL	83	105	88	150	120
JAN-SEP	149	195	90	268	216
JAN-JUL	130	174	91	240	192
OCT-SEP	198	250	89	329	281

5 days QPF: Ensemble: 2018-12-06 Issued: 2018-12-06

APR-SEP	91	124	85	173	145
APR-JUL	78	101	84	143	120
JAN-SEP	142	187	87	267	216
JAN-JUL	126	168	87	237	192
OCT-SEP	187	238	85	330	281

0 days QPF: Ensemble: 2018-12-06 Issued: 2018-12-06

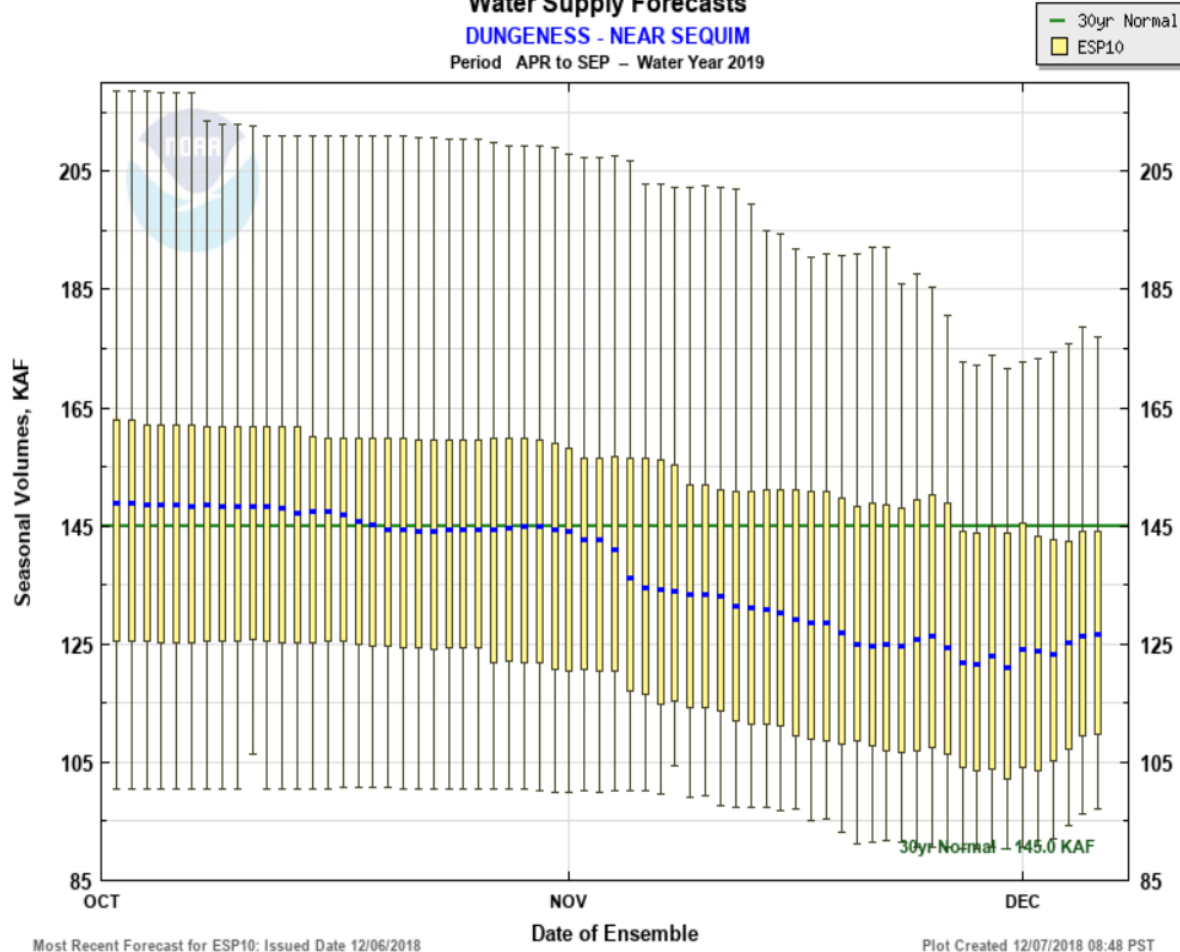
APR-SEP	90	122	84	178	145
APR-JUL	77	103	86	143	120
JAN-SEP	141	193	89	262	216
JAN-JUL	124	171	89	238	192
OCT-SEP	184	245	87	330	281

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

Water Supply Forecasts

DUNGENESS - NEAR SEQUIM

Period APR to SEP - Water Year 2019





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SKAGIT - NEAR CONCRETE (CONW1) Forecasts for Water Year 2019

Official Forecast

10 days QPF: Ensemble: 2018-12-06 Issued: 2018-12-06

Forecasts Are in KAF

Forecast Period	30 Year Average (1981-2010)			
	90 %	50 %	% Average	10 %
APR-SEP	4338	5284	89	6655
APR-JUL	3402	4394	89	5579
JAN-SEP	6427	7639	93	9528
JAN-JUL	5447	6793	95	8184
OCT-SEP	8662	9946	93	11983

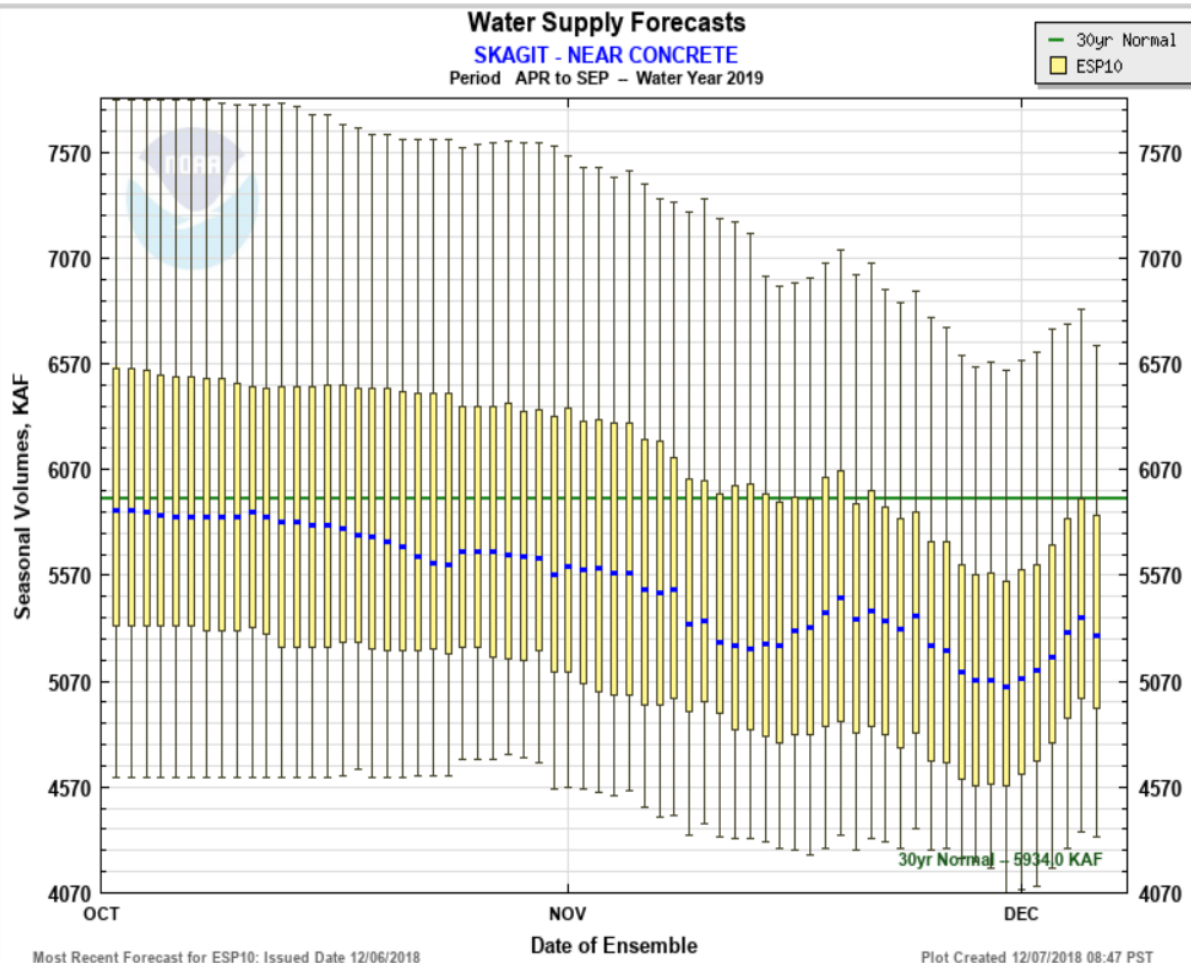
5 days QPF: Ensemble: 2018-12-06 Issued: 2018-12-06

APR-SEP	4106	5114	86	6615	5934
APR-JUL	3265	4246	86	5311	4914
JAN-SEP	6141	7367	90	9155	8201
JAN-JUL	5188	6493	90	8036	7181
OCT-SEP	8359	9670	90	11648	10715

0 days QPF: Ensemble: 2018-12-06 Issued: 2018-12-06

APR-SEP	4248	5177	87	6725	5934
APR-JUL	3314	4292	87	5294	4914
JAN-SEP	6232	7411	90	9288	8201
JAN-JUL	5335	6542	91	8158	7181
OCT-SEP	8628	9922	93	11883	10715

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





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YAKIMA - AT KIONA (KIOW1) Forecasts for Water Year 2019

Official Forecast

10 days QPF: Ensemble: 2018-12-06 Issued: 2018-12-06

Forecast Period	Forecasts Are in KAF				30 Year Average (1981-2010)
	90 %	50 %	% Average	10 %	
APR-SEP	494	807	77	1316	1050
APR-JUL	347	651	76	1097	852
JAN-SEP	936	1424	77	1960	1858
JAN-JUL	801	1260	76	1767	1660
OCT-SEP	1434	1894	80	2450	2364

5 days QPF: Ensemble: 2018-12-06 Issued: 2018-12-06

APR-SEP	474	817	78	1272	1050
APR-JUL	335	645	76	1053	852
JAN-SEP	916	1415	76	2047	1858
JAN-JUL	784	1244	75	1830	1660
OCT-SEP	1380	1918	81	2521	2364

0 days QPF: Ensemble: 2018-12-06 Issued: 2018-12-06

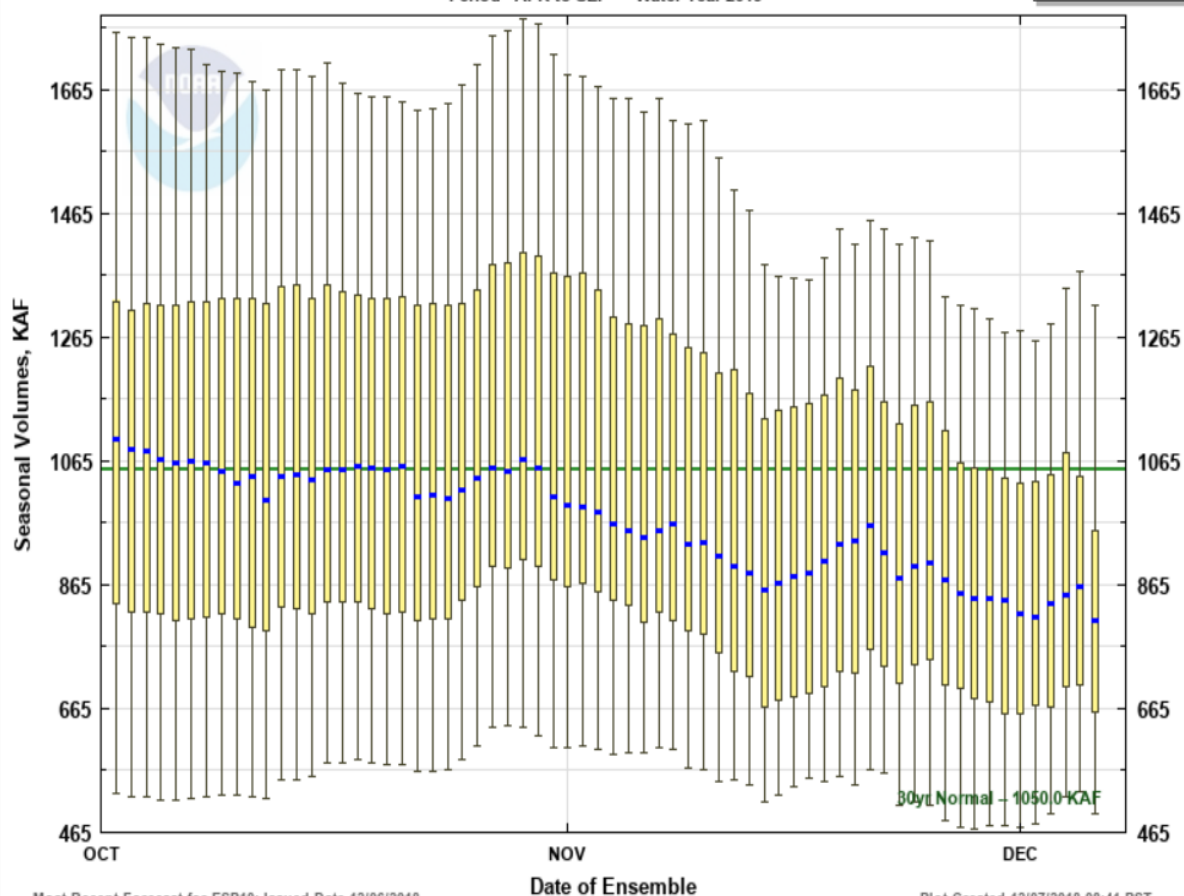
APR-SEP	466	862	82	1312	1050
APR-JUL	336	671	79	1123	852
JAN-SEP	977	1472	79	2185	1858
JAN-JUL	841	1293	78	1961	1660
OCT-SEP	1467	1957	83	2706	2364

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

Water Supply Forecasts

YAKIMA - AT KIONA

Period APR to SEP - Water Year 2019





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OKANOGAN - NEAR TONASKET (TONW1) Forecasts for Water Year 2019

Official Forecast

10 days QPF: Ensemble: 2018-12-06 Issued: 2018-12-06

Forecasts Are in KAF

Forecast Period	90 %	50 %	% Average	10 %	30 Year Average (1981-2010)
APR-SEP	795	1346	85	2031	1583
APR-JUL	722	1233	87	1828	1419
JAN-SEP	969	1553	85	2307	1832
JAN-JUL	898	1443	86	2050	1668
OCT-SEP	1233	1816	88	2570	2070

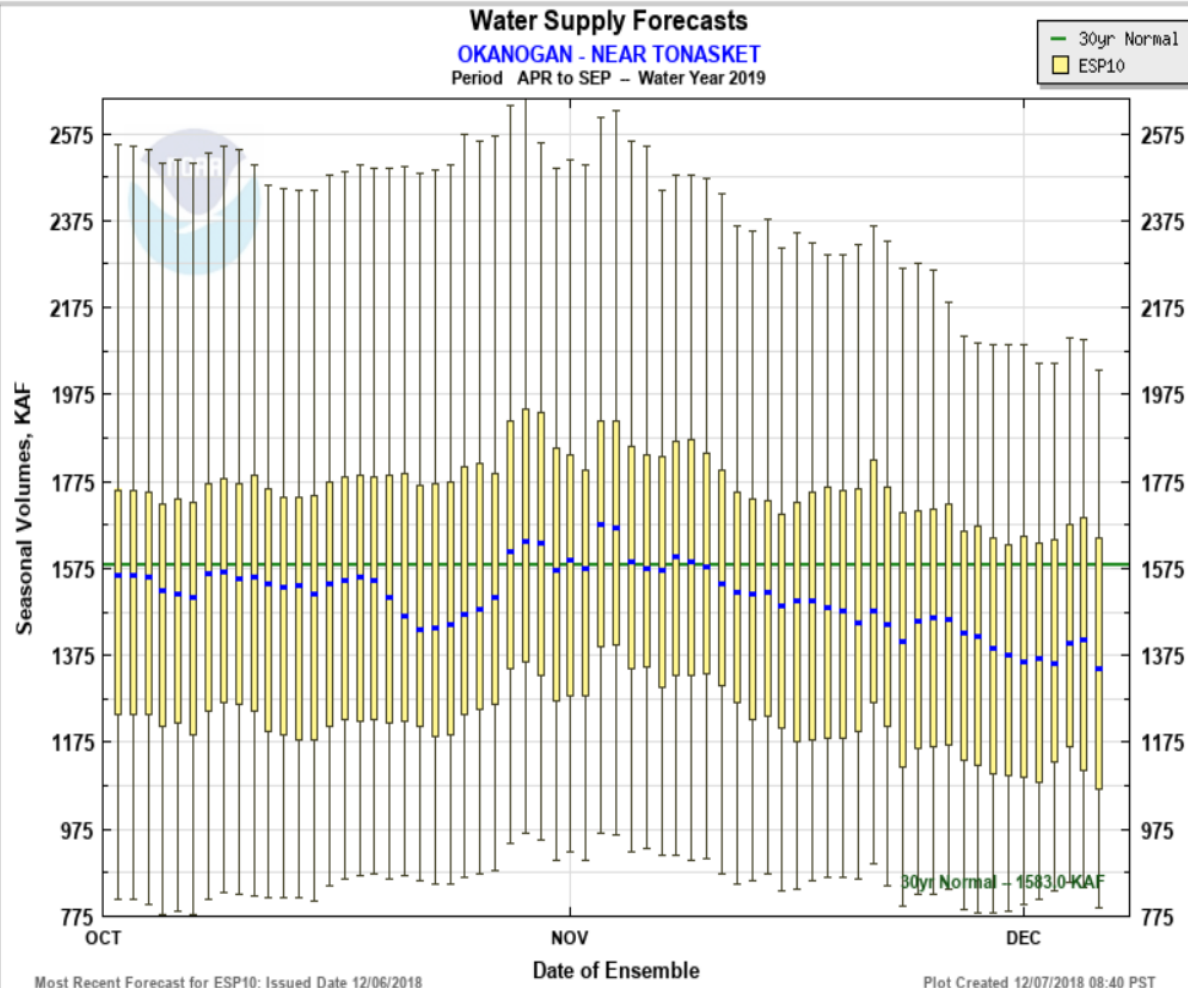
5 days QPF: Ensemble: 2018-12-06 Issued: 2018-12-06

APR-SEP	770	1324	84	2049	1583
APR-JUL	680	1205	85	1835	1419
JAN-SEP	945	1515	83	2297	1832
JAN-JUL	856	1422	85	2083	1668
OCT-SEP	1207	1791	87	2559	2070

0 days QPF: Ensemble: 2018-12-06 Issued: 2018-12-06

APR-SEP	803	1416	89	2133	1583
APR-JUL	708	1271	90	1928	1419
JAN-SEP	981	1622	89	2410	1832
JAN-JUL	906	1491	89	2148	1668
OCT-SEP	1244	1885	91	2675	2070

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





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COLUMBIA - THE DALLES DAM (TDAO3)

Forecasts for Water Year 2019

Official Forecast

10 days QPF: Ensemble: 2018-12-06 Issued: 2018-12-06

Forecast Period	Forecasts Are in KAF				30 Year Average (1981-2010)
	90 %	50 %	% Average	10 %	
APR-SEP	66465	82284	89	102222	92704
APR-JUL	56749	69395	87	86505	79855
APR-AUG	62569	76892	88	95993	87532
JAN-SEP	82204	99223	87	122786	114216
JAN-JUL	72503	87549	86	108771	101368
OCT-SEP	95175	112307	86	136662	130518

5 days QPF: Ensemble: 2018-12-06 Issued: 2018-12-06

APR-SEP	65080	83514	90	103411	92704
APR-JUL	55472	70263	88	87636	79855
APR-AUG	61228	78078	89	97646	87532
JAN-SEP	81494	99418	87	123748	114216
JAN-JUL	71451	87066	86	108926	101368
OCT-SEP	94522	113273	87	137059	130518

0 days QPF: Ensemble: 2018-12-06 Issued: 2018-12-06

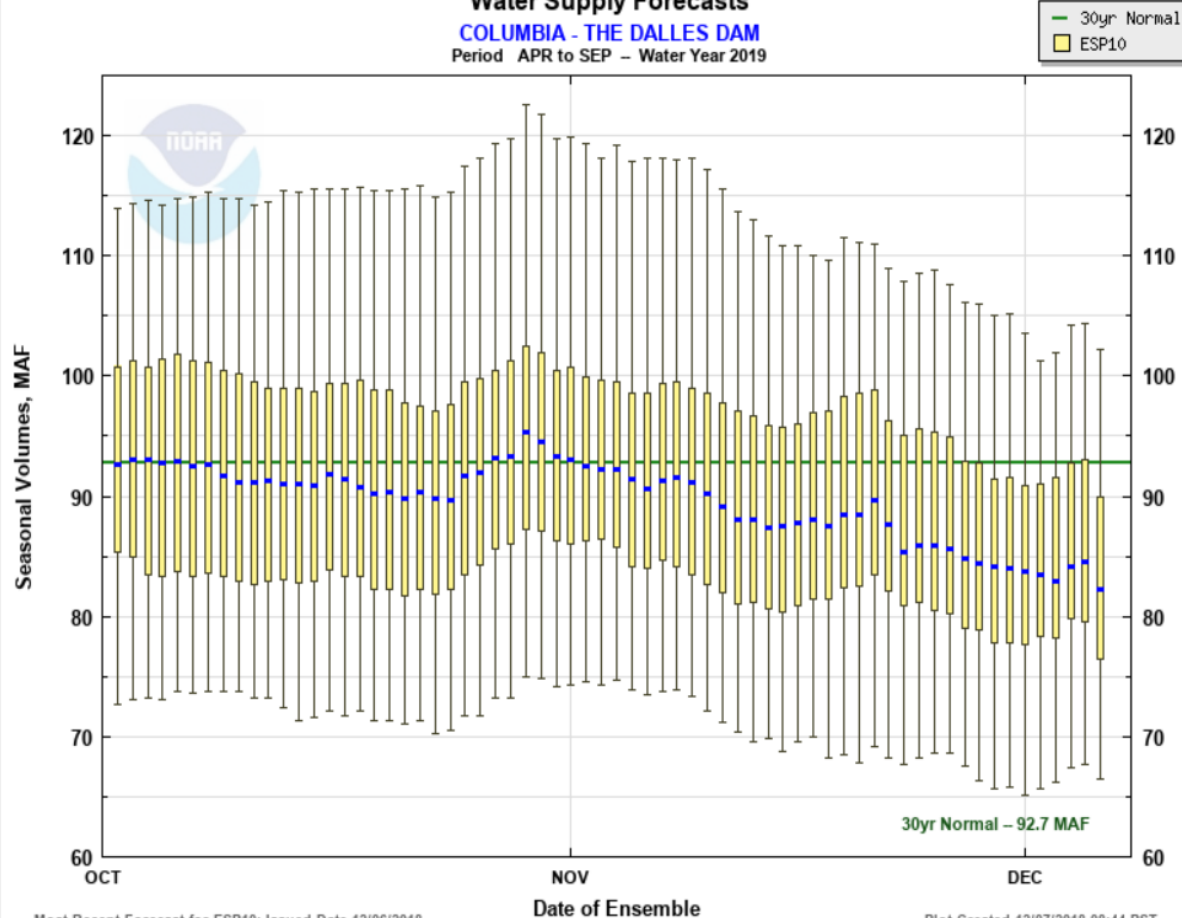
APR-SEP	68402	85520	92	107228	92704
APR-JUL	56999	72290	91	91293	79855
APR-AUG	62972	80340	92	101024	87532
JAN-SEP	85296	103523	91	127925	114216
JAN-JUL	75049	90099	89	112040	101368
OCT-SEP	98580	117408	90	142951	130518

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

Water Supply Forecasts

COLUMBIA - THE DALLES DAM

Period APR to SEP - Water Year 2019



☐ Max Scale ☒ Scale To Data ☐ Scale To Last 45 Days



Historical Apr-Sept Runoff & ENSO

(west to east)



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DUNGENESS - NEAR SEQUIM (RSW1)

Forecasts for Water Year 2019

Official Forecast

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Forecasts Are in KAF

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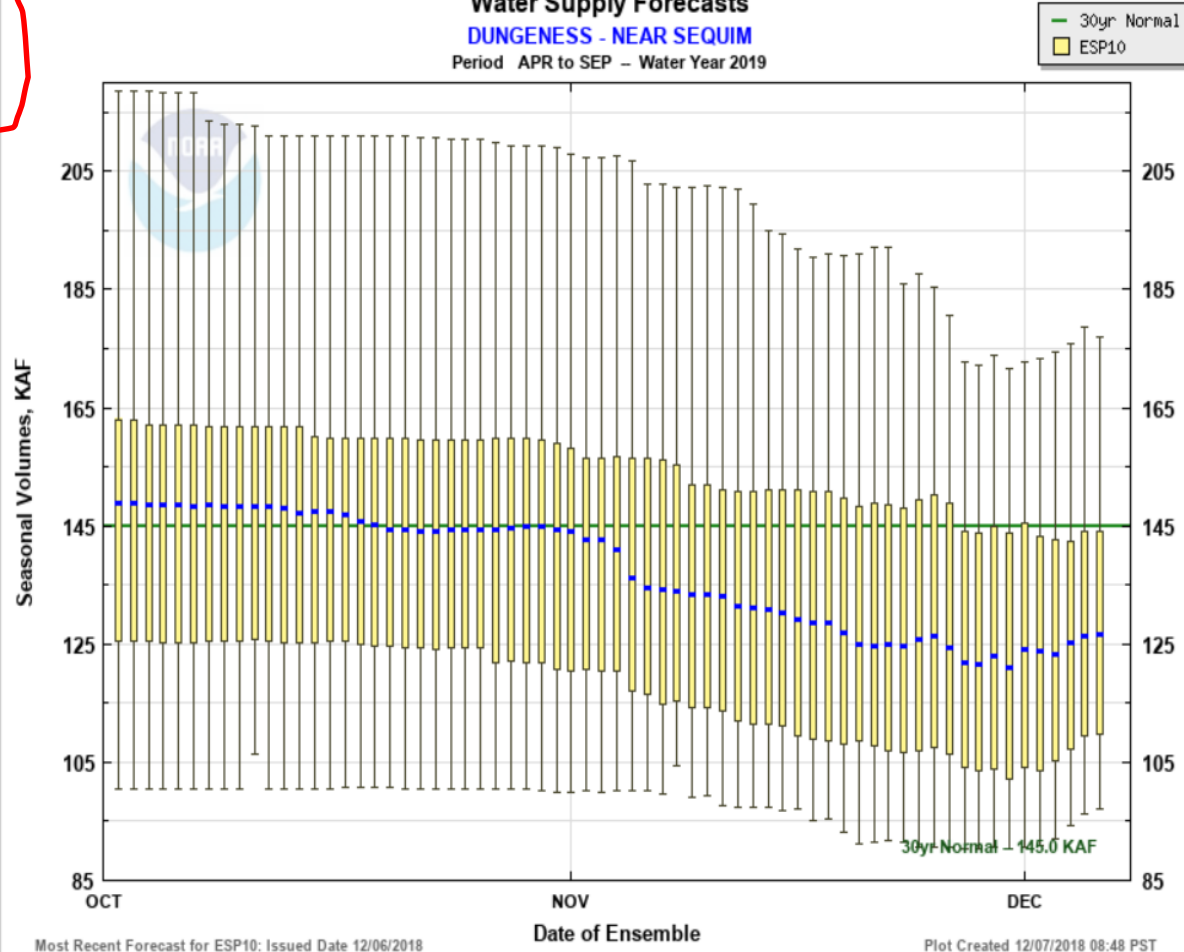
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Water Supply Forecasts

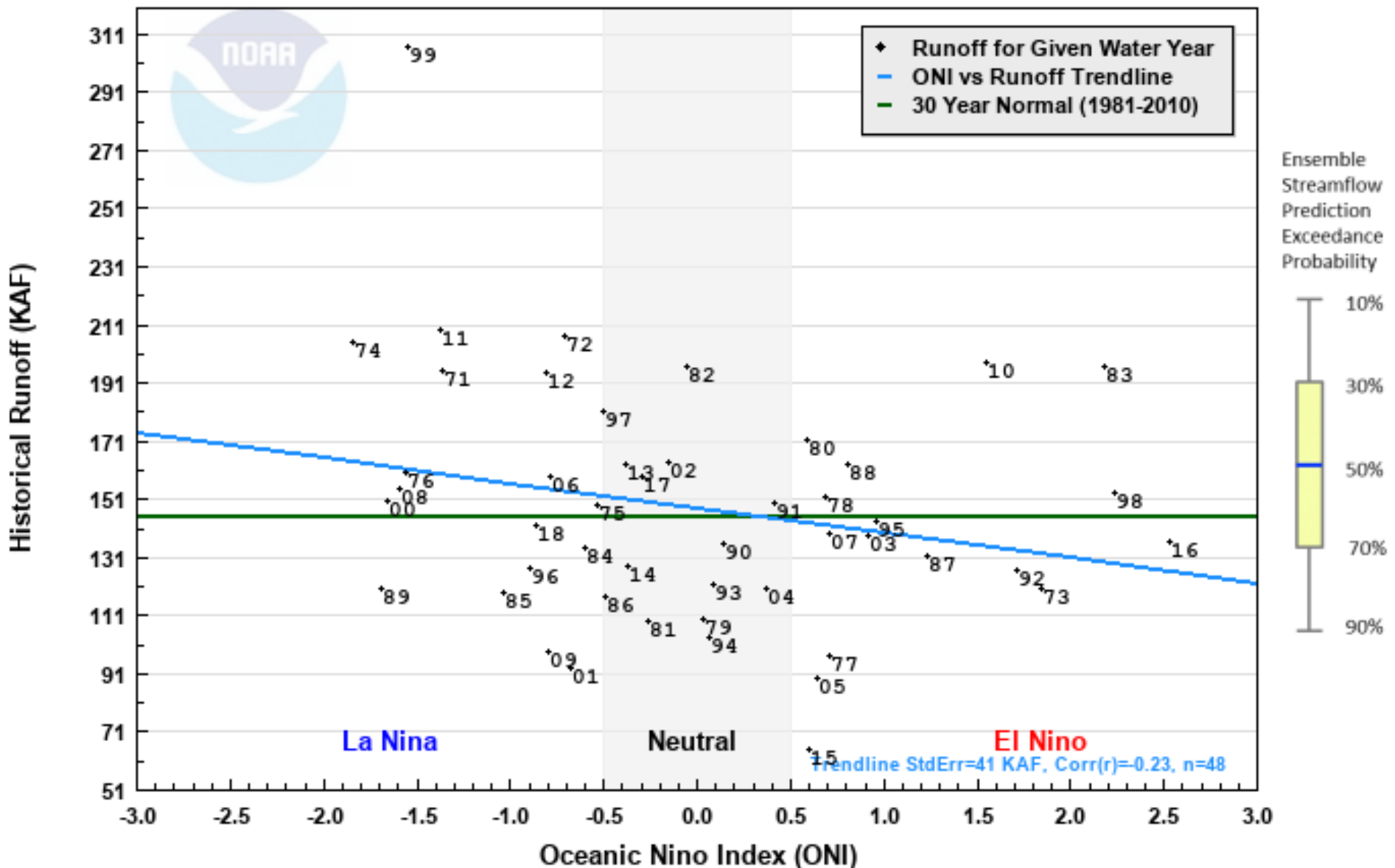
DUNGENESS - NEAR SEQUIM

Period APR to SEP - Water Year 2019



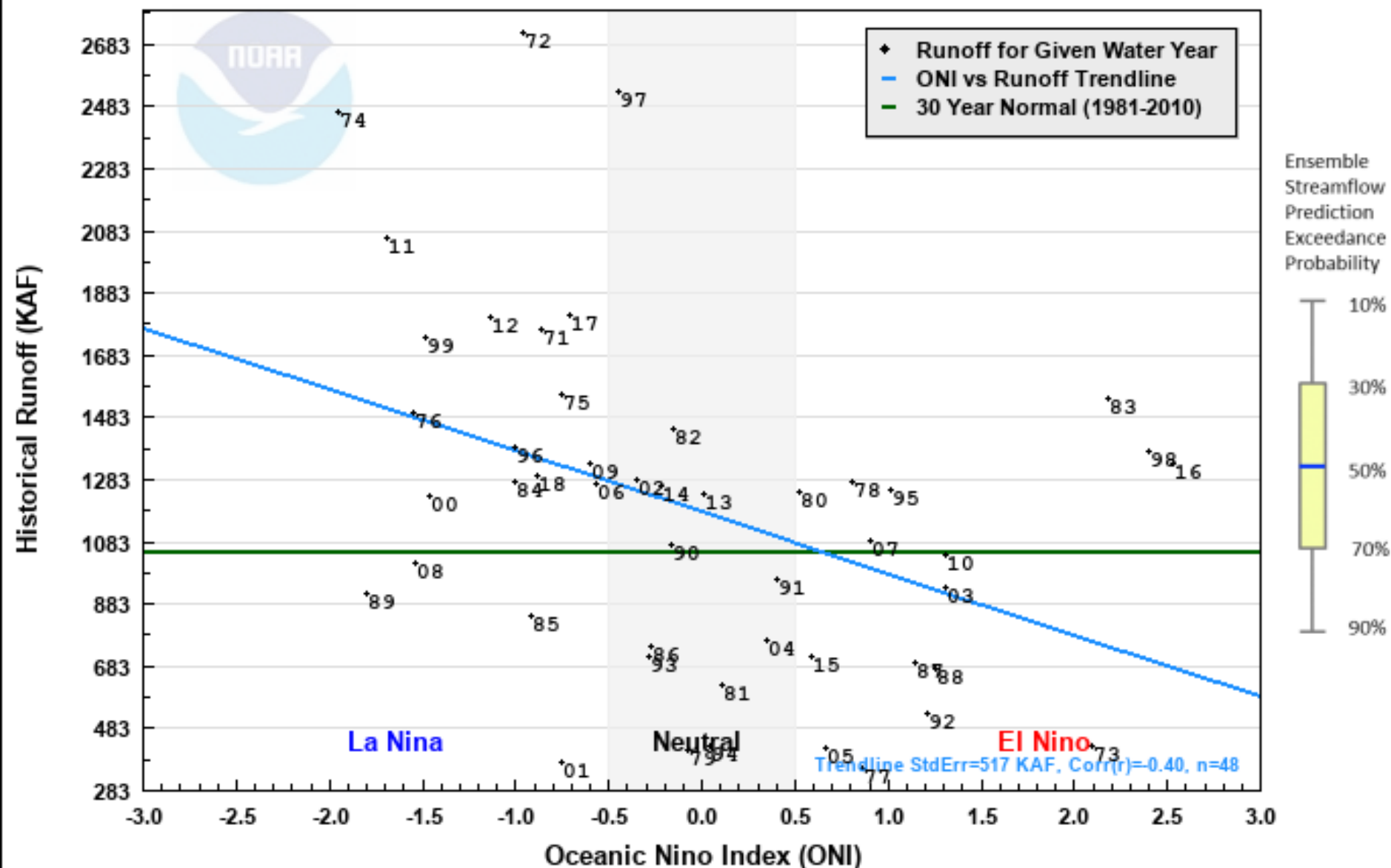
DEC-FEB Oceanic Nino Index vs APR-SEP Historical Water Supply Runoff

(DRSW1) DUNGENESS - NEAR SEQUIM (1971-2018)



OCT-DEC Oceanic Nino Index vs APR-SEP Historical Water Supply Runoff

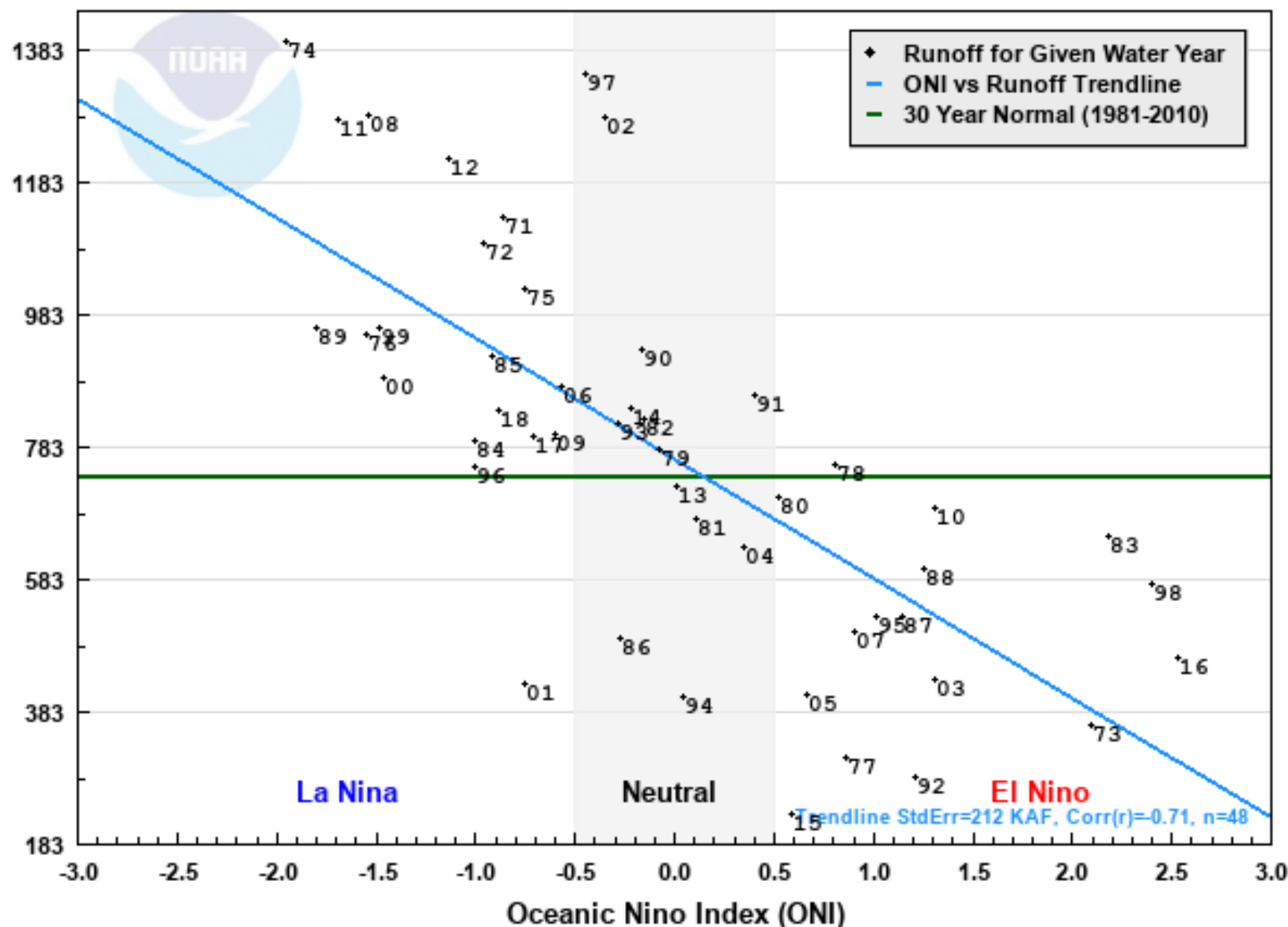
(KIOW1) YAKIMA - AT KIONA (1971-2018)



OCT-DEC Oceanic Nino Index vs APR-SEP Historical Water Supply Runoff

(ENV11) NF COEUR D ALENE - AT ENAVILLE (1971-2018)

Historical Runoff (KAF)



Ensemble
Streamflow
Prediction
Exceedance
Probability

