Water Supply Outlook Spring/Summer 2019

WSAC December 7, 2018 Katherine Rowden, Brent Bower NWS

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	Wate	er Supply	Observations	Weather Forecasts	Climate	NWRFC
Home	Zoom Out	Quick Zooms	▼ 2018-12	2-05 09:30:01pt 2018-12-05 17:00:0	0z Elevation Filter:	Permalink
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Northwest River Forecast Center Water Supply Forecasts

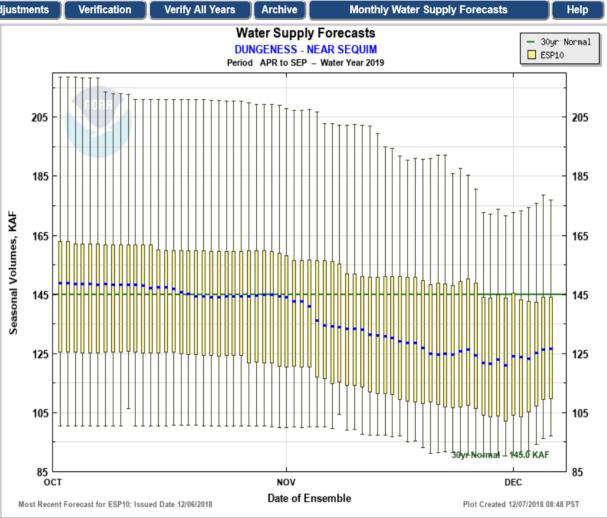


River and Hydrology	Water Supply	Observations	Weather Forecasts	Climate	NWRFC							
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Water Supply Forecasts

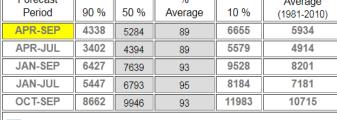
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APR-SEP	97	127	87	177	145	
APR-JUL	83	105	88	150	120	
JAN-SEP	149	195	90	268	216	
JAN-JUL	130	174	91	240	192	
OCT-SEP	198	250	89	329	281	
5 days 0	QPF:Ensen	nble: 201	8-12-06 <i>Issu</i>	ed: 2018-	-12-06	
APR-SEP	91	124	85	173	145	
APR-JUL	78	101	84	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:Ensen	nble: 201	8-12-06 <i>Issu</i>	ed: 2018-	-12-06	
APR-SEP	90	122	84	178	145	
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JAN-SEP	141	193	89	262	216	
JAN-JUL	124	171	89	238	192	
OCT-SEP	184	245	87	330	281	
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Water Supply Forecasts

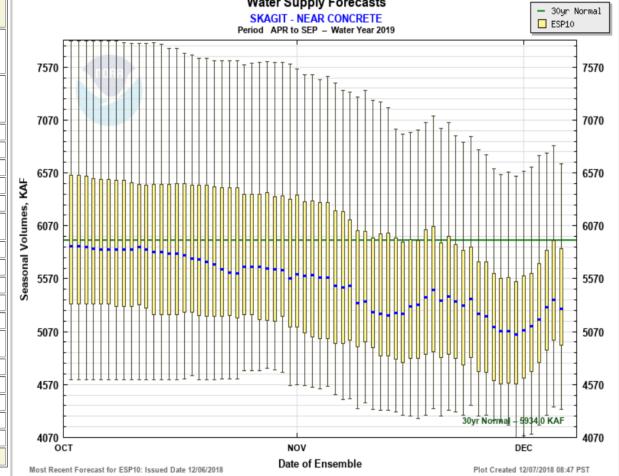
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5 days QPF: Ensemble: 2018-12-06 Issued: 2018-12-06 APR-SEP APR-JUL JAN-SEP JAN-JUL OCT-SEP

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.

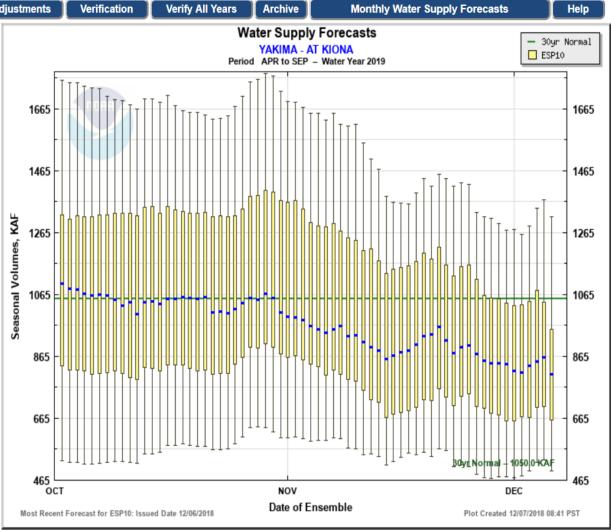


Help



Water Supply Forecasts

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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	
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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	
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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 m	ouse over t	he desire	ed "Forecast P	eriod" to	display a graph	١.





Water Supply Forecasts

ENSO / Runoff Verification **Verify All Years** Home Data/Normals **Rankings Adjustments** Archive **Monthly Water Supply Forecasts** Help

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

Official Forecast

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

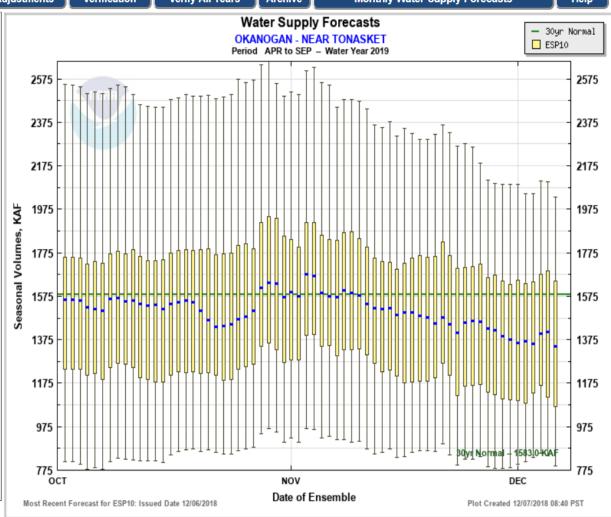
		Forecas	ts Are in KAF		30 Year
Forecast			%		Average
Period	90 %	50 %	Average	10 %	(1981-2010)
APR-SEP	795	1346	85	2031	1583
APR-JUL	722	1233	87	1828	1419
JAN-SEP	969	1553	85	2307	1832
JAN-JUL	898	1443	86	2050	1668
OCT-SEP	1233	1816	88	2570	2070

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

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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										





Water Supply Forecasts

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Help

120

110

70

30yr Normal - 92.7 MAF

DEC Plot Created 12/07/2018 08:44 PST

— 30yr Normal ☐ ESP10

Historical Apr-Sept Runoff & ENSO

(west to east)

NORR

JAN-JUL

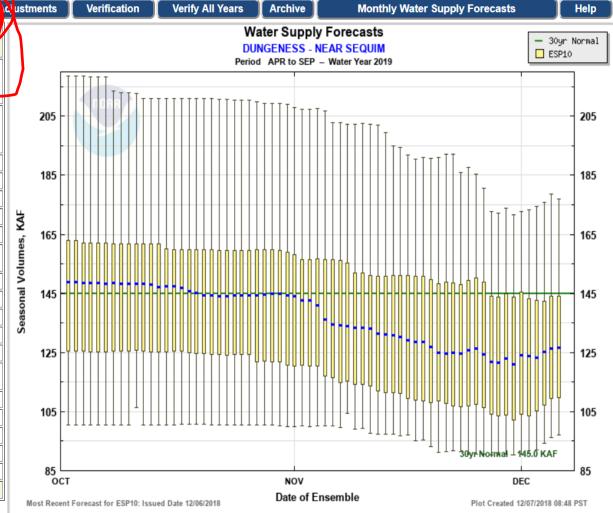
OCT-SEP

Northwest River Forecast Center

Water we ecasts

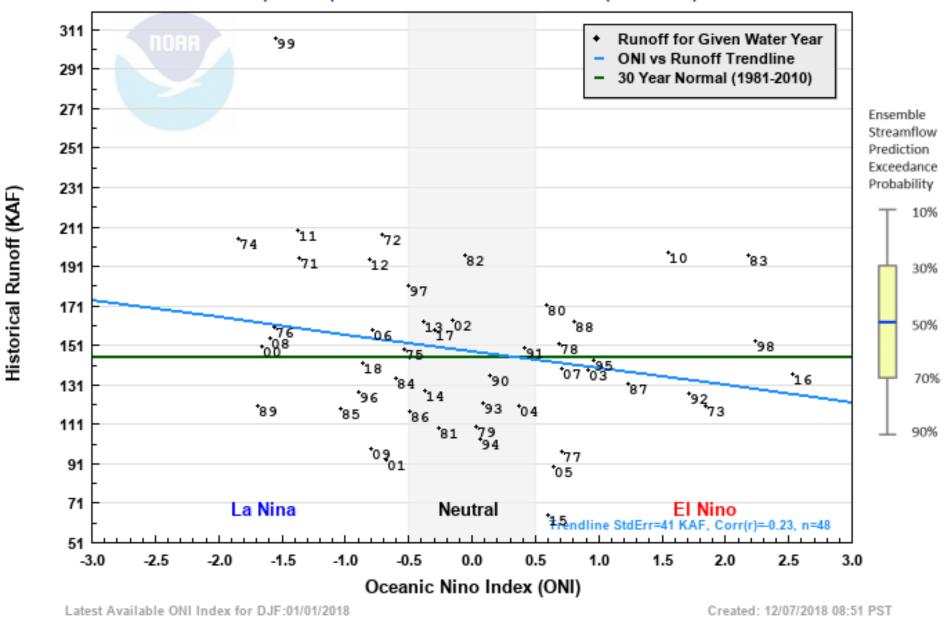
Rankings Home **Data/Normals ENSO / Runoff** DUNGENESS - NEAR SEQUIM () RSW1) Forecasts for Water Year 200 Official Forecast 10 days QPF: Ensemble: 2018-12-06 Issued: 2018-12-06 Forecasts Are in KAF 30 Year Forecast Average 90 % 50 % 10 % Period Average (1981-2010)APR-SEP APR-JUL JAN-SEP JAN-JUL OCT-SEP 5 days QPF: Ensemble: 2018-12-06 Issued: 2018-12-06 APR-SEP APR-JUL JAN-SEP JAN-JUL OCT-SEP 0 days QPF: Ensemble: 2018-12-06 Issued: 2018-12-06 APR-SEP APR-JUL JAN-SEP

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



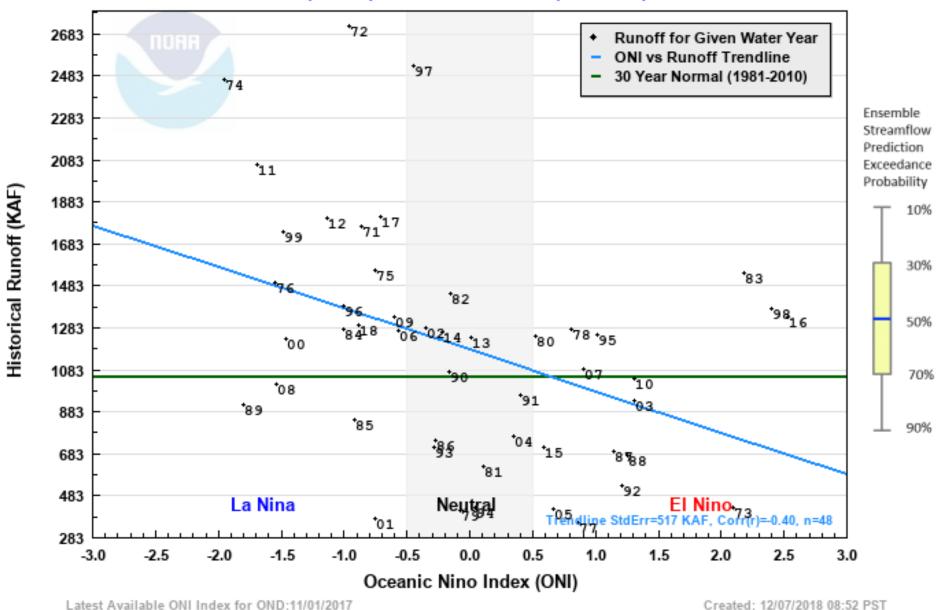
DEC-FEB Oceanic Nino Index vs APR-SEP Historical Water Supply Runoff

(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

(ENVI1) NF COEUR D ALENE - AT ENAVILLE (1971-2018)

