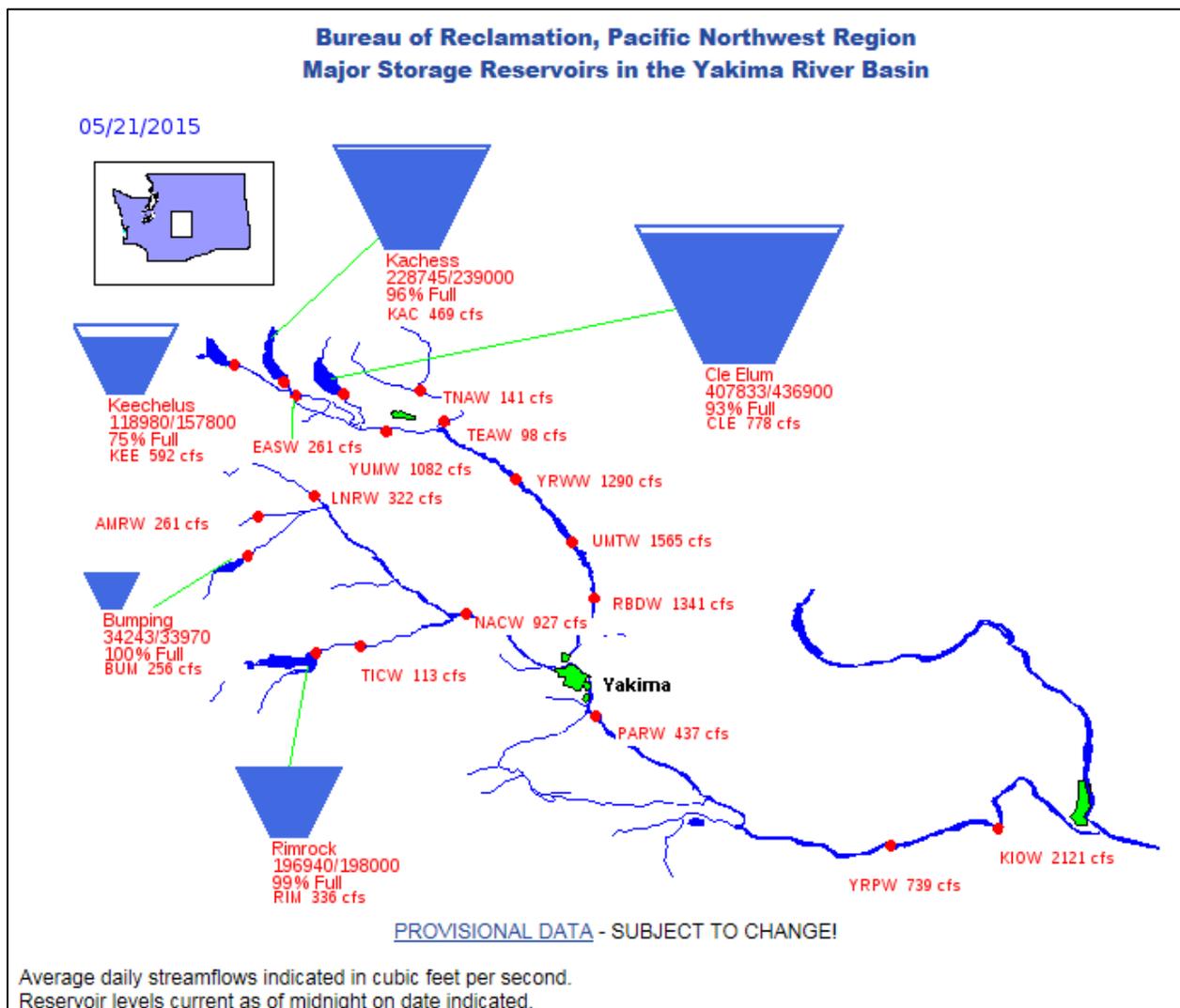


Washington Department of Fish and Wildlife Drought Status Update #11 for 22 May 2015

Note: This material is intended for agency staff and contains elements of special interest to WDFW staff. Non-agency readers, or, really, anyone having questions about the context, clarity, or content for items in this update should contact me: Teresa Scott (360) 902-2713 teresa.scott@dfw.wa.gov

On May 18, U.S. Bureau of Reclamation release its mid-month water supply forecast for the Yakima basin and downgraded junior water right holders to 44% of their normal supply, down from 47%. Seniors are still guaranteed their full shares. Reclamation will issue water supply forecasts monthly or as needed at least through July. More on the Yakima situation can be found at: <http://www.usbr.gov/pn/hydromet/yakima/>

While we're on the subject of the Yakima, here is the reservoir storage status "teacup" diagram for yesterday:

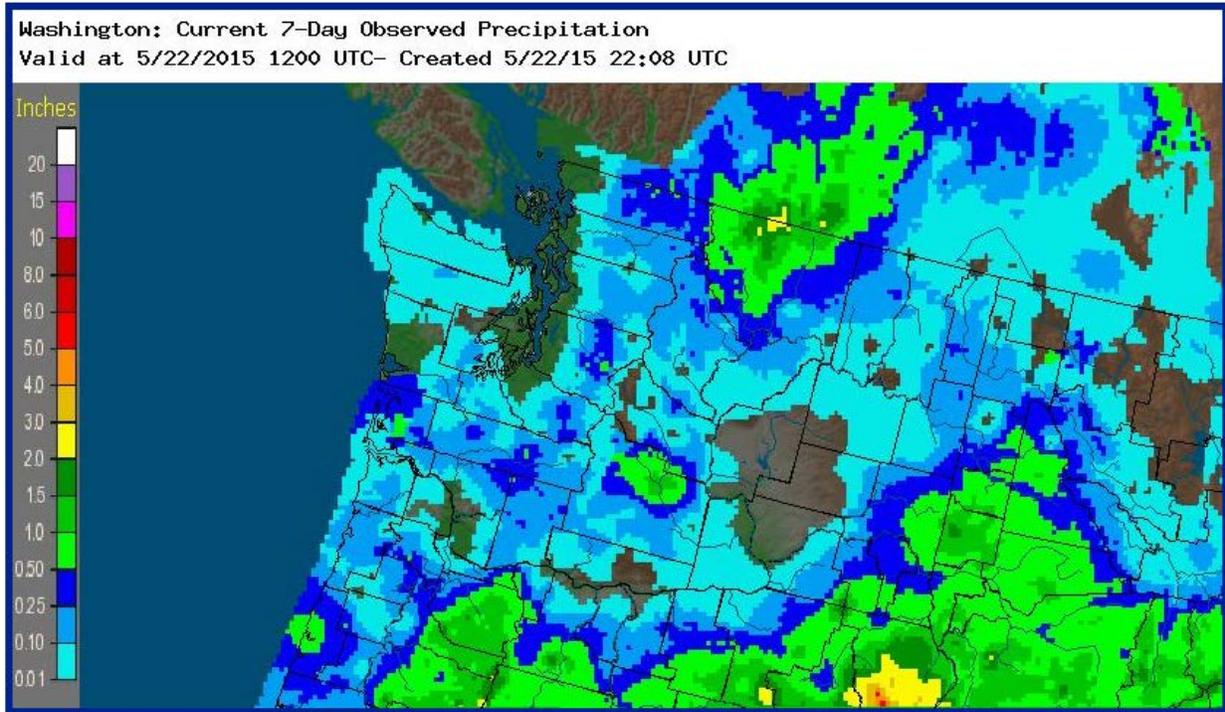


Precipitation this past week reduced the rate of drawdown of the reservoirs; there's not much change since last week's map.

Precipitation

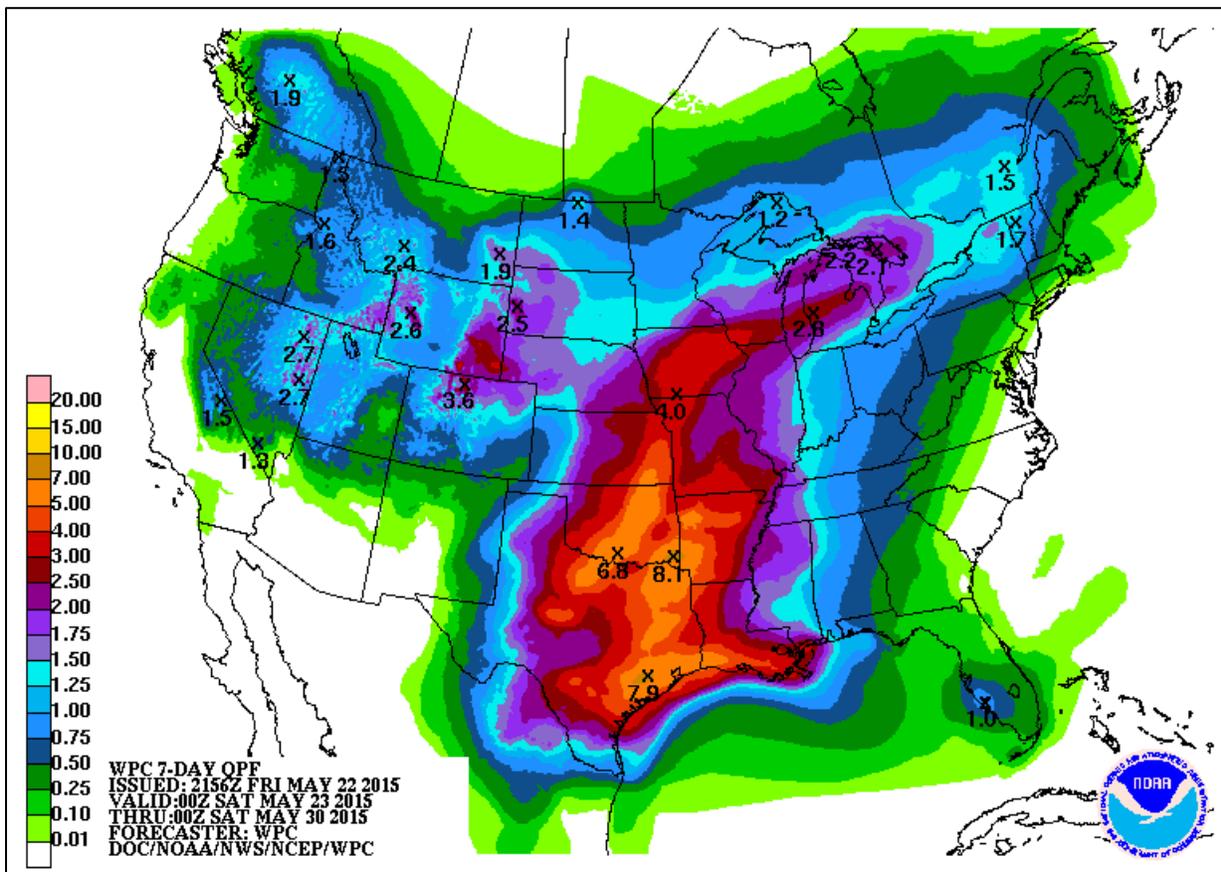
Here's the analysis of the **last** 7 days of precipitation in Washington. Moderate showers mainly

in north central Washington.



<http://water.weather.gov/precip/>

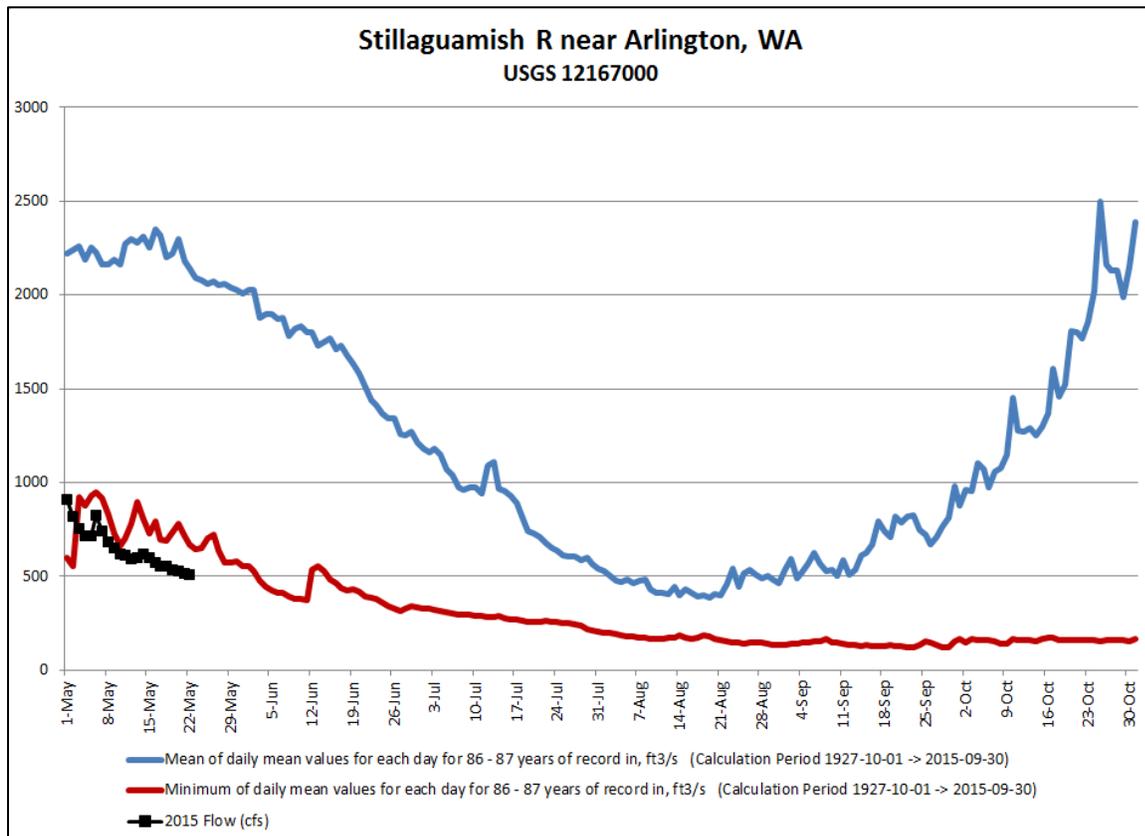
The **next** 7 days look like more precipitation in the northern Cascades and farther east and nothing on the northwestern Olympic Peninsula.



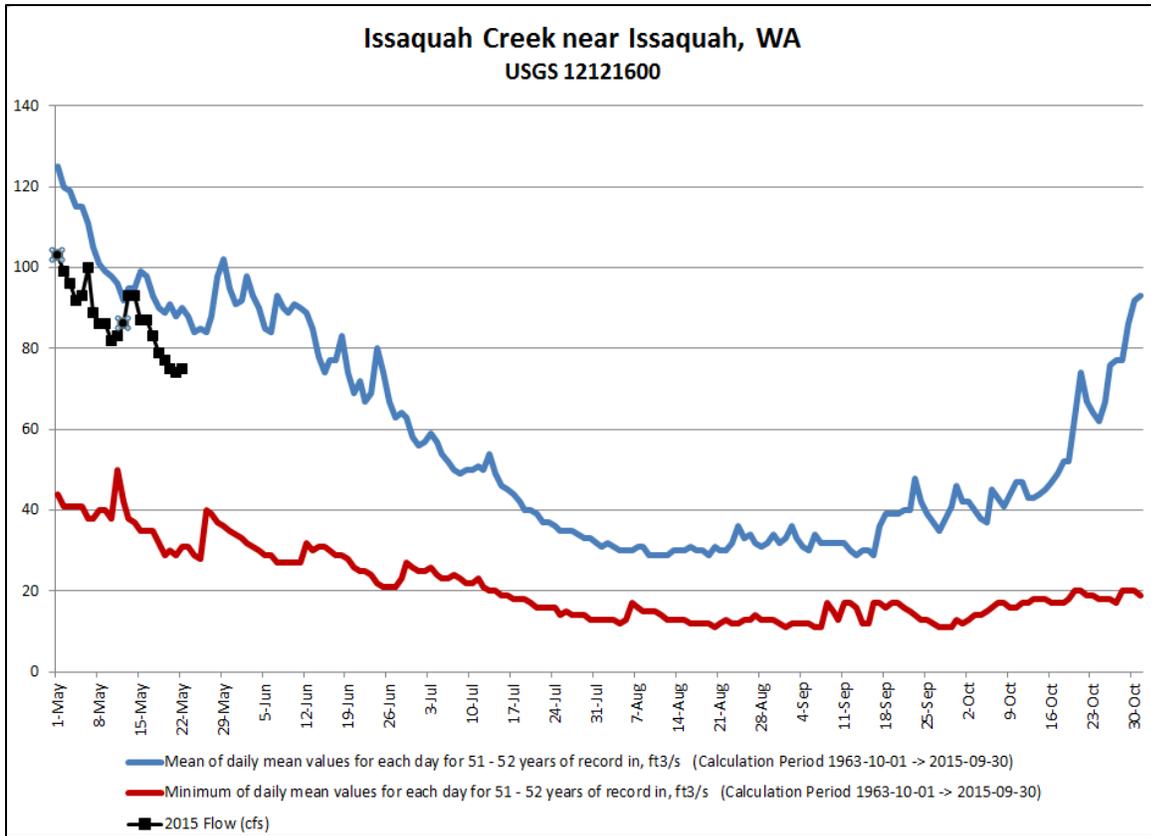
<http://www.wpc.ncep.noaa.gov/qpf/p168i.gif?1432223698>

Hydrograph Sampler:

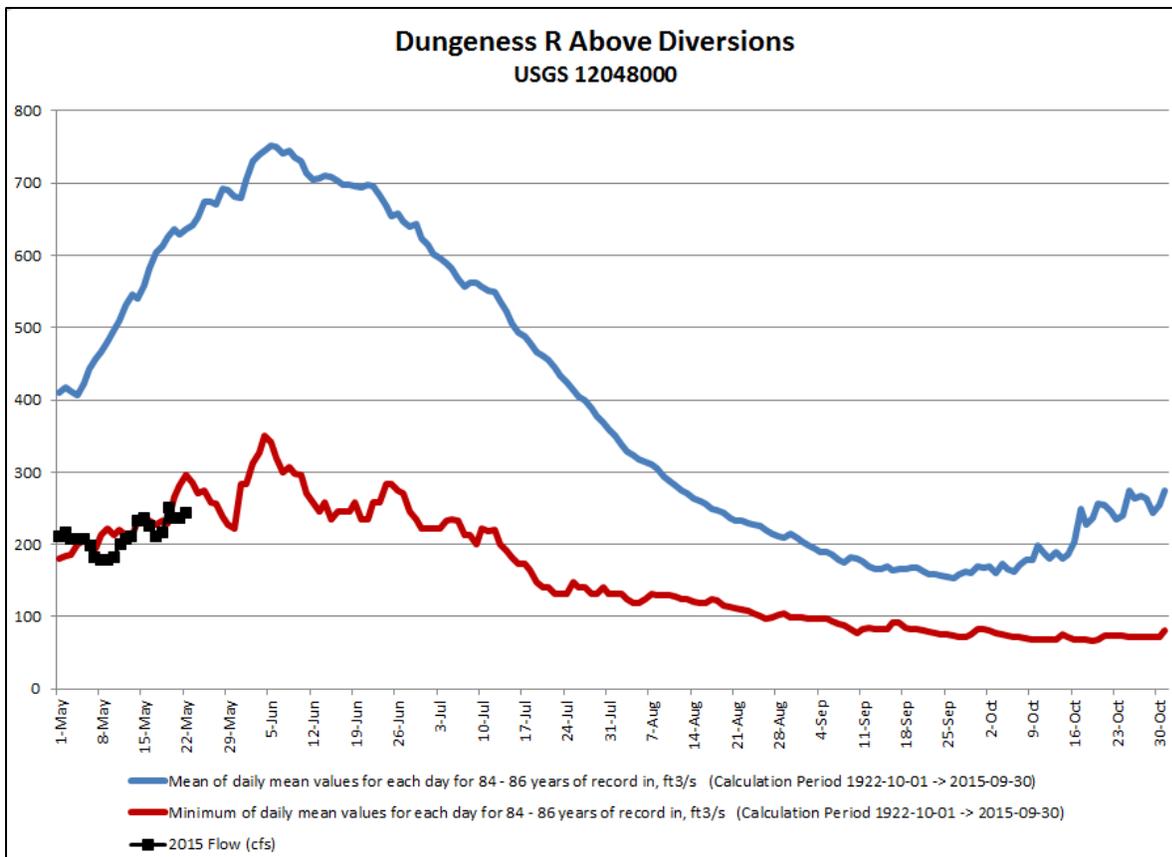
I chose seven stream gauges to help us understand how flows are progressing this year. New this week is the Issaquah Creek gauge, which might help us understand small tributary status in central Puget Sound (or at a minimum, status near the Issaquah Hatchery). Blue line represents the average daily flows for the period of record; red line shows the minimums of daily flows in the period of record, and the black line depicts 2015 flows. These flows are through mid-day May 22, 2015. Comments and suggestions always welcomed!



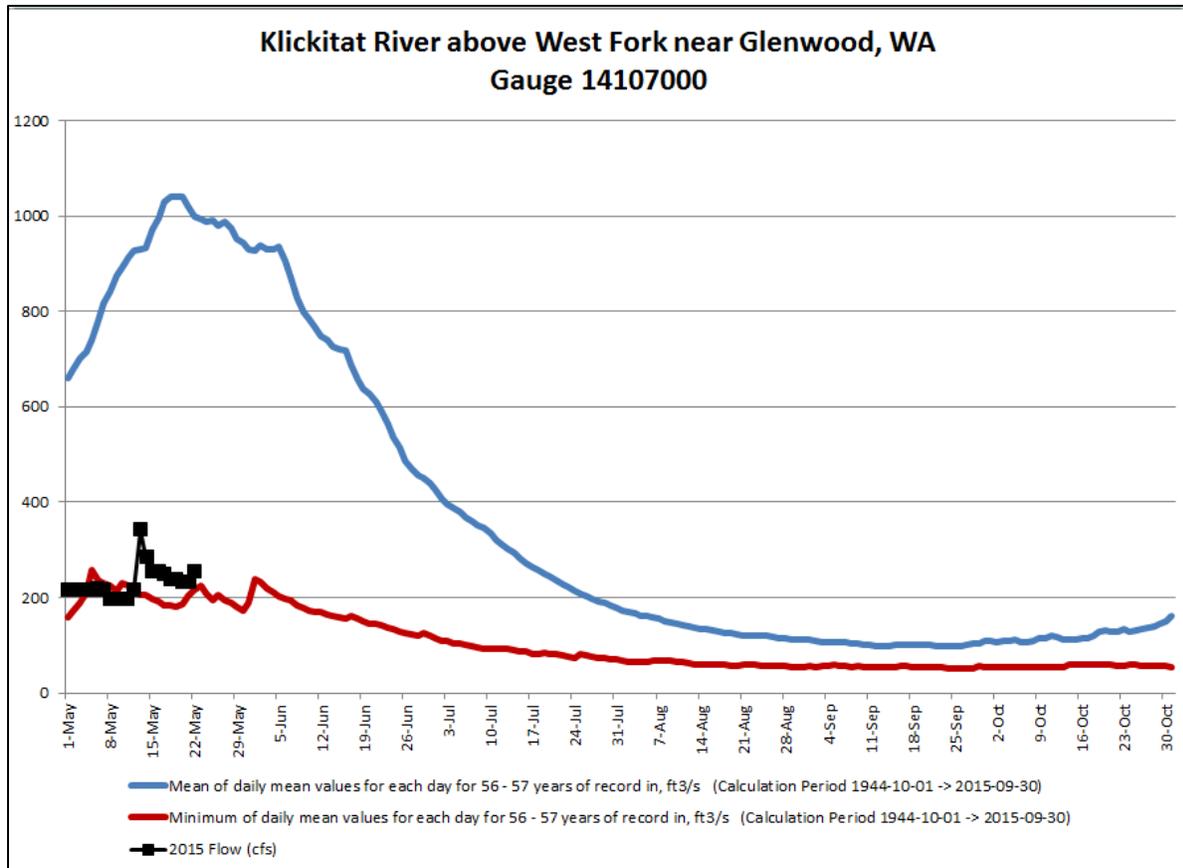
Record low flows daily since about the 9th of May on the Stillaguamish!



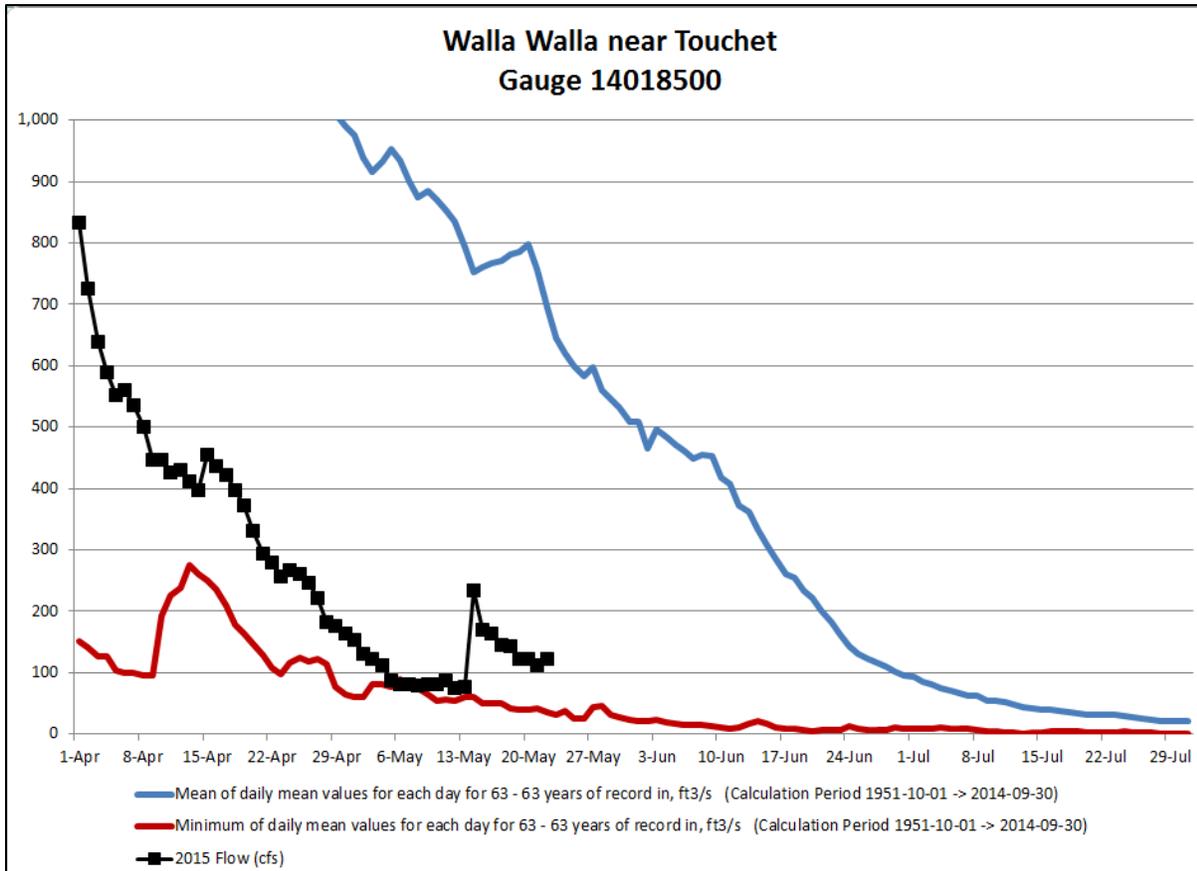
Issaquah Creek will be fun to watch!



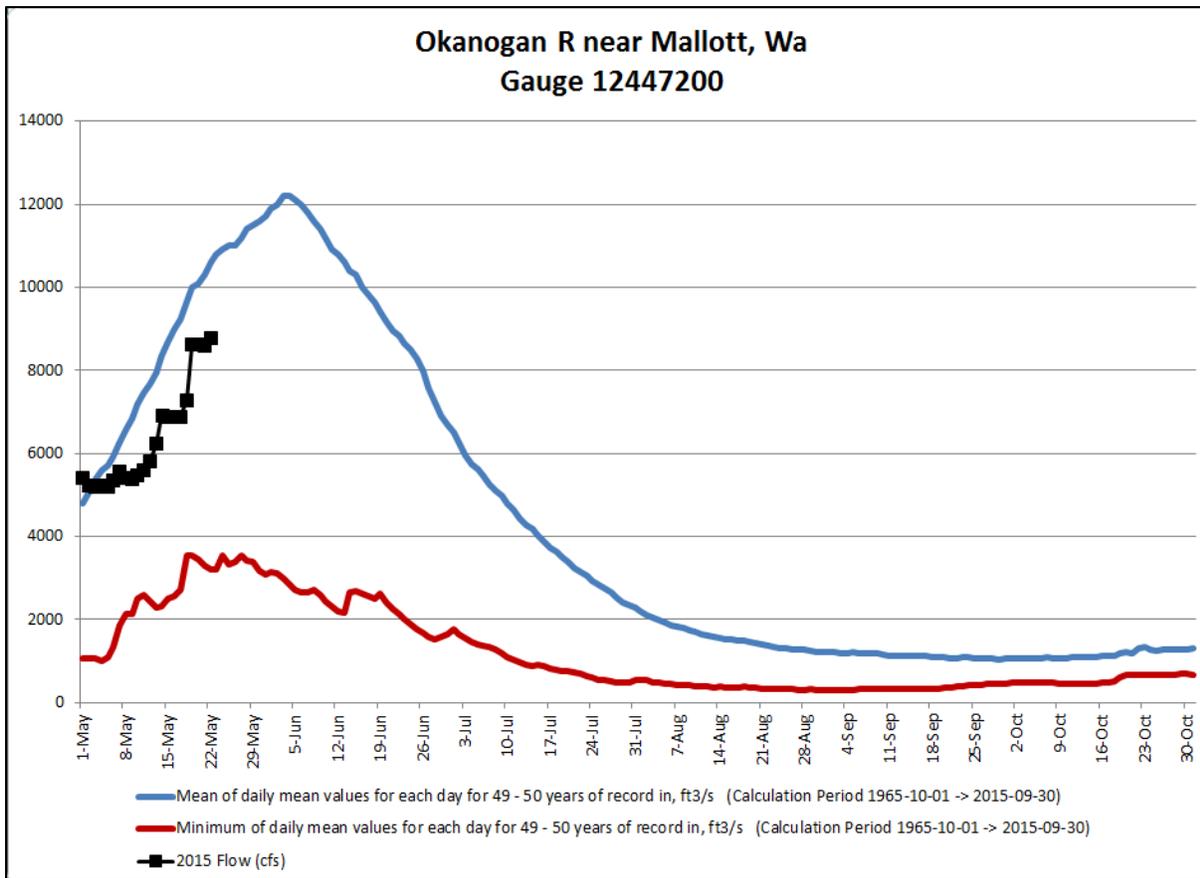
Dungeness continues to hover in and out of "record" territory. More on Dungeness below.



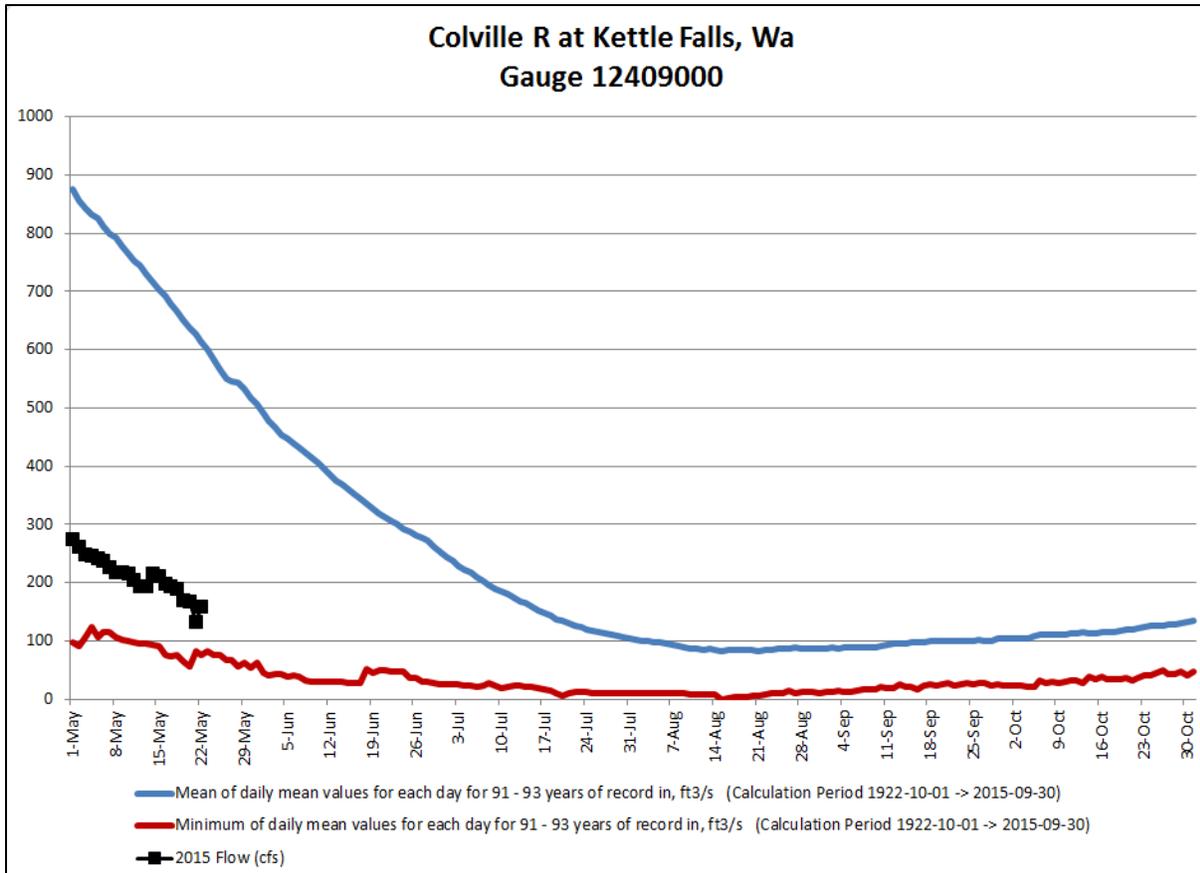
Klickitat is not great, but not breaking records this week.



Rain in the Walla Walla area has contributed to keeping flows higher this part week.



Okanogan hydrograph tells the story: Okanogan is one of few basins in Washington to actually be enjoying the phenomenon of relatively normal snow melt runoff!



Maybe someone from the Colville area can chime in with comments on the status of surface water in that area.

Selected Washington Streamflows Table

The first column shows the gauge location, the second column shows today's stream flow readings, the third column shows today's flows as a percentage of average flows for this date throughout the period of record, column four shows the (previous) minimum flow for this date, and the fifth column shows in what year that minimum occurred. Six of our select set of locations set records lows today (dark red cells). Statewide streamflows are available from USGS at: <http://waterdata.usgs.gov/wa/nwis/current/?type=flow>

Selected Washington Streamflows	May 22, 2015			
	Today's Flow (cfs)	Percent of average for this date in the record	Min Flow (cfs)	Min Yr
MF NOOKSACK RIVER NEAR DEMING, WA	378	50%	200	1992
NOOKSACK RIVER AT FERNDALE, WA	3,010	60%	2,240	1992
SKAGIT RIVER NEAR CONCRETE, WA	12,800	59%	9,120	2003

SAUK RIVER AT DARRINGTON, WA	2,010	56%	1,340	1915
CASCADE RIVER AT MARBLEMOUNT, WA	1,640	72%	1,540	2010
NF STILLAGUAMISH RIVER NEAR ARLINGTON, WA	533	24%	714	1992
SNOQUALMIE RIVER NEAR CARNATION, WA	1,660	32%	1,650	1992
SKYKOMISH RIVER NEAR GOLD BAR, WA	2,070	28%	2,740	1992
ISSAQUAH CREEK NEAR MOUTH NEAR ISSAQUAH, WA	78	89%	29	2004
CEDAR RIVER BELOW DIVERSION NEAR LANDSBURG, WA	271	45%	212	1992
CEDAR RIVER AT RENTON, WA	293	40%	181	1963
BIG SOOS CREEK ABOVE HATCHERY NEAR AUBURN, WA	65	68%	44	2004
GREEN RIVER NEAR AUBURN, WA	493	32%	405	1980
SOUTH PRAIRIE CREEK AT SOUTH PRAIRIE, WA	88	32%	85	1992
PUYALLUP RIVER AT PUYALLUP, WA	2,260	53%	1,160	1994
NISQUALLY RIVER AT MCKENNA, WA	635	52%	289	1963
DESCHUTES RIVER NEAR RAINIER, WA	75	47%	55	2004
NF SKOKOMISH R BL STAIRCASE RPDS NR HOODSPORT, WA	118	17%	269	1992
DUNGENESS RIVER NEAR SEQUIM, WA	245	39%	282	2003
HOKO RIVER NEAR SEKIU, WA	50	36%	41	2004
CALAWAH RIVER NEAR FORKS, WA	209	35%	135	2004
HOH RIVER AT US HIGHWAY 101 NEAR FORKS, WA	1,240	59%	1,030	2003
SATSOP RIVER NEAR SATSOP, WA	484	47%	489	2004
CHEHALIS RIVER NEAR GRAND MOUND, WA	761	59%	505	1994
NASELLE RIVER NEAR NASELLE, WA	83	44%	68	1956
COWLITZ RIVER BELOW MAYFIELD DAM, WA	3,050	39%	1,510	1968
COWLITZ RIVER AT PACKWOOD, WA	1,270	41%	1,210	1992
LEWIS RIVER AT ARIEL, WA	2,400	49%	188	1931
WHITE SALMON RIVER NEAR UNDERWOOD, WA	726	47%	582	1977
KLICKITAT RIVER ABOVE WEST FORK NEAR GLENWOOD, WA	323	32%	202	1977
WALLA WALLA RIVER NEAR TOUCHET, WA	163	22%	41	1992
TUCANNON RIVER NEAR STARBUCK, WA	129	41%	87	1930
GRANDE RONDE RIVER AT TROY, OR	5,310	68%	2,170	1977
YAKIMA RIVER AT KIONA, WA	1,910	33%	654	1977
AMERICAN RIVER NEAR NILE, WA	275	38%	192	1977
CRAB CREEK AT IRBY, WA	9	22%	6	1990
WENATCHEE RIVER AT PLAIN, WA	4,320	65%	2,270	1915
METHOW RIVER NEAR PATEROS, WA	6,540	107%	1,220	1977
OKANOGAN RIVER AT MALOTT, WA	9,110	88%	3,300	2003

OKANOGAN RIVER AT OROVILLE, WA	1,780	140%	75	1987
SPOKANE RIVER AT SPOKANE, WA	3,970	22%	4,200	1987
COLVILLE RIVER AT KETTLE FALLS, WA	159	25%	82	1931
PEND OREILLE RIVER BELOW BOX CANYON NEAR IONE, WA	20,900	39%	19,700	1994

Federal Drought Status

New this week is the spread of D0 “abnormally Dry” conditions throughout western Washington, and the downgrading of northeast Washington to D2 “Severe Drought” status. This brings the total percent of Washington’s land area experiencing Severe Drought up to 23.74 percent, up from 15.49 percent just last week. This is week four at D2 for south central Washington, and week 1 for northeastern Washington. Four more weeks at D2 will get us a federal drought declaration in south central counties; 7 more weeks in northeast.

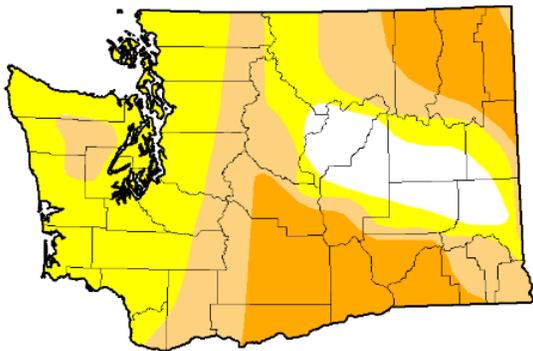
U.S. Drought Monitor Washington

May 19, 2015
(Released Thursday May 21, 2015)
Valid 8 a.m. EDT

Statistics type: Traditional (D0-D4, D1-D4, etc.) Categorical (D0, D1, etc.)

Drought Condition (Percent Area):

Week	Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	2015-05-19	9.77	90.23	51.81	23.74	0.00	0.00
Last Week	2015-05-12	32.49	67.51	51.82	15.49	0.00	0.00
3 Months Ago	2015-02-17	38.13	61.87	16.66	0.00	0.00	0.00
Start of Calendar Year	2014-12-30	51.87	48.13	36.15	14.83	0.00	0.00
Start of Water Year	2014-09-30	34.22	65.78	40.27	20.17	0.00	0.00
One Year Ago	2014-05-20	44.26	55.74	34.66	15.22	0.00	0.00



Population Affected by Drought: **2,470,937**

[View More Statistics](#)

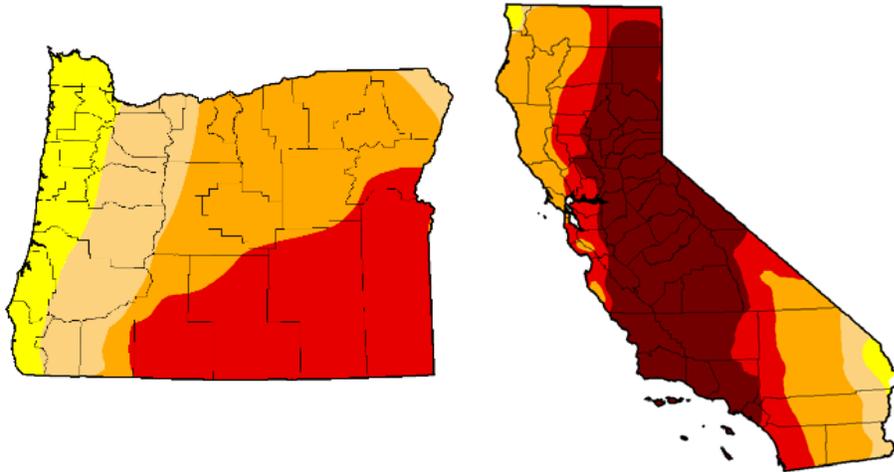
Intensity:

- D0 - Abnormally Dry
- D1 - Moderate Drought
- D2 - Severe Drought
- D3 - Extreme Drought
- D4 - Exceptional Drought

For perspective, here are Oregon’s and California’s situations:

May 19, 2015

May 19, 2015



Dungeness

While Dungeness flows continue to break record lows, the community is developing concerns about water supply and flows for fish this summer. Shallow exempt-well owners are particularly concerned and vulnerable. A Dungeness Community Forum was held the evening of Thursday May 21, with about 160 community members attending to hear about the state drought process, drought impacts, wildfire, and local water supply. Speakers included representatives of Ecology, WDFW, DNR, Health, federal Natural Resource Conservation Service, Jamestown s'Klallam Tribe, Cities of Port Angeles and Sequim, Clallam County PUD, irrigators, and Washington Water Trust. Audience engagement was very good, and all audience questions were answered before the end of the event. Many thanks to the Jamestown s'Klallam Tribe for organizing and the Dungeness River Management Team for sponsoring the forum!

King5 released this story: <http://www.king5.com/story/tech/science/environment/2015/05/21/olympic-mountain-snowpack-drought-forum/27749215/>

Other Comments:

Copies of these Status Updates and other material of interest is available on the "S:" drive at s:\All Agency\Shared Projects\DROUGHT 2015. A copy of the presentation given last evening in Sequim is also posted there.

Finally, the Governor's Office announced today the appointment of Derek Sandison as the new director of the Washington Department of Agriculture. Mr. Sandison, who has been leading Ecology's Office of Columbia River, will take over at Agriculture on June 15.

Links

Ecology Drought Watch 2015: <http://www.ecy.wa.gov/drought/index.html>

Office of the State Climatologist now offers a weekly drought update for Washington State: <http://www.climate.washington.edu/events/2015drought/>

State departments of Health and Agriculture have posted drought web pages:

<http://agr.wa.gov/PestFert/natresources/Drought.aspx>

<http://www.doh.wa.gov/CommunityandEnvironment/DrinkingWater/HotTopics#2015drought>

Pacific Northwest Drought Portal:

<http://www.drought.gov/drought/regional-programs/pacific/pacific-northwest-home>

NOAA El Nino Portal: <http://www.elnino.noaa.gov/>

Great water supply and drought links: <http://www.ecy.wa.gov/programs/WR/ws/wtrsuply.html>

Monthly and Seasonal climate outlooks:

http://www.cpc.ncep.noaa.gov/products/predictions/multi_season/13_seasonal_outlooks/color/churchill.php

Northwest River Forecast Center Water Supply: <http://www.nwrfc.noaa.gov/ws/>

Real time stream data for Washington: <http://waterdata.usgs.gov/wa/nwis/rt>

USGS Washington Water Science Center: http://wa.water.usgs.gov/water_issues/watercensus.htm

Nationwide drought information is available at <http://www.drought.gov>