



Drought Status Update #29 October 16, 2015

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

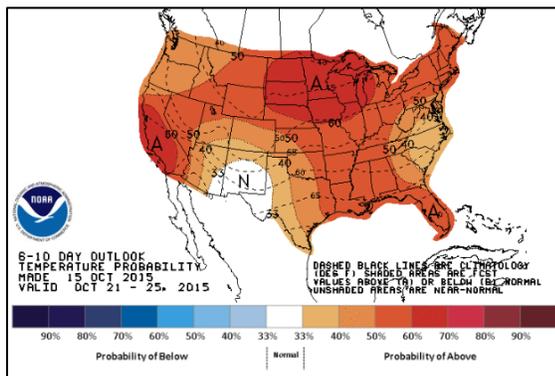
It's a beautiful autumn in the Pacific Northwest. Salmon are returning, and fall colors can now be attributed to leaves actually turning color instead of just the bright orange of dead conifers everywhere. Significant precipitation events have occurred in Western Washington in October, and flows are up in some eastside creeks as well. But let's not call off this drought thing too soon! The best quote seen by this author about our current status comes from Port Townsend City Manager David Timmons on October 15, saying "Our ability to get through this [water shortage] depends on when the rains start." Indeed!

But forget lingering concerns for just a minute and check out this final-draft hot off the press [video by Danny Garrett about Box Canyon Creek bull trout](#). Danny, you make it all look so glamorous; Jon, you're a born educator and outreach specialist!

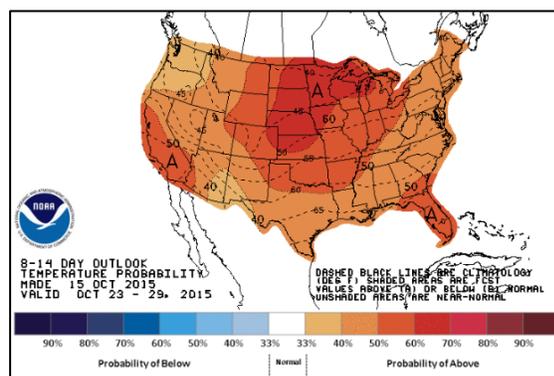
Temperature Forecasts

The [6-to-10 day temperature outlook](#) shows **HIGHER-THAN-NORMAL** temperatures throughout Washington, as does the [8-to-14 day temperature outlook](#).

6-10 day forecast on 10/15 for Oct 21-25

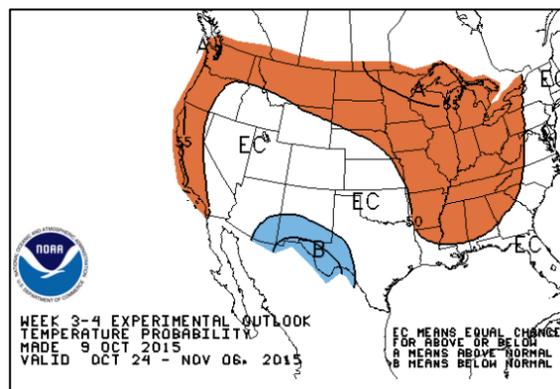


8-14 day forecast on 10/15 Oct 23-29



NOAA's weeks 3 and 4 outlook hasn't changed much. The legend is the same as above.

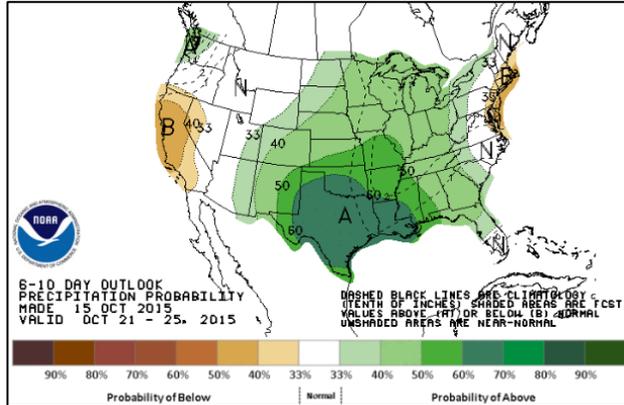
[Week 3-4 Experimental Outlook for Temperature](#)
Created on 10/9 for the period October 24-
Nov 6



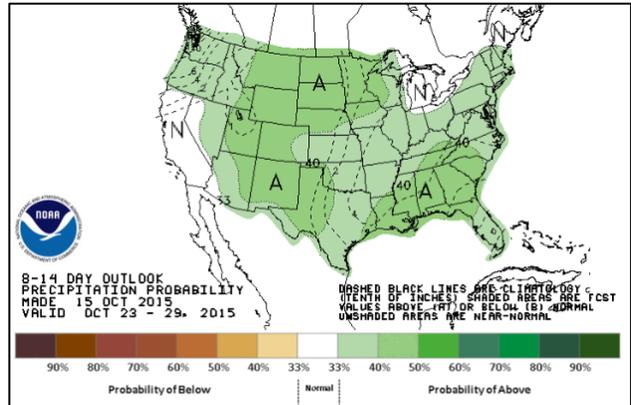
Precipitation Forecasts

The [6-to-10 day probability of precipitation](#) (below) is for **above-normal** precipitation statewide, and this carries through to the [8-to-14-day precipitation probability outlook](#).

6-10 day precipitation forecast for Oct 21-25

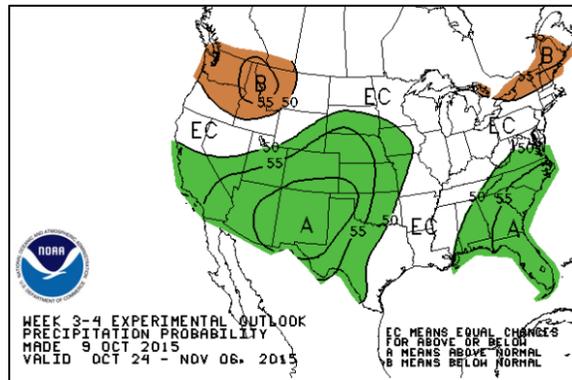


8-14 day precipitation forecast for Oct 23-29



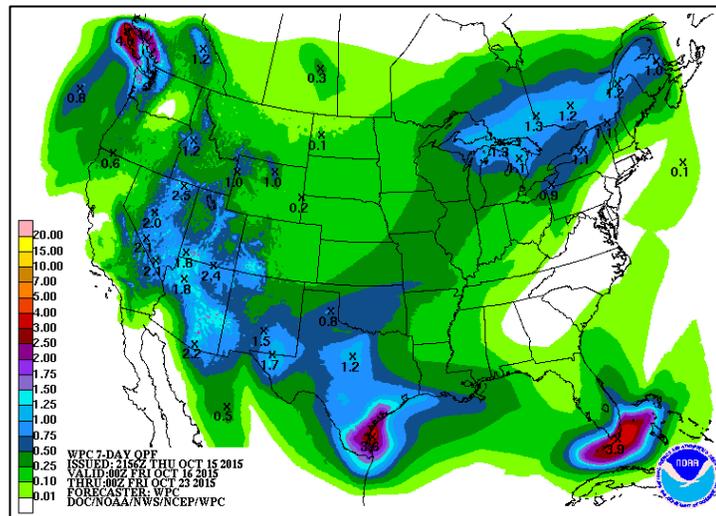
NOAA's experimental outlook for weeks 3 and 4 precipitation is presented below.

Week 3-4 Experimental Outlook for Precipitation Created on 10/9 for the period October 24- Nov 6



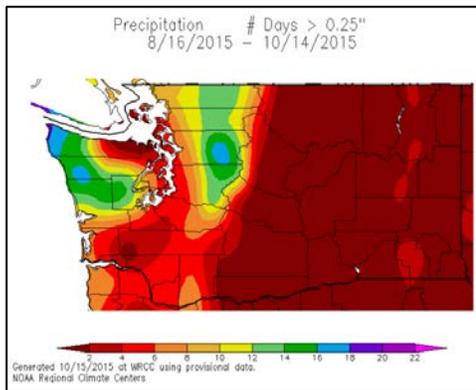
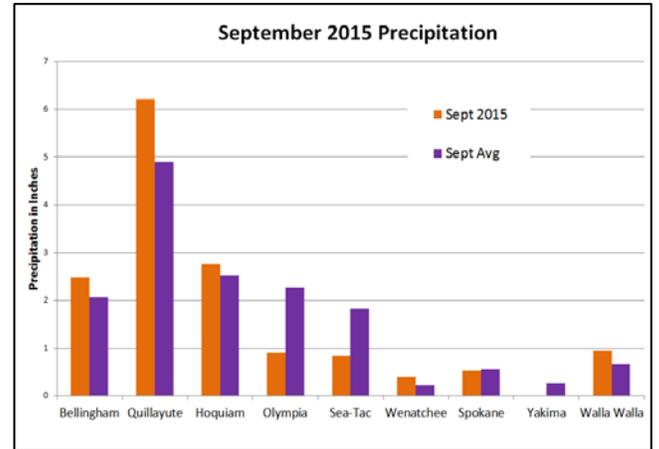
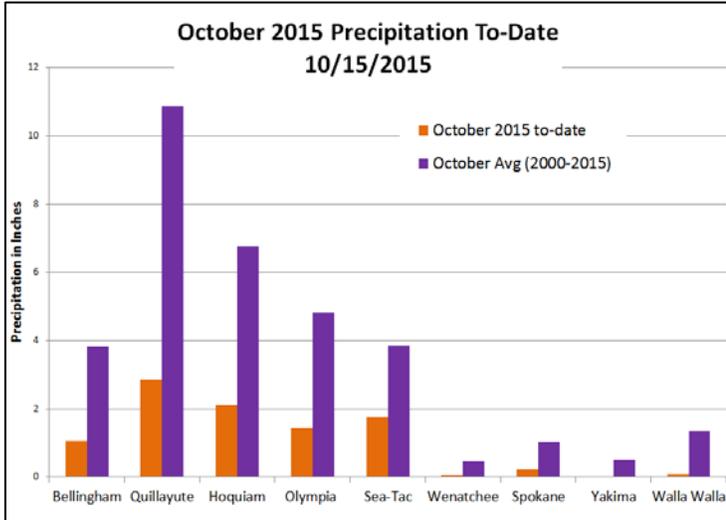
At right is NOAA's weather forecast for [precipitation](#) (right) in most of Washington over the **coming week**. It's difficult to see Washington - it's covered in precip. Still, conditions don't look great in eastern Washington in terms of water falling from the sky - still under one-tenth inch at most.

Get local weather forecasts by clicking the map at [Weather.Gov](#). Satellite images are available by scrolling down the forecast page to "Additional Resources."



Precipitation History

Below is a chart showing the history of precipitation at nine Washington weather stations for October to-date (10/15/2015) and September 2015. The October chart is misleading, though, because it compares oranges (Oct 1-15) to grapes (Oct 1-31). I'm still working out the kinks with the available data.

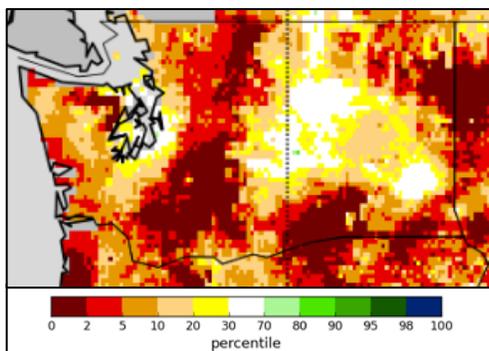


I'm continuing to search for that one federal report that can help us guess where problems might be occurring in real time. It depends, as always, on the question.

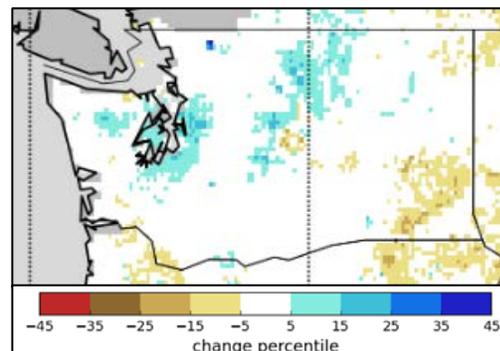
[Western Regional Climate Center](#) provides a wealth of ways to look at climate anomalies in the recent past; here is one interesting map showing the number of days with more than one-quarter-inch precipitation since August 16. It tells us what we already know, but it's got pretty colors! The [UW Drought Monitoring System](#) builds maps representing soil moisture content and percentage change in the recent past.

Below left is a map of total soil moisture expressed as percentile compared to the historical soil moisture values from 1920-2010. Below right is a map showing percentage change in soil moisture in the last two weeks (10/14/2015).

Soil Moisture Percentile on 10/14/2015 (1920-2010 base period)



Change in soil moisture in the past 2 weeks 10/14/2015

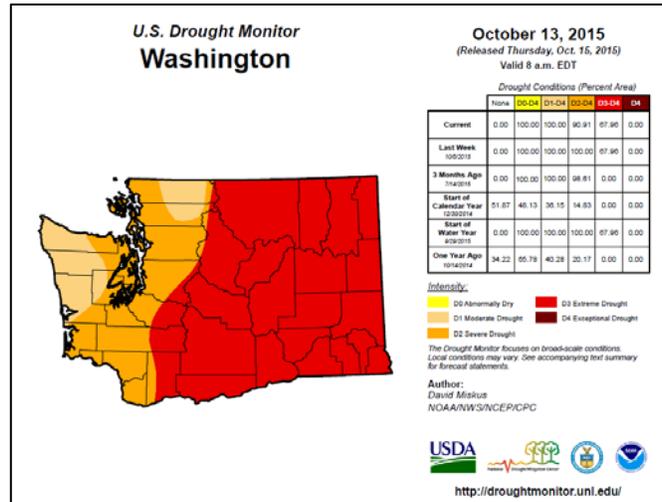


El Niño Update

The October 8th El Niño/Southern Oscillation Diagnostic Discussion tells us that there is an approximately 95% chance that El Niño will continue through Northern Hemisphere winter 2015-16, gradually weakening through spring 2016. This is consistent with previous forecasts, and I guess consistency can be comforting. The next ENSO Diagnostics Discussion is scheduled for 12 November 2015.

Federal Drought Status

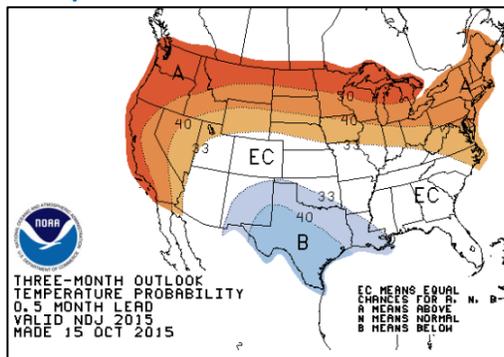
North coast and north central Cascades headwaters areas, representing about 9% of total land area, were upgraded to “Moderate Drought” status this week! The rest of Western Washington remains in “Severe Drought” status, while everything east of the Cascade Crest remains in “Extreme Drought” status. The [U.S. Drought Portal](http://www.drought.gov) provides the weekly drought status for the nation.



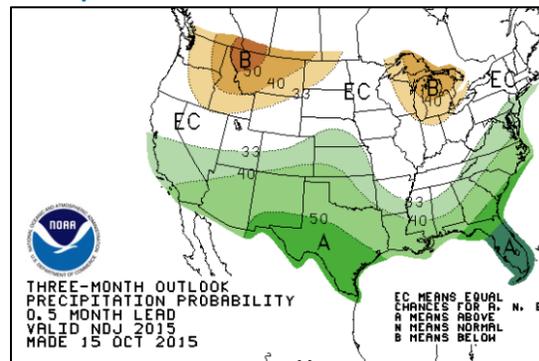
Climate Predictions

Nothing has changed with the [seasonal climate outlooks](#) except that we have advanced to the November, December, and January (NDJ) forecast period.

November, December, January Outlook Temperature



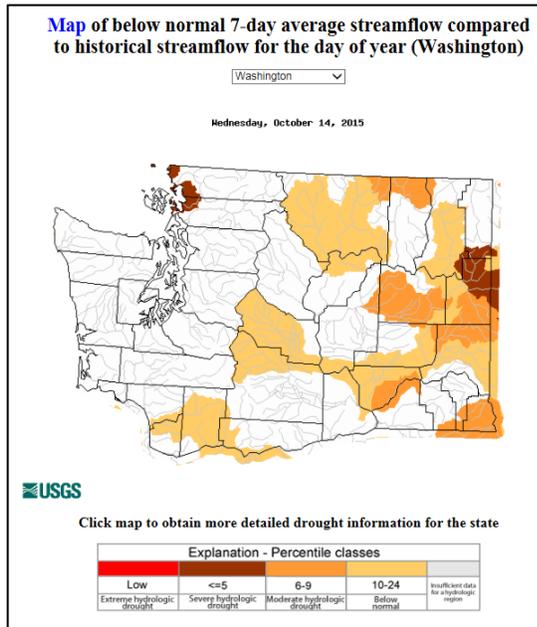
November, December, January Outlook Precipitation



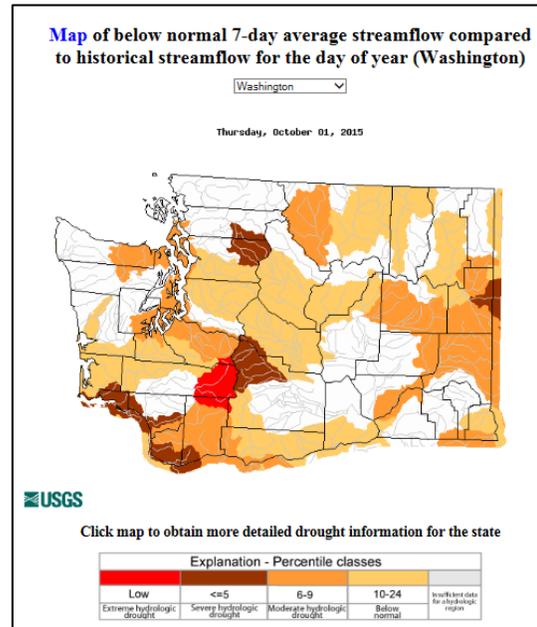
Stream Flows

The USGS figure showing [stream gauges with below normal streamflow](#) for 7 days or more shows westside streamflows mostly “recovered” to normal conditions, but many eastern Washington basins are still below normal.

Below-normal 7-day average stream flow October 14, 2015



Below-normal 7-day average stream flow October 1, 2015



Selected Washington Streamflows Table

No locations show record low flows for this date in the record for October 15. Yee haw!

This [Statewide Streamflows](#) tables from USGS gives a quick visual reference for daily flows as a percent of normal for this date in the historic record. We selected 43 out of a total of 254 flow gauges in Washington as a subjectively representative sample of Washington conditions. Colors in the table emphasize flows less than 100% of average (orange-yellow) and less than 50% (red) for this day in the record. Flows at 100% or more of average are green.

SELECTED WASHINGTON STREAMFLOWS FOR 43 OUT OF 254 GAUGES IN WASHINGTON	10/15 FLOW (CFS)	PERCENT OF AVERAGE FOR THIS DATE IN THE RECORD	MIN FLOW (CFS)	YR OF MIN FLOW	MEAN FLOW (CFS)
Mf Nooksack River Near Deming, Wa	220	48%	95	1967	459
Nooksack River At Ferndale, Wa	1,520	62%	586	2010	2,470
Skagit River Near Concrete, Wa	9,330	93%	2,800	1926	9,990
Sauk River At Darrington, Wa	753	58%	286	1926	1,300
Cascade River At Marblemount, Wa	433	63%	184	2007	690
Nf Stillaguamish River Near Arlington, Wa	569	46%	155	2007	1,250
Snoqualmie River Near Carnation, Wa	1,640	81%	401	1988	2,020
Skykomish River Near Gold Bar, Wa	1,530	67%	346	1988	2,280
Issaquah Creek Near Mouth Near Issaquah, Wa	37	84%	18	2003	44
Cedar River Below Diversion Near Landsburg, Wa	288	83%	245	1995	346

Cedar River At Renton, Wa	343	99%	82	1953	347
Big Soos Creek Above Hatchery Near Auburn, Wa	53	129%	24	1993	41
Green River Near Auburn, Wa	534	93%	191	1988	575
South Prairie Creek At South Prairie, Wa	43	39%	25	1988	111
Puyallup River At Puyallup, Wa	1,020	60%	580	1995	1,700
Nisqually River At Mckenna, Wa	567	75%	128	1964	759
Deschutes River Near Rainier, Wa	29	40%	21	2003	73
Nf Skokomish R Bl Staircase Rpds Nr Hoodsport, Wa	130	42%	38	1994	313
Dungeness River Near Sequim, Wa	116	64%	76	1995	180
Hoko River Near Sekiu, Wa	197	70%	11	1988	281
Calawah River Near Forks, Wa	416	65%	42	1988	642
Hoh River At Us Highway 101 Near Forks, Wa	1,510	80%	330	1988	1,880
Satsop River Near Satsop, Wa	906	105%	193	2007	865
Chehalis River Near Grand Mound, Wa	263	38%	109	1953	686
Naselle River Near Naselle, Wa	60	34%	18	2007	177
Cowlitz River Below Mayfield Dam, Wa	3,560	102%	990	1943	3,490
Cowlitz River At Packwood, Wa	289	46%	221	1988	630
Lewis River At Ariel, Wa	886	33%	552	1946	2,720
White Salmon River Near Underwood, Wa	474	77%	377	1993	612
Klickitat River Above West Fork Near Glenwood, Wa	86	77%	59	1994	112
Walla Walla River Near Touchet, Wa	17	25%	6	1989	69
Tucannon River Near Starbuck, Wa	76	93%	54	1989	82
Grande Ronde River At Troy, Or	555	64%	495	1992	862
Yakima River At Kiona, Wa	1,280	65%	597	1980	1,970
American River Near Nile, Wa	35	57%	28	1988	61
Crab Creek At Irby, Wa	1	9%	-	1978	7
Wenatchee River At Plain, Wa	529	65%	240	1943	815
Methow River Near Pateros, Wa	325	70%	294	1980	465
Okanogan River At Malott, Wa	1,070	98%	444	1989	1,090
Okanogan River At Oroville, Wa	338	67%	130	1967	506
Spokane River At Spokane, Wa	1,120	53%	881	1964	2,130
Colville River At Kettle Falls, Wa	62	54%	39	1932	114
Pend Oreille River Below Box Canyon Near Lone, Wa	23,800	113%	7,600	1953	21,000

Real-Time Water Temperature

Water temperatures in the Columbia and Snake mainstems, and Lake Osoyoos (Canadian Okanogan) have finally come below the 18 degree mark during this past two weeks. White River (King County) temperatures near Auburn are over 18 degrees C. Odd, that! Temperatures on October 1 for this gauge were 13 degrees C.

Follow this link to see the USGS [Real Time Temperature Stations map](#) for Washington. Below is a table showing September 23 [water temperature at all Washington gauges](#) having that attribute, in degrees C. Colors emphasize lethal (red, above 20 degrees C), dangerous (yellow,

above 18 degrees), and acceptable (green) temperatures for salmon. Note that this sample of gauges is heavily weighted by stations at Columbia-Snake hydropower facilities, so statistics like *percent-of-Washington-gauges* would not be representative of overall status in Washington.

WATER TEMPERATURE FOR 65 GAUGES IN WASHINGTON	10/15/2015
Nf Skokomish R Bl Staircase Rpds Nr Hoodspport, Wa	9
White River At Headworks Ab Flume Nr Buckley, Wa	10.1
White River At R Street Near Auburn, Wa	18.8
Lake Tapps Diversion At Dieringer, Wa	12
Ysi 6920v2-2 At Wsu 2 At Puyallup, Wa	10.6
Clarks Creek At Tacoma Road Near Puyallup, Wa	10.8
Duwamish River At Golf Course At Tukwila, Wa	13.3
Cedar River Near Cedar Falls, Wa	11
Cedar River At Cedar Falls, Wa	12.9
Cedar River Below Diversion Near Landsburg, Wa	11.5
Cedar River At Renton, Wa	12.6
South Fork Sultan River Near Sultan, Wa	8.9
Sultan River Below Diversion Dam Near Sultan, Wa	7.6
North Fork Tolt River Near Carnation, Wa	9.3
South Fork Tolt River Near Index, Wa	9
South Fork Tolt River Near Carnation, Wa	12.7
Sf Tolt River Bl Regulating Basin Nr Carnation, Wa	11.5
Nf Stillaguamish East Pooled Slide Area Nr Oso, Wa	6.4
Skagit River At Newhalem, Wa	10.3
Skagit River At Marblemount, Wa	10.7
Nf Nooksack River Bl Cascade Creek Nr Glacier, Wa	7.5
Sf Nooksack River At Saxon Bridge, Wa	9.7
Nooksack River At North Cedarville, Wa	9.4
Boundary Reservoir At Forebay Nr Metaline Falls	14.2
Pend Oreille River At International Boundary	14.4
Columbia River At Bridgeport, Wa	16.3
Osoyoos Lake Near Oroville, Wa	16.4
Okanogan River At Oroville, Wa	15.2
Similkameen River Near Nighthawk, Wa	11.4
Okanogan River Near Tonasket, Wa	12.6
Okanogan River At Malott, Wa	13.8
Okanogan River Nr Wakefield Br South Of Malott, Wa	13.2
Andrews Creek Near Mazama, Wa	7.3
Methow River Near Mouth Near Pateros, Wa	11.2
Wells Powerplant Headwater Near Pateros, Wa	16.3
Snake River Near Anatone, Wa	17.4
Snake River (Right Bank) Bl Lower Granite Dam, Wa	17.4
Snake River Bl Goose Island Bl Ice Harbor Dam, Wa	17.6
Columbia River At The Dalles, Or	17.7

Ecology's [Flow Monitoring Network](#) provides water temperature monitoring at several Ecology and co-op stations. Definitely check out whether there is an Ecology gauge in your area and spend a little time looking at the information. Data for the Lake Washington Ship Canal can be found [here](#).

Drought Impacts to Fish and Wildlife

Hatchery Returns To-Date

Total Adult Salmon Returned to WDFW Facilities by Species and Run Type

Hatchery Returns through 10/14/2015 - Total does not include jacks. Numbers are preliminary estimates only.

FACILITY	SPECIES	CHINOOK						STEELHEAD		
	RUN	FALL	SPRING	SUMMER	CHUM	COHO	PINK	SOCKEYE	SUMMER	WINTER
Kendall Cr Hatchery			2919				144	4		446
Whatcom Cr Hatchery		18				4	88			
Glenwood Springs		858								
Samish Hatchery		5352				286				
Baker Lk Hatchery						12		6301		
Marblemount Hatchery			1735	93		927	51			
Whitehorse Pond				7		19	2	4	69	172
Reiter Ponds									682	
Sunset Falls Fcf				495		3093	17293	6	710	
Tokul Cr Hatchery		78								
Wallace R Hatchery				3020		698	1600		798	
Cedar River Hatchery		35						2544		
Issaquah Hatchery		2713				575		2		
Soos Creek Hatchery		7385				650	33		67	
Voights Cr Hatchery		2890				2870	705			
Tumwater Falls Hatch		3650								
Garrison Hatchery		49				11				
Minter Cr Hatchery		2776	187			1839	190			
George Adams Hatchery		6007				2910		2		
Hoodspout Hatchery		2142			3	43	6435			
Dungeness Hatchery			6			10				
Hurd Cr Hatchery			194							
Morse Creek Hatchery		44				4	28		2	
Bogachiel Hatchery									499	
Solduc Hatchery				517		4570			9	
Humtulsips Hatchery		850				50			50	
Lk Aberdeen Hatchery		53			1	34	1		360	
Satsop Springs Ponds		113				250				
Forks Creek Hatchery		10107				722				1
Naselle Hatchery		5606				2330				19
Nemah Hatchery		1596				2				
Cowlitz Salmon Hatch		5165	17601		1	1356	7	7	7737	

FACILITY	SPECIES RUN	CHINOOK			CHUM	COHO	PINK	SOCKEYE	STEELHEAD	
		FALL	SPRING	SUMMER					SUMMER	WINTER
Cowlitz Trout Hatch									893	
Kalama Falls Hatchery		4158	2674			139			5289	
North Toutle Hatchery		2132				287			72	
Fallert Cr Hatchery		33	1			294			6	
Lewis River Hatchery		542	218			2862		1	100	
Merwin Dam Collection		545	690			408		30	4029	
Merwin Hatchery									339	
Modrow Trap		28310				1598			1559	
Speelyai Hatchery			863			1146				
Skamania Hatchery									1723	
Washougal Hatchery		4094							168	
Washougal River Fish Weir		11164				1			340	
Lyons Ferry Hatchery		1732	478							
Tucannon Hatchery			622							
Priest Rapids Hatchery		21293						2	12	
Ringold Springs Hatchery		7388				1			228	
Chiwawa Hatchery			450						2	
Chelan Hatchery										
Methow Hatchery			3353							
Omak Hatchery										
Eastbank Hatchery			291	768				950	64	
Wells Hatchery			0	1939					377	
Spokane Hatchery										

Fisheries Changes

'Hoot-Owl' fishing restrictions were removed on Peshastin Creek and all its tributaries effective October 13, 2015. Recent rain and cooling temperatures have increased water levels, allowing fish to move more freely upriver and alleviating the need for additional protection.

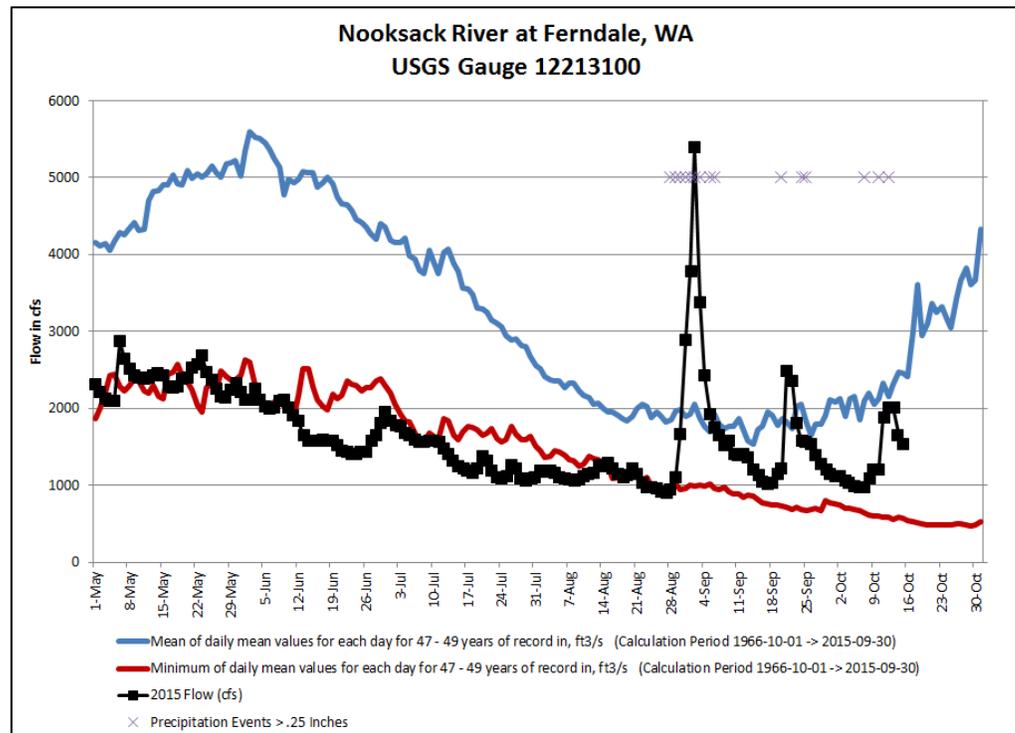
Coho non-retention was announced on the Green River along with closure of the uppermost section of the river; these closures are effective October 16 until further notice. Coho broodstock collection efforts at Soos Creek Hatchery are well behind the goal. Non-retention of coho (adults and jacks) is needed to protect returning coho. Additionally, the uppermost reaches of the Green River (upstream of Flaming Geyser State Park) is closed to all fishing to protect chinook redds.

Fishing on the Skagit River (Skagit County) from the mouth upstream to the Cascade River Road (Marblemount) Bridge and the Stillaguamish River from Marine Drive (south of Stanwood) upstream to the confluence of the North and South Forks is closed effective Oct. 19, 2015. The rule is necessary to protect returning coho runs to the Skagit and Stillaguamish rivers. Coho run sizes are significantly below pre-season forecasts in these rivers.

Information about status of fisheries changes can be found [HERE](#). The drought page at <http://wdfw.wa.gov/conservation/drought/> is no longer being maintained.

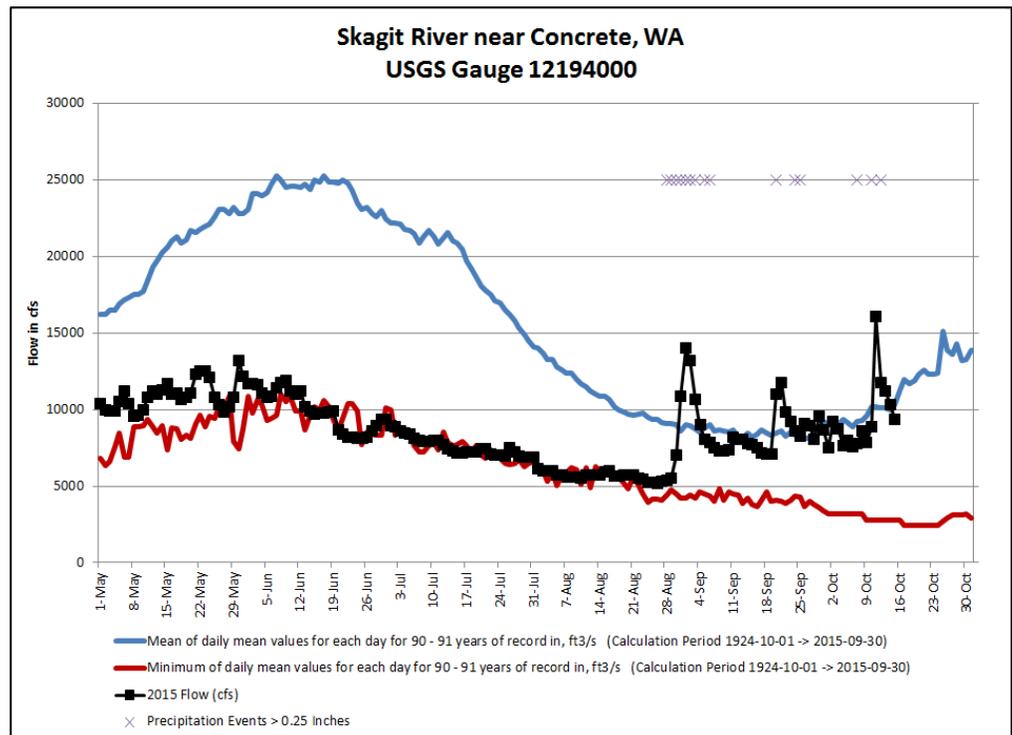
Nooksack

New this week are points showing dates with “major” rain events. It’s difficult to define “major!” As a native Washingtonian, “major” to me is something above 3 inches in a day; the NWS only counts greater than 1 inch in a day, and increments smaller. We’re looking for the level at which stream flows show a response.

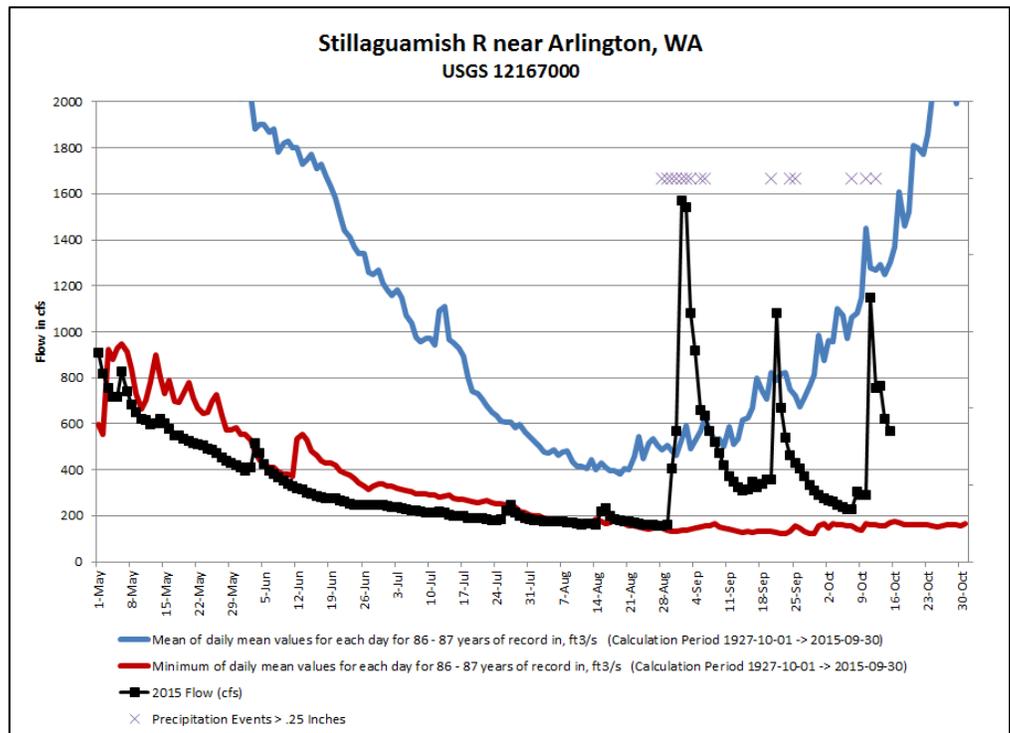


Skagit

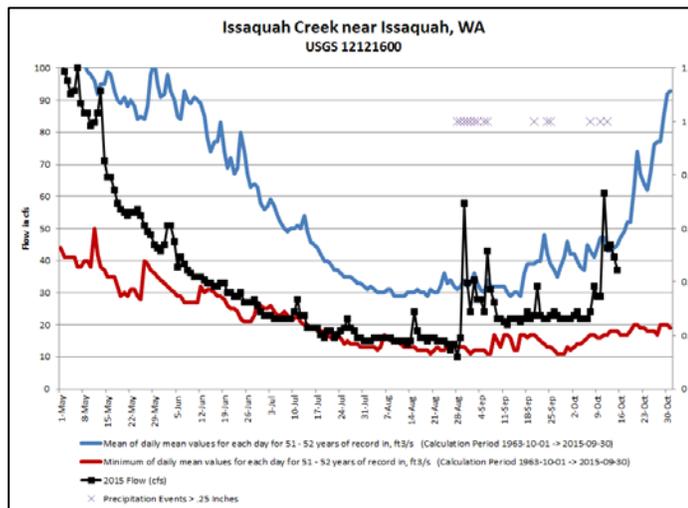
To depict “precipitation events” for Western Washington, I’ve defined this level as any daily precipitation totals over .25 Inches. I’m using a single data set for western Washington because most stations are surprisingly consistent with respect to rainfall days.



Stillaguamish



Lake Washington



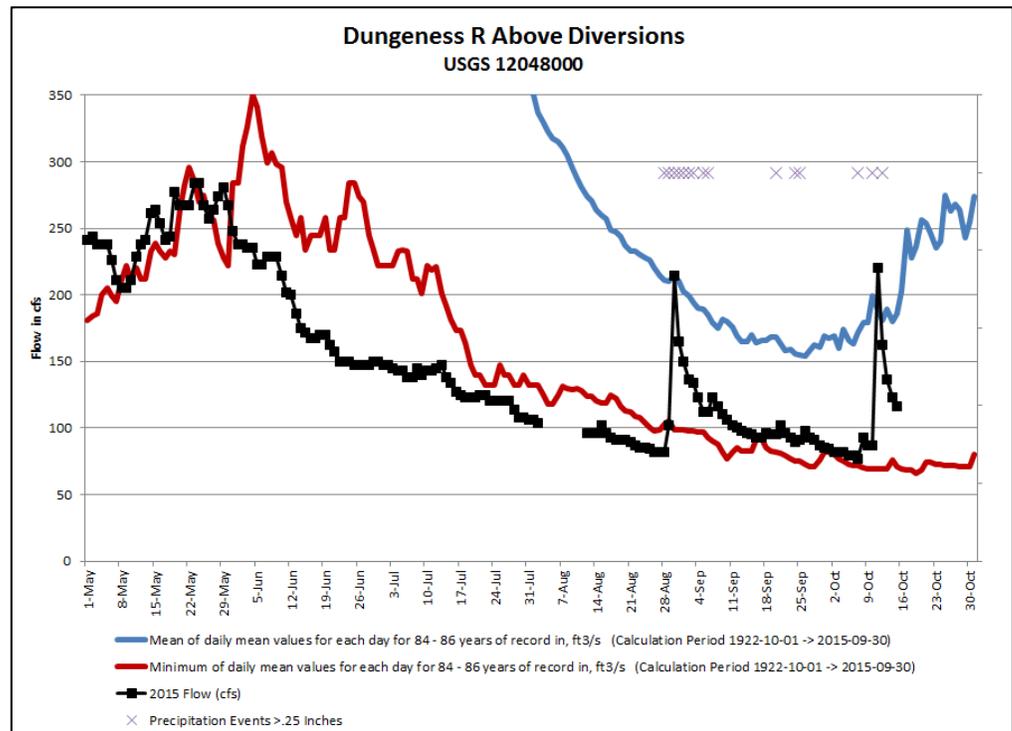
Chester Morse Reservoir

Photos taken
10/14/2015 and
contributed by Frank
Urabeck



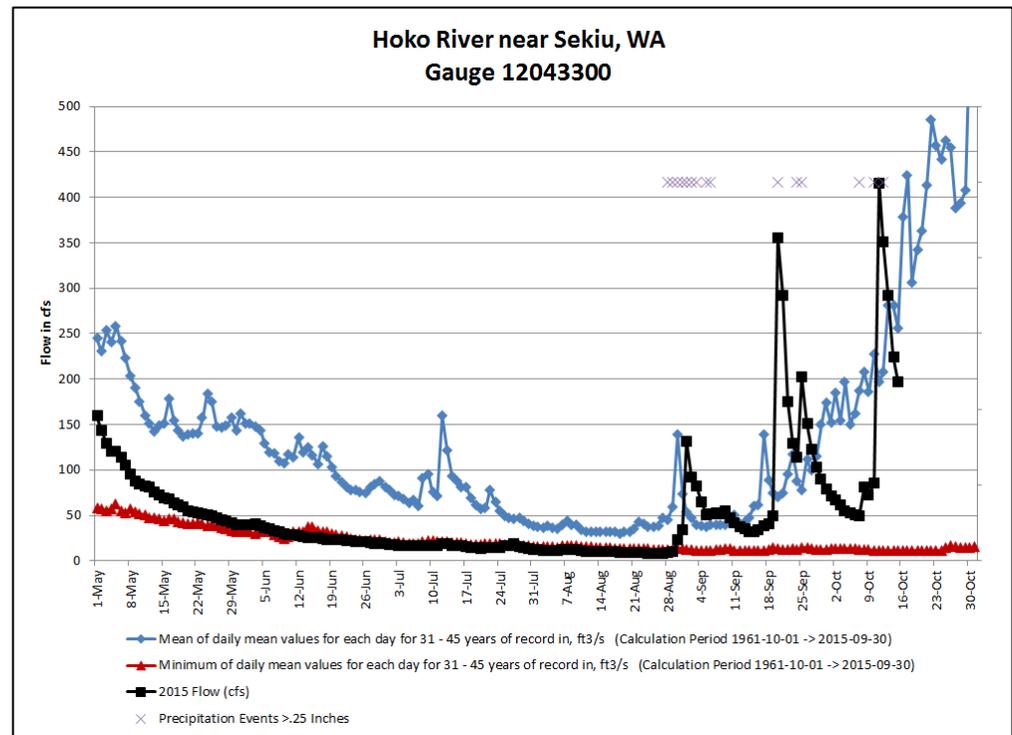
Dungeness

We have a new low flow for 2015: 77 cfs on October 7. While rain occurred elsewhere in western Washington September 18-22, whatever fell in the Dungeness basin barely registers a blip in downstream flow. Today's (10/16/2015) most recent flow value of 108 continues the downward trend after the 10/10-11 peak of 390 cfs, which is well above average for this period. Recall that 2015 plots the minimum of daily means.



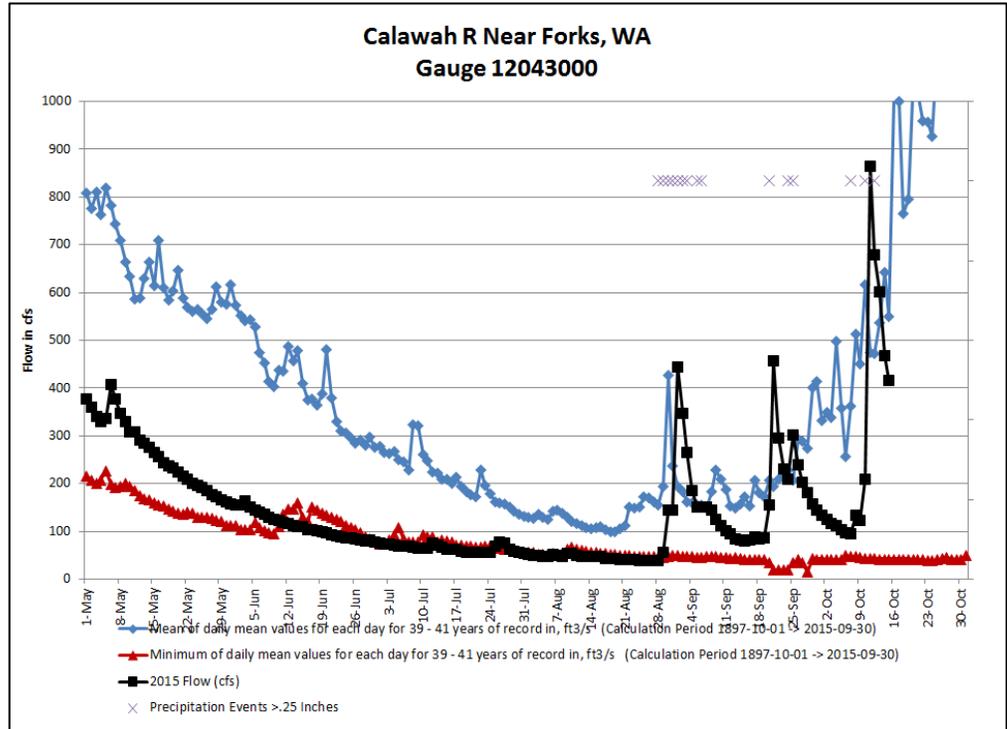
Hoko

Hoko is showing a marvelous recovery to its customary fall upward trend. It's been all uphill since a low-flow value of 8 cfs on August 28th. The Hoko is a problem child between May and September, even in a normal year. But even this year is behaving as expected for a Washington north coastal stream starting in September.



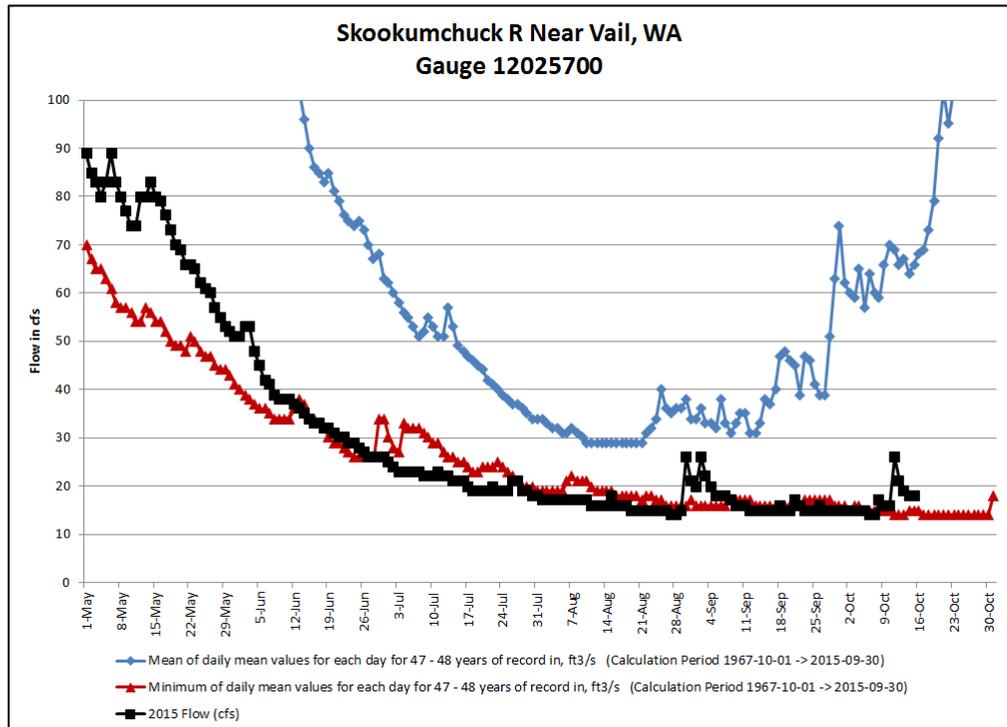
Calawah

Calawah, too, is right on schedule!

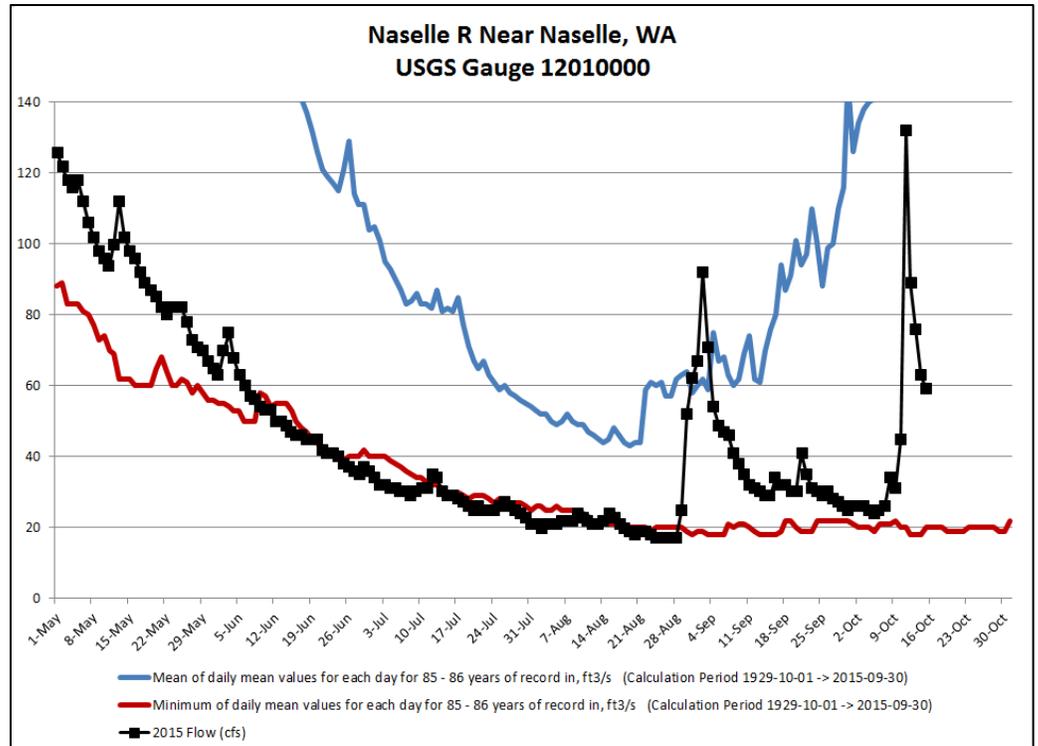


Skookumchuck

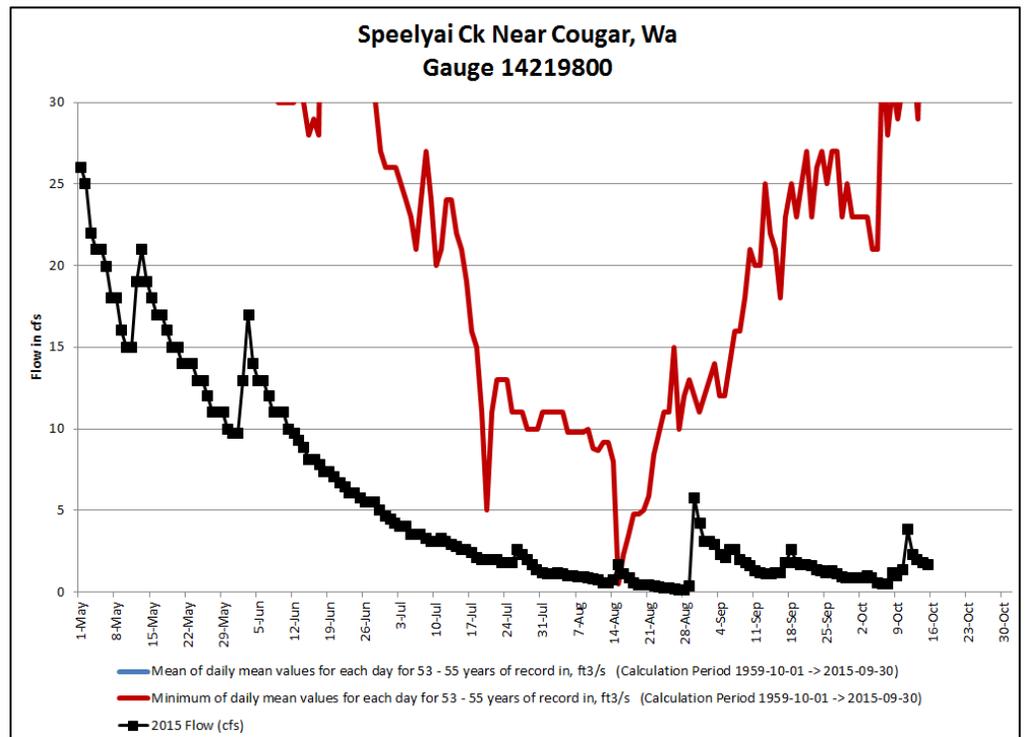
Rain events for the southern Cascades aren't as consistent as more northerly stations, so precipitation events aren't shown for these southwest streams.



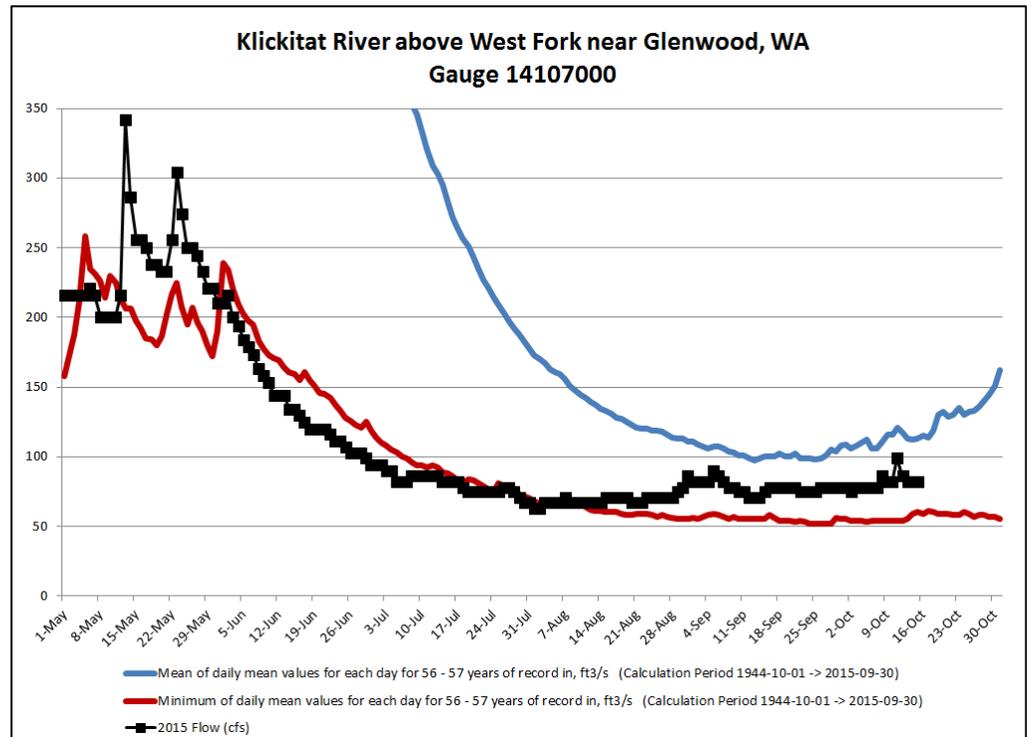
Naselle



Speelyai



Klickitat

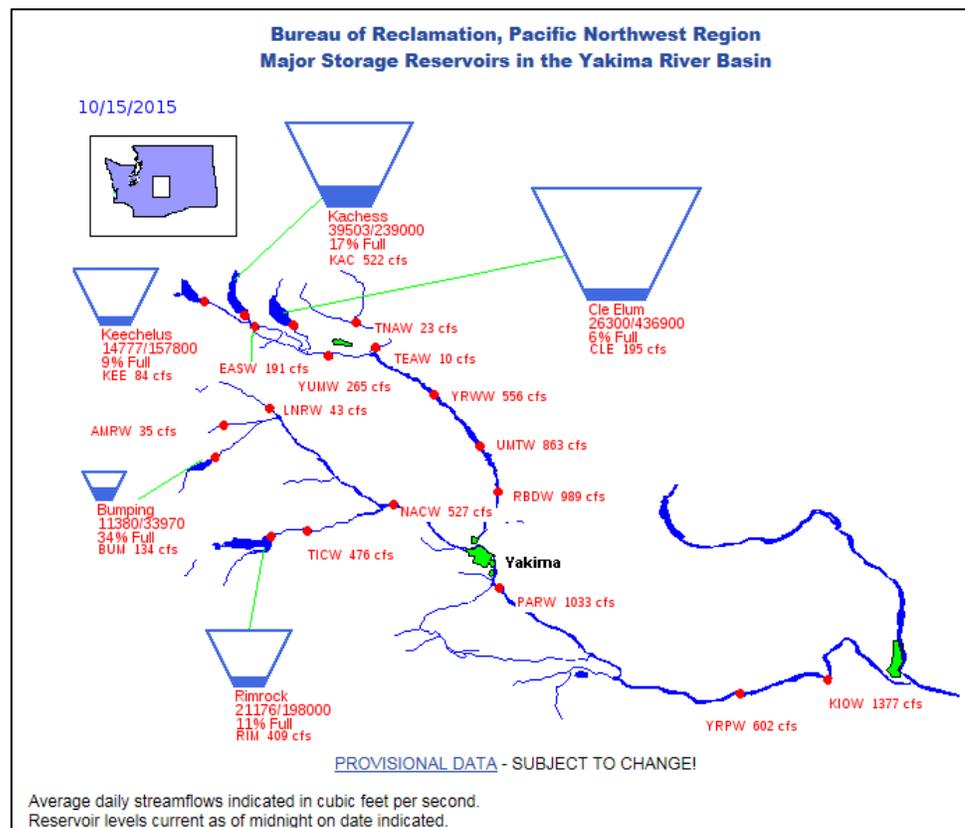


Yakima

Keechelus is 9% full;
 Kachess 17%;
 Cle Elum 6%;
 Bumping 34%;
 Rimrock 11%.

Compared to
 “average”:

Storage is 43.8%;
 October prorationing
 is 47% (up from 44%)
 Roza forebay is being
 drawn down for
 maintenance, and
 Chandler is generating
 5.9MW.



Box Canyon Creek bull trout

After two weeks in operation, the Box Canyon Creek flume was largely bypassed by high creek flows. A crew removed the flume on Thursday 10/15 so no non-biodegradable materials would be lost in the rising creek flows and lake level. Here are more photos of the working flume, as well as the de-construction.

Bull trout upstream from flume on 10/7/2015



Bull trout pair upstream from flume on 10/7/2015



Mouth of flume from underwater in Lake Kachess on 10/7



Full flume looking downstream on 10/8/2015



Breached flume looking downstream on 10/12/2015



Removing plastic sheeting on 10/15/2015



Removing baling twine 10/15/2015

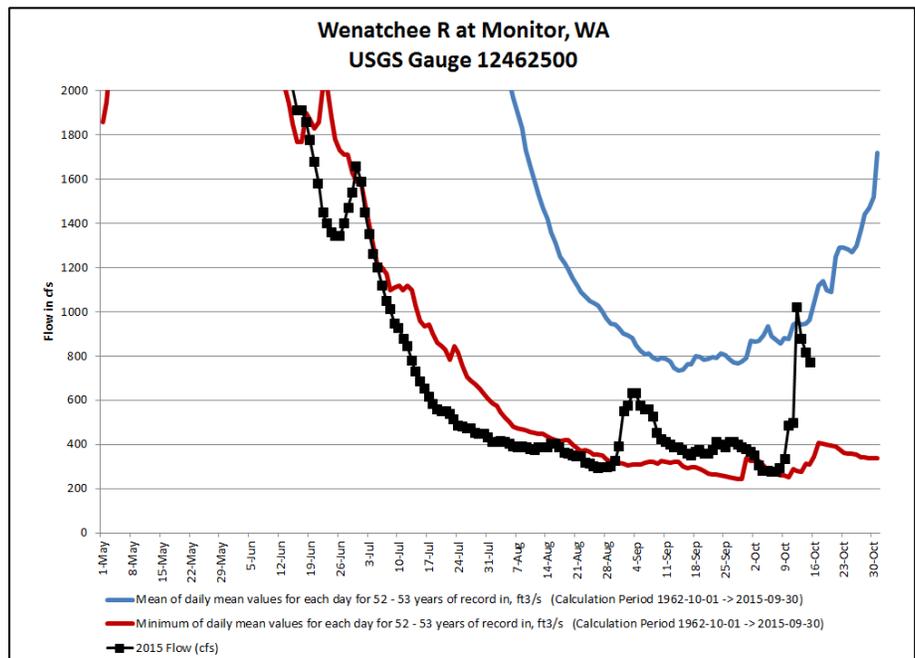


Moving & dispersing straw 10/15/2015



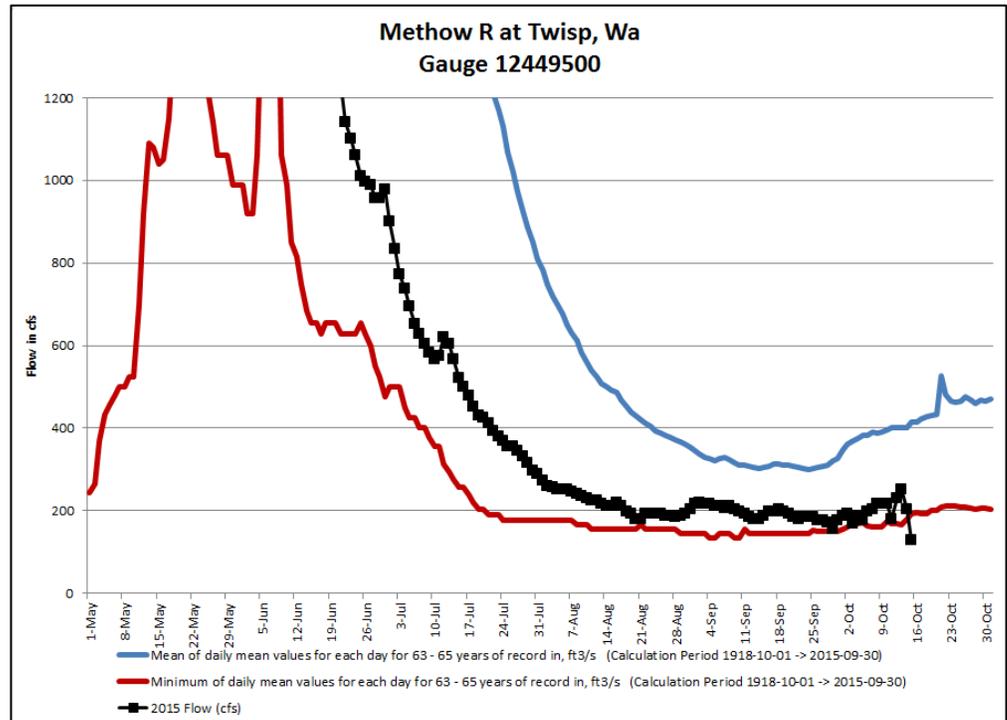
Wenatchee

Below are snapshots of the Wenatchee on October 8, 2015, running at about 274 cfs; many thanks to Amanda Barg!!



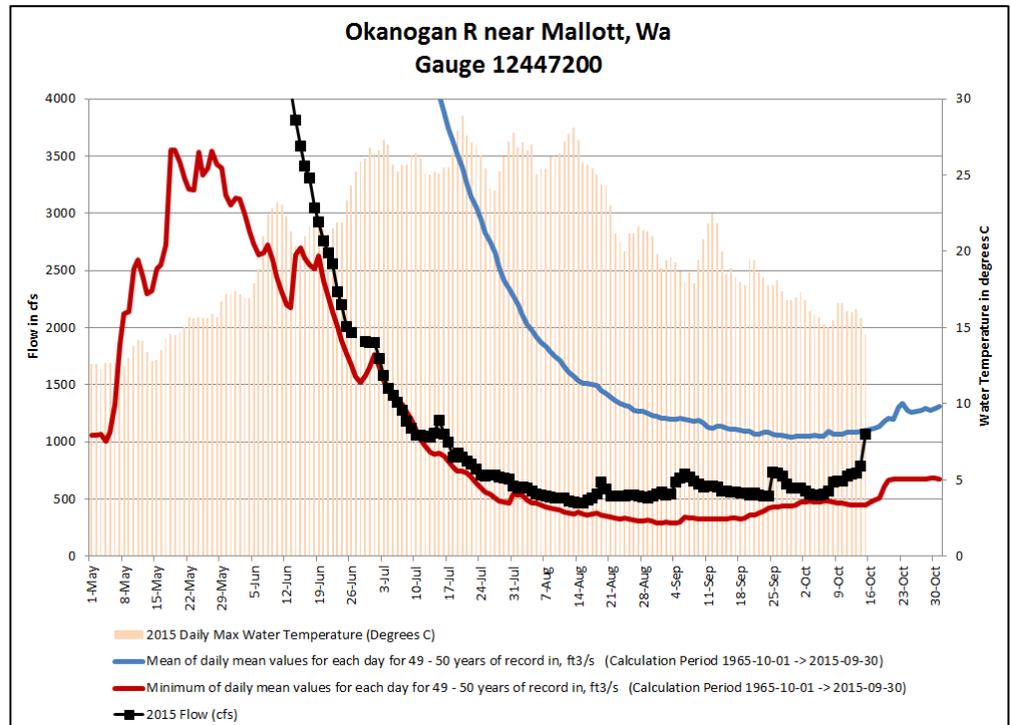
Methow

Yep, that's a season record low flow on 10/15 at 129 cfs. The most recent 10/15 instantaneous value is 241, so maybe the 129 is an anomaly? Because I am expecting flow increases as we move through October (see Okanogan), the 129 value is troubling. If anyone has information on the cause of this dramatic dip, or just wants to tell me not to worry about it, please let me know.



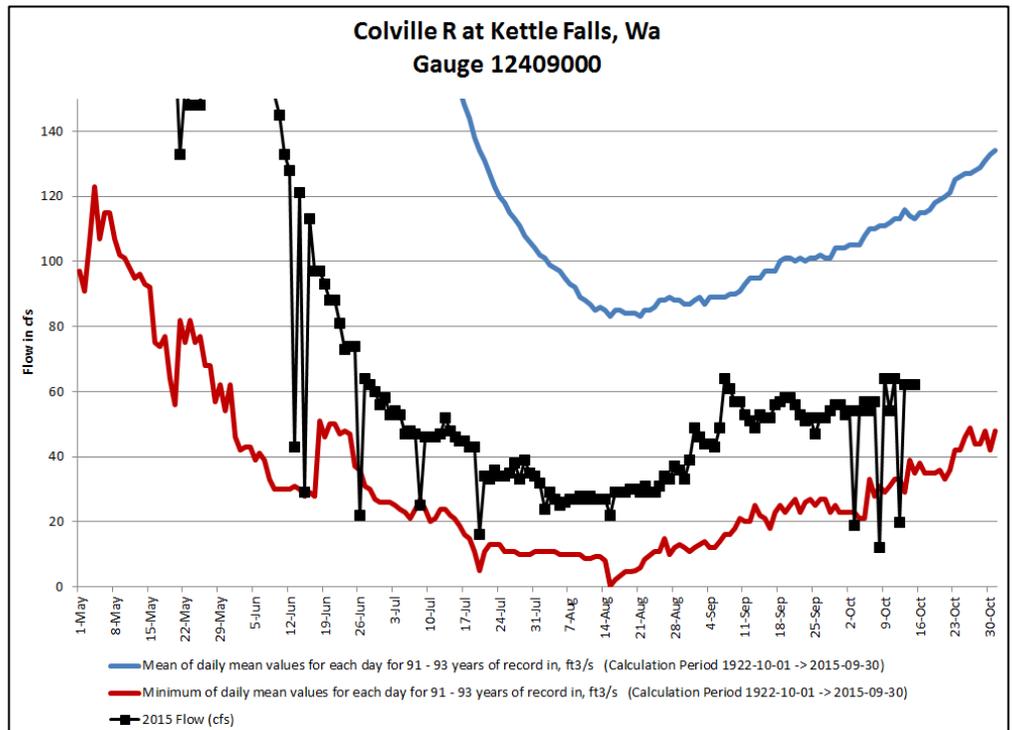
Okanogan

That lovely spike on 10/15 is hopefully a sign of improvement: 1,070 cfs!



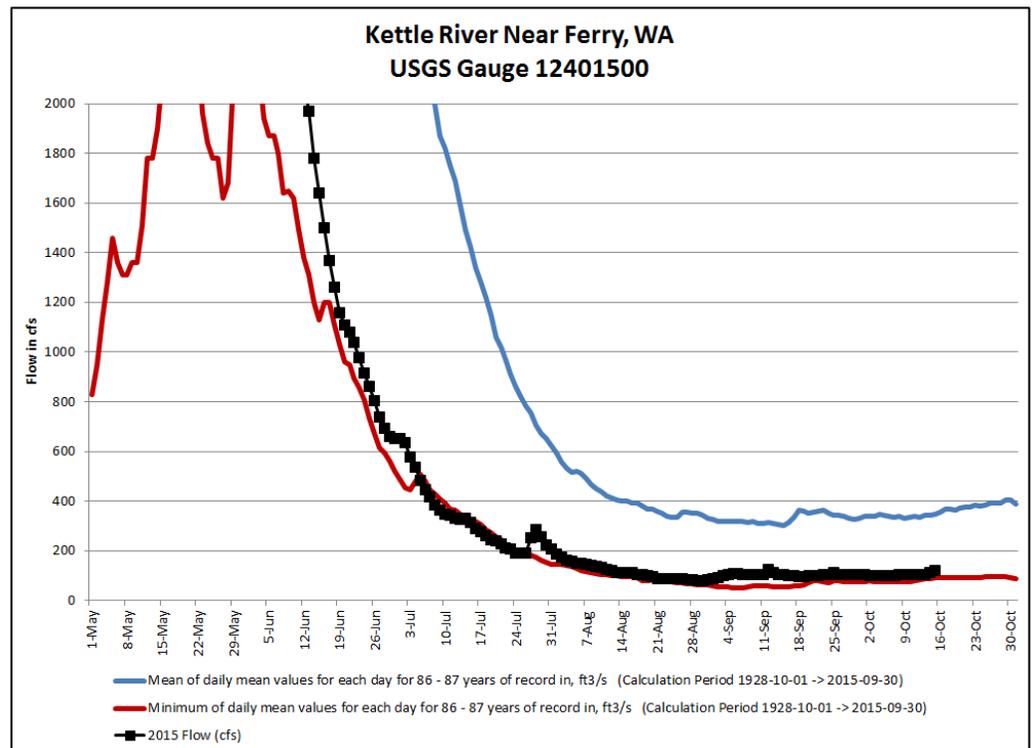
Colville

Those weird dips are back. Kevin Wright from the USGS Upper Columbia Field Office tells us this gauge is below the hydroelectric power-plant at Meyers Falls, and explains that these dips occur when the turbines turn off and on.



Kettle

October 15 flow is 121 cfs.



Drought-related impacts to fish at hatcheries

Mortalities are shown for drought-caused losses only. “% Production” represents the % lost of the total production of the identified species at that facility. **There have been no changes to this table since the last publication.**

REGION	FACILITY (SPECIES)	JUVENILE MORTALITY (% PRODUCTION)	TRANSFERS & RELEASES
3	Naches Hatchery	-0-	Two new wells have been drilled at this facility to replace the previous unreliable water supply.
4	Bellingham (Rainbow Trout)	5,760 (80%)	
4	Issaquah (Coho)	6,728 (1%)	
4	Soos Creek (Summer Steelhead)	41,308 (60%)	
4	Soos Creek (Coho)	172,963 (21%)	Transferred 480,000 coho to Keta Creek Complex (Muckleshoot). This is a normal activity that was executed early this year.
4	Icy Creek (chinook)	-0-	107,000, or 33%, of the population was released early into the Green River on 7/29.
5	Grays River (Steelhead)	150,300 (93%)	450k type S coho were transferred to Cowlitz Trout Hatchery on July 28th and 29 th due to low water supply at Grays.
5	North Toutle (Coho)	101,746 (76%)	On July 14, the remaining 33,600 Type S Toutle Stock Coho were transferred to Cowlitz Trout Hatchery. The move was prompted by the losses due to columnaris (left).
5	Lewis (chinook)	-0-	On Mon. Aug. 3rd 500k Spring were released (~38% of the Lewis Spring program); standard release in Oct.
5	Speelyai (kokanee)	-0-	Fall Kokanee program released early due to construction of new intake at facility.
5	Vancouver	-0-	Well level is dropping so plans are underway to plant 15K brown trout early .
5	Washougal (Coho)	37,000 (2%)	
6	Elwha	0 (0%)	Staff is working to develop a replacement well at this facility
6	Forks Creek (Steelhead)	14,489 (24%)	
6	Lake Aberdeen (Steelhead)	64,903 (22%)	
	Naselle (Chinook)		2,700 fall chinook adults have been lost on-station, and an additional 1,400 (minimum estimate) lost in the Naselle River within 4,000 feet downstream of the hatchery weir. The loss is due to Ich which is elevated due to low flow conditions; some loss was expect but not at this level.
6	Naselle (Steelhead)	64,989 (22%)	
6	Naselle (Coho)	639,646 (44%)	
6	Voights Creek (Coho)	347,000 (44%)	

News Clips

Today's [Cliff Mass Weather Blog](#) presents his post-drought scorecard for Washington's performance: Even with a D- in wildfires and C in air quality, the state pulls through our "climate stress test" with an overall passing grade of B-. Mass did not grade the impacts on salmon, which he deems as "economically unimportant."

[NOAA: El Nino Means More Drought For Eastern Washington](#)

Kuow - October 15, 2015

[Roza Irrigation District to pursue \\$60M pump system](#)

Yakima Herald 16 October 2015

[Baker River Sockeye Run Sets New Record](#)

Northwest Sportsman - October 15, 2015

[Port Townsend water fears ease with rains, but concerns for resource continue](#)

Peninsula Daily News 15 October 2015

[Why The Kalama Turned White](#)

Northwest Sportsman - October 14, 2015

[Thousands of fish rescued after being stranded by low flows on Deschutes River](#)

Daily Reporter - October 15, 2015

[The Kalama River is running white, and scientists don't know why](#)

The Daily News - October 13, 2015

[Scientists Try Radical Move To Save Bull Trout From A Warming Climate](#)

OPB - October 09, 2015

[Revised KID drought plan makes trees, gardens a priority](#)

Tri-City Herald 10 October 2015

[Dead or dying deer in the neighborhood? Here are your options](#)

Spokesman Review - October 09, 2015

[OUTDOORS: Warm water blob may be cause of smaller salmon](#)

Peninsula Daily News (AP) - October 08, 2015

[Warm weather, low water wreak havoc on salmon](#)

SnoValley Star - October 07, 2015

[Despite rain, Seattle utility wrestles with drought and fish](#)

King 5 - October 08, 2015

[Inslee asks for federal wildfire aid](#)

Seattle Times - October 08, 2015

[Amid drought, Rattlesnake Lake reveals its roots](#)

Seattle Times - October 07, 2015

[Cliff Mass Knows Climate Change Is Real, So Why Are Activists and Scientists So Mad at Him?](#)

Seattle Weekly - October 06, 2015

[Image of bluetongue-inflicted deer worth 1,000 words, but explanation still needed](#)

Spokesman Review - October 05, 2015

[Skagit streams included in six-state drought study](#)

Goskagit.com - October 03, 2015

Links

[WDFW's drought web page](#) is no longer being maintained

[WDFW's 2015 Drought Status Updates](#) web page

[Ecology's "Washington Drought 2015"](#)

Washington State Climatologist [weekly drought update for Washington State](#).

Drought web pages for State departments of [Health](#) and [Agriculture](#)

National Integrated Drought Information System [Pacific Northwest Drought Portal](#)

NOAA Climate.gov [ENSO Blog](#)

NOAA [El Nino Portal](#)

[NOAA's Climate Prediction Center](#) and [North American Multi-Model Ensemble](#)

[Northwest River Forecast Center Water Supply](#)

USGS [Real time stream data for Washington](#)

WRCC [Washington Climate Anomaly Maps and Tables](#)

Fire incidents maps from [Northwest Interagency Coordination Center](#)

NWS [Severe Weather Hazards](#) predictions

[Inciweb](#) reports active wildfires in the U.S.

U.S. Army Corps of Engineers [Seattle District Reservoir Control Center](#)

[Rich Landers Outdoors Blog](#) Spokesman Review – ongoing

[Concerns mount as drought deepens](#) Columbian Special Project July 11, 2015

[Washington Wildfire Resources](#)

Ecology Dam Safety web page [Wildfire Impacts on Dams](#)

Social media fire updates are available on #waWILDFIRE

[Get Everett water supply information.](#)

[Get Seattle water supply information.](#)

[Get Tacoma water supply information.](#)

[Saving Water Partnership](#)

For Further Information:

Drought-related staff resources are available on WDFW shared drive at [S:\All Agency\Shared Projects\DROUGHT 2015](#). Contact WDFW Drought Coordinator Teresa Scott at teresa.scott@dfw.wa.gov or (360) 902-2713 with questions, suggestions, and reports or observations.

The next WDFW status update will be distributed in **mid-November** to capture information through the end of October. Between mid-November, and February 2016, drought news will be distributed only as needed (i.e. major surprises). It's currently anticipated that regular drought status updates will resume in February 2016.

Please take a moment to complete a survey about the content of these status update documents. Your responses will help us shape this tool for the coming drought season.

Survey link: <https://www.surveymonkey.com/r/W9PGB6P>