



Washington  
Department of  
**FISH and  
WILDLIFE**

# Drought Status Update Addendum #21.5

## August 10, 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 Coordinator Teresa Scott at (360) 902-2713 [teresa.scott@dfw.wa.gov](mailto:teresa.scott@dfw.wa.gov)

This is an addendum to last Friday's WDFW Drought status update. It includes the news links along with assorted other tidbits that didn't make last week's deadline. It's also the first full test of our new distribution system.

### ***Drought Impacts to Fish and Wildlife***

#### **Dungeness Basin - Morse Creek**

On July 30, 2015, Clallam County PUD successfully began using three booster pumps from the Old Olympic Wells to serve the upper Fairview district, thus curtailing diversion from Morse Creek. The PUD can start using Morse Creek again when flows are above 25 cfs. The PUD downgraded their drought response from Stage 4 (outdoor watering ban) to a Stage 3 advisory (alternate day watering- No car washing). Mean flow for August 5<sup>th</sup> was 18.6 cfs and flows have been steady around this mark for several days. (Steve Boessow)

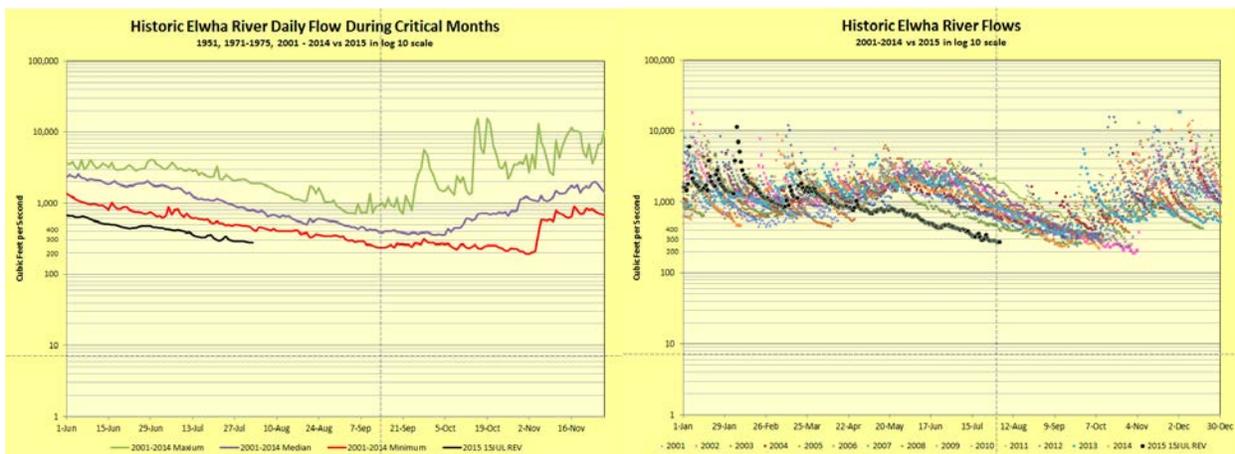
Below is a summary of a salmon survey conducted August 5 on Morse Creek from RM 1.1 (Highway 101 Bridge) to Frog Creek (RM 4.7). Total live pinks = 728; Total dead pinks = 5. There were no other adult salmon species observed. WDFW hatchery staff have caught a couple of Chinook in their trap by the Highway 101 Bridge. Following is a photo of Morse Creek at the footbridge at river mile 2.5. (Randy Cooper/Christopher O'Connell)



#### **Elwha Flows – Port Angeles Water**

The Port Angeles City Council (Council) Craig Fulton, Director of Public Works and Utilities for City of Port Angeles, provided these figures as part of a Elwha River Daily Discharge briefing to

the on August 4, 2015. The Council implemented a Stage 2 water shortage on June 16, 2015, which included voluntary water use restrictions. The Elwha River is flowing at less than 300 cubic feet per second (cfs), where normally the flow averages 1000 cfs at this time of year (below left and right). Flows of 300 cfs are not normally reached until the mid-September timeframe. The low flows are expected to continue to decline, with no significant precipitation in the forecast. On August 4, 2015, the City Council voted to approve a Stage 3 water shortage and to authorize the Public Works and Utilities Department to implement the limited outdoor restrictions on the use of water as detailed in the city's [Water Shortage Response Plan](#). The City's potable water source is groundwater under the direct influence of the Elwha River. The water is pumped to the City from a Ranney Collector Well located next to the river. There are currently indicators of increased stress in juvenile salmonids in estuary ponds adjacent to the river mouth. Temperatures in those ponds have been as high as 24 C, which is about 5 C higher than is normally seen in these areas, even in late August. Temperatures in the mainstream are elevated as well for this time of year, but not to the same extent as the estuary ponds. (Thanks, Craig!)



## George Adams Hatchery

Jorge Villarreal provided this photo of the first roll of shade cloth installed at the fall Chinook adult pond at George Adams. Installation is tedious, but results are good. More cloth will be installed when time is available.



## Yakima - Addendum

Following are photos taken August 3 at Box Canyon Creek, tributary to Lake Kachess on Snoqualmie Pass. The photos show the stream still passable for adult bull trout, but it's getting pretty skinny near the reservoir bed. Two more photos show the nature of the stream just

upstream from the reservoir. The last photo is taken looking upstream from the campground. The Bull Trout Task Force deployed a temperature logger in the stream.

This is one location where intervention was installed in 2001 and 2005 to create a temporary channel with straw bales and plastic sheeting to allow adult bull trout migration upstream from the reservoir.



Our thanks to Bull Trout Task Force lead Cassandra Anderson!

## **Methow River**

WDFW announced August 4th a change to “hoot owl” fishing restrictions on the Methow River (Okanogan County). Afternoon water temperatures in the Methow are approaching the upper limit for survival of trout. The Methow River receives significant fishing pressure during the summer. Trout hooked and handled are subject to stress, injury, or death as a result of low instream flow conditions and elevated water temperatures. Fishing is closed from 2pm through midnight in that portion of the Methow from County Road 1535 Bridge (lower Burma Road) upstream to Weeman Bridge (8 miles upstream of Winthrop).

## **Columbia River Sockeye**

Correspondent Dan Rawding shares the following re-direct about the story on sockeye in the Columbia River that ran in edition 19 on July 17, 2015. Specifically, the following is a more accurate reflection of the science in local adaptation and species tolerances.

Low flows and high temperatures may hinder adult salmon from reaching upstream spawning grounds. Temperatures above 20 to 21 degrees C are generally considered to be a migratory barrier. While temperatures between 20 and 23 degrees C generally can cause thermal stress to many salmonids and increase disease outbreaks and infection, temperatures above 23 degrees C can cause substantial health impacts or mortality to many salmonids. However, the temperatures that cause migration delay, stress, and disease/infection are modulated by local adaptation and species specific tolerances. Therefore, at the northern end of the species' range, thermal tolerance is likely to be lower than at the southern end of the range. For example, pink salmon in Alaska have shown increased mortality when conditions above 17 degrees C are combined with lower-than-typical dissolved oxygen. In contrast, high counts of Columbia River salmon and steelhead at Bonneville Dam have been observed at mean daily temperatures up to 22+ degrees C.

While negative response to thermal stress may occur based on short or daily exposure to a near-lethal temperature, it also occurs when salmon are exposed to warm but sub-lethal temperatures over extended periods of time (e.g. cumulative effects of long-term expose). This highlights the importance of thermal refugia (i.e. cool water) where adult salmon can hold to cool down their body temperature before continuing their migration. In addition, low flows decrease available wetted habitat for spawning and rearing, may limit food availability, and make fish more susceptible to predation.

USGS produced this [video of adult sockeye taken at Drano Lake](#) on July 15-16.

## ***Water Rights Curtailment***

Ecology Water Resources shared the following summary information with WDFW Drought Central last week:

**Table 1 Regulation of Junior/Interruptible Water Rights and other enforcement actions from April 1 through July 31, 2015 (8/5/15 Mike Dexel)**

WRIA	Stream	#Water Rights receiving curtailment warning letters		#Water rights Actively Curtailed (includes any of following: 1. contacted WR holder to shut off 2. physically shutting off diversion 3. Ordered to call hotline) 4. Cease & Desist Order	
1	Nooksack			9	6/30/2015
3	Skagit	3	6/1/2015		
7	Snohomish R basin				
23/22	Upper/Lower Chehalis R basin	93	7/21/2015	93	7/30/2015
32	Yellow Hawk Cr			14	June
32	Walla Walla R basin			17	June
32	Touchet R basin			67	7/9/2015
35	Tucannon R/Asotin Cr			15	7/7/2015
38	Cowiche			74	7/22/2015
38	Wenas Cr				

39	Post 1905 rights			18	7/20/2015
39	Teanaway			55	7/21/2015
43	Cow Creek	20	4/21/2015	20	5/26/2015
45	Wenatchee	91	4/23/2015	91	6/23/2015
48	Methow	70	3/30/2015	70	4/29/2015
49	Okanogan/Similkameen river	101	5/13/2015	101	6/16/2015
55	Little Spokane basin	140	5/20/2015	140	6/29/2015
57	Chamokane Cr			7	6/24/2015
59	Colville R basin	58	6/17/2015		
62	Harvey Cr			14 C&D	
Totals		576		791	

## WDFW Headquarters Drought Response Activity

Here's a reminder about some WDFW drought response activities this week:

**Report your observations** – Contact [Katrina Simmons](#) with your drought observations! We have noted a dearth of observations on the sharepoint table and are trying another approach. The absolute easiest way to report drought issues is to **snap a photo** with your cell phone or tablet and [email your photo to Katrina](#) along with some clues about the **location**. If your device is set up to geotag photos, then that's all we need. Turn on your device's "location services" to geotag your photos - Here are a few links to instructions for doing this.

<http://www.cultofmac.com/266849/see-took-photos-iphone-ios-tips/>

<http://www.imore.com/how-to-turn-off-photo-geotagging-protect-privacy-iphone-ipad>

For Android, look in "settings." If you haven't a clue what any of this means, but think it might be important to you, contact [Jake Shapley](#).

**Rescue stranded fish** – **Report ALL fish handled on WDFW's sharepoint spreadsheet!** Go to the WDFW intranet, click on "New 2013 SharePoint site", choose "Fish" (across the top), drop down to "Fish Management" and click (don't choose from the subsequent drop-down), choose "documents" (2<sup>nd</sup> down, left side), and the spreadsheet is entitled "**SalvageRescueReport.template**". When you click on the template, it will open and prompt you (in yellow bar) to click on the "edit" button to enter your data. It will prompt you to "save" when you close it out. Don't forget to include your name so Val Tribble can contact you with any questions or clarifications needed. Remember, we are recording **all species** encountered or handled, not just ESA fish. For more information, contact [Val Tribble](#).

**Get new/replacement nets and buckets:** contact [Angella Ward](#).

**Remove Rock Dams** – Right now, reports of rock dams that make their way to Drought Central are dispatched to the local enforcement officers and/or the District Fish Biologist and/or the Habitat Biologist. In the near future, the plan is to engage RFEs, conservation districts, and other local partners in organizing and removing rock dams. Skilled labor will be provided by WCC crews assigned either to WDFW/tribal staff or to the local response group. Every crew conducting this work must carry a copy of the WDFW Drought HPA # 1004 to show concerned citizens and enforcement officers. Landowner permission must be obtained prior to the

scheduled work day. Copies of the permit, landowner permission form, and other supporting information are available on the shared drive.

**Ecology Drought Relief Funds:** Drought funding is coming to WDFW through Ecology, and spending has already begun. Any questions staff has about WDFW's drought funding can be directed to [Drought Coordinator Scott](#). Ecology has also asked WDFW to work with tribal comanagers to fund drought projects.

## ***News Clips***

Clips shared by Ecology:

**Die-Off Sparks Questions About Sturgeon Survival In A Changing Climate | Northwest Public Radio** <http://nwpr.org/post/die-sparks-questions-about-sturgeon-survival-changing-climate>

**Immediate water restrictions proposed to Port Townsend City Council could take effect Tuesday** <http://www.peninsuladailynews.com/article/20150803/NEWS/308039985>

**Fairview Water District users can water lawns, gardens, crops again [corrected]** <http://www.peninsuladailynews.com/article/20150804/NEWS/308049997>

**Oregonian on hot water killing CR sockeye** <https://twitter.com/Sightline/status/626068361990963201>

**Drought drying up some private wells in Yakima Basin** [http://www.yakimaherald.com/news/local/drought-drying-up-some-private-wells-in-yakima-basin/article\\_db2b4a2c-39a8-11e5-ac28-57012e802ac7.html](http://www.yakimaherald.com/news/local/drought-drying-up-some-private-wells-in-yakima-basin/article_db2b4a2c-39a8-11e5-ac28-57012e802ac7.html)

**The Daily News – Lower Columbia River – reprint of YHR editorial - Don't count on drought going away this year** [http://tdn.com/news/opinion/don-t-count-on-drought-going-away-this-year/article\\_957d84a0-88eb-5a27-9c7a-b8161da9445a.html](http://tdn.com/news/opinion/don-t-count-on-drought-going-away-this-year/article_957d84a0-88eb-5a27-9c7a-b8161da9445a.html)

**Tight Water Year Forces Water Shut Off For Kittitas County by Associated Press August 5, 2015 5:47 AM** <http://newstalkkit.com/water-tight-year-forces-water-shut-off-for-kittitas-county/?trackback=tsmclip>

## ***More News Clips***

[Heat causes massive fish die-off at Whatcom Falls hatchery](#)

Bellingham Herald - August 07, 2015

[Word spreads that moose look cool in kiddie pool](#)

Spokesman-Review - August 07, 2015

[Biologists fear repeat of 2002 Klamath salmon kill](#)

The Register-Guard - August 06, 2015

[Climate change already rearing its ugly head in Northwest](#)

MyNorthwest.com - August 06, 2015

[Marine toxin closes half of the coast to crabbing](#)

Kitsap Sun - August 06, 2015

[UPDATED — Gibbs Lake south of Port Townsend closed; joins Anderson Lake off-limits because of toxin](#)

Peninsula Daily News (AP) - August 06, 2015

[Drought, wildfires could impact access to favored hunting lands](#)

The Olympian - August 06, 2015

[Why Are Pink Salmon Bucking The Trend In Puget Sound?](#)

Kuow - August 05, 2015

[Wildfire fights roar through Forest Service budget](#) Spokesman Review - August 06, 2015

[Kalama steelhead will no longer be recycled](#)

The Daily News - August 05, 2015

[Conservationists ask Spokane-area water users to conserve, protect river](#)

The Spokesman-Review - August 06, 2015

[Pink salmon run enjoys solid opening](#)

HeraldNet.com - August 06, 2015

[Anglers object to plans to limit fall Chinook fishing on the Kalama River](#)

The Daily News - August 05, 2015

[Jellyfish boom prompts research by plane and boat](#)

King5.com - August 05, 2015

[Toxic algae blooming in warm water from California to Alaska](#)

The Seattle Times - August 05, 2015

[Sockeye troubles highlight need for unified watershed management](#)

Chinook Observer - August 04, 2015

[Fishery managers double size of crab fishery closure](#)

Chinook Observer - August 04, 2015

[The cost of fighting wildfires is sapping Forest Service budget](#)

Seattle Times - August 05, 2015

[Drought, water quality on many minds](#)

North County Outlook - August 04, 2015

[Drought could hurt endangered fish caught in water fight](#)

MyNorthwest.com - August 03, 2015

[A Last Ditch Effort To Save Snake River Sockeye](#)

Kuow - August 03, 2015

[Holy Humpies! Everett Catch Weeks Ahead Of 2013](#)

Northwest Sportsman - August 03, 2015

[The 2015 fire season hasn't broken any all-time records — yet](#)

High Country News - August 03, 2015

[Dead salmon, climate change and Northwest dams](#) Seattle Times - August 03, 2015

[Drought drying up some private wells in Yakima Basin](#)

Yakima Herald - August 03, 2015

[Scientists worry about 'the blob' as it takes over more of the Pacific](#)

BendBulletin.com (AP) - August 03, 2015

[Hatchery crews working overtime to save as many fish as possible due to extreme drought-like conditions](#)

The Seattle Times - August 02, 2015

[Don't count on drought going away this year](#)

Yakima Herald Republic - August 01, 2015

High Country News - August 03, 2015

[Hot, dry weather continues and fire risk rises](#)

The Olympian - July 31, 2015

## ***Links***

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

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

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 [El Nino Portal](#)

[NOAA's Climate Prediction Center](#)

[Northwest River Forecast Center Water Supply](#)

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

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

## ***For Further Information:***

Drought-related staff resources are available on the shared drive (S:\All Agency\Shared Projects\DROUGHT 2015) and WDFW SharePoint under Habitat Program, Drought 2015.

Contact WDFW Drought Coordinator Teresa Scott at [teresa.scott@dfw.wa.gov](mailto:teresa.scott@dfw.wa.gov) or (360) 902-2713 with questions and suggestions.