

# Washington State Drought Update

Pacific Northwest DEWS October Drought & Climate Outlook

October 6, 2016



Jeff Marti

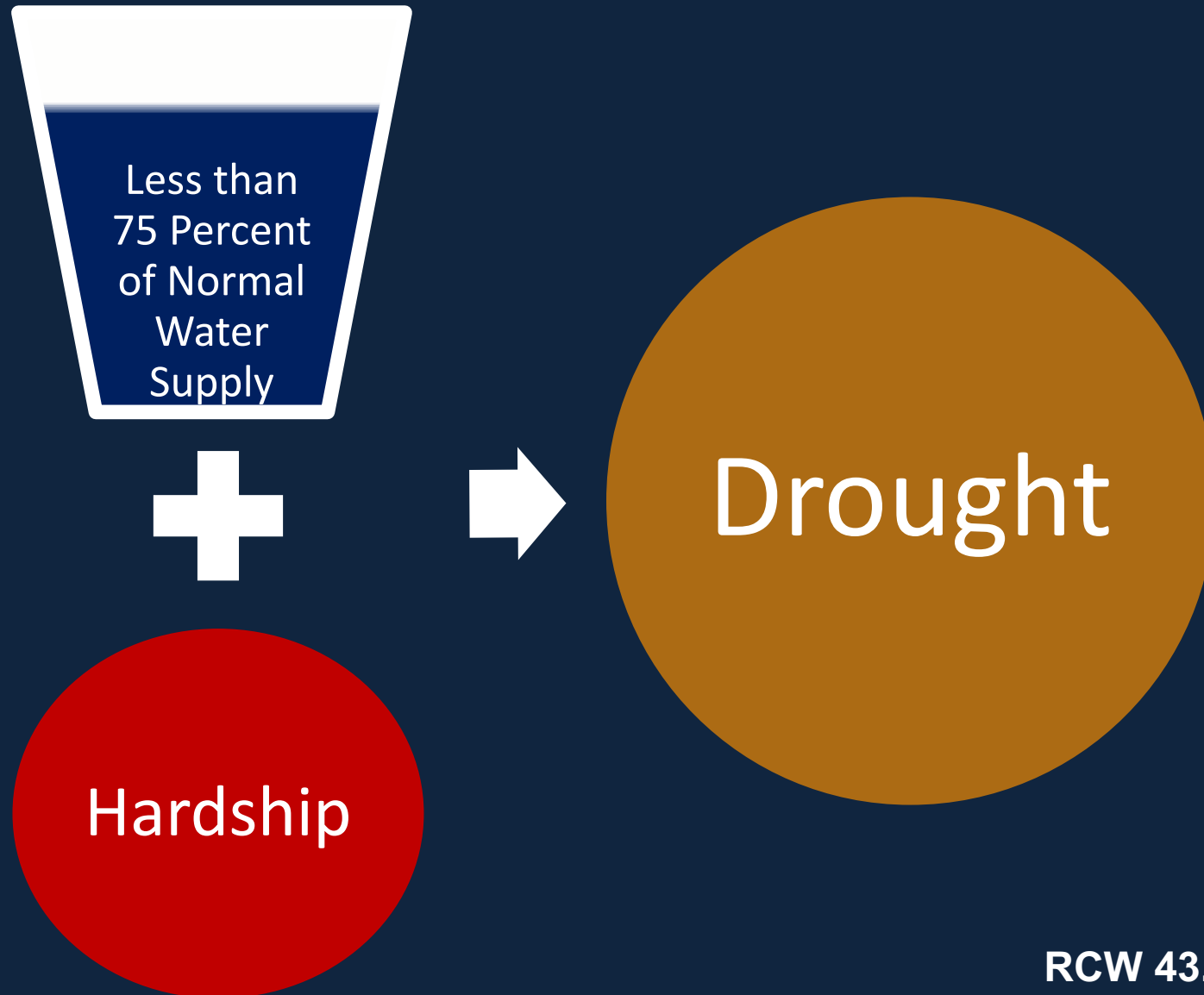
Water Resources Program

Washington Department of Ecology

[jeff.marti@ecy.wa.gov](mailto:jeff.marti@ecy.wa.gov)



# Washington State's Drought Trigger



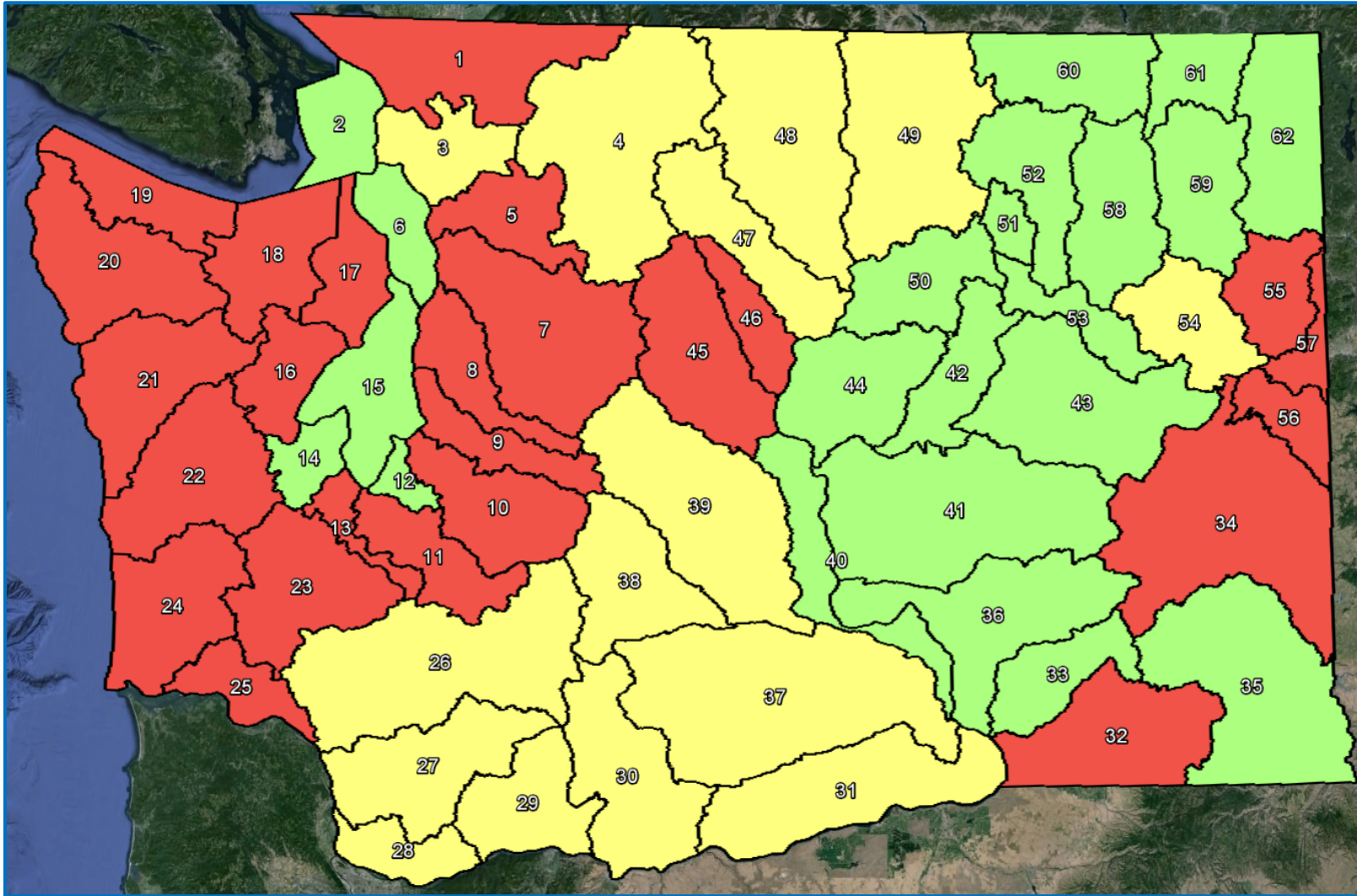
RCW 43.83B.400

# Recommendations from June 2, 2016 WSAC where watersheds are likely to be below 75 percent of normal supply by WRIA

(Next step: 06/09/2016 EWEC will evaluate hardship in watersheds below 75% of normal water supply and may recommend drought declaration for some basins.)



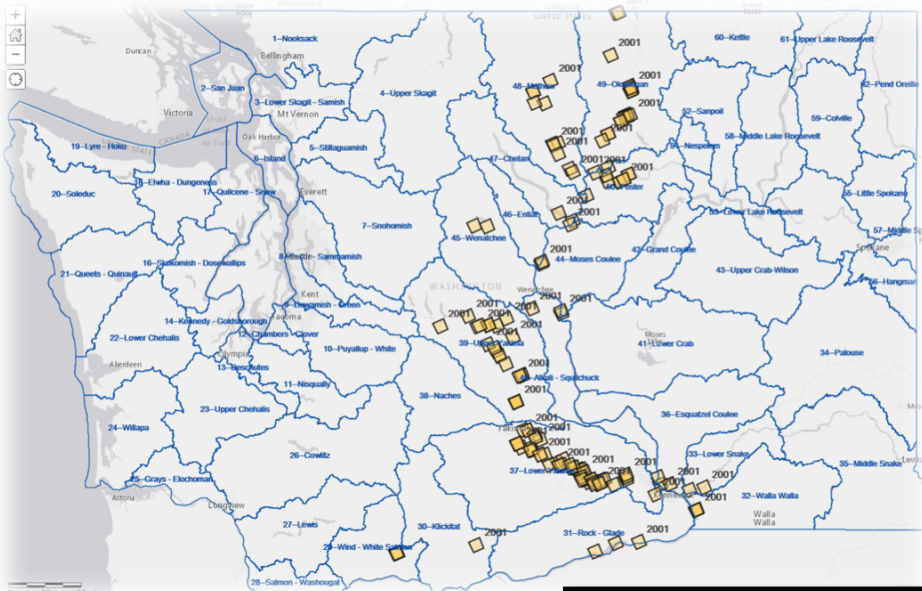
WRIA	WRIA Name	WSAC 06/02/16
1	Nooksack	Below
2	San Juan	Above
3	Lower Skagit-Samish	Watch
4	Upper Skagit	Watch
5	Stillaguamish	Below
6	Island	Above
7	Snohomish	Below
8	Cedar-Sammamish	Below
9	Duwamish-Green	Below
10	Puyallup-White	Below
11	Nisqually	Below
12	Chambers-Clover	Above
13	Deschutes	Below
14	Kennedy-Goldsborough	Above
15	Kitsap	Above
16	Skokomish-Dosewallips	Below
17	Quilcene-Snow	Below
18	Elwha-Dungeness	Below
19	Lyre-Hoko	Below
20	Sol Duc-Hoh	Below
21	Queets-Quinault	Below
22	Lower Chehalis	Below
23	Upper Chehalis	Below
24	Willapa	Below
25	Grays-Elokoman	Above
26	Cowlitz	Watch
27	Lewis	Watch
28	Salmon-Washougal	Watch
29	Wind-White Salmon	Watch
30	Klickitat	Watch
31	Rock-Glade	Watch



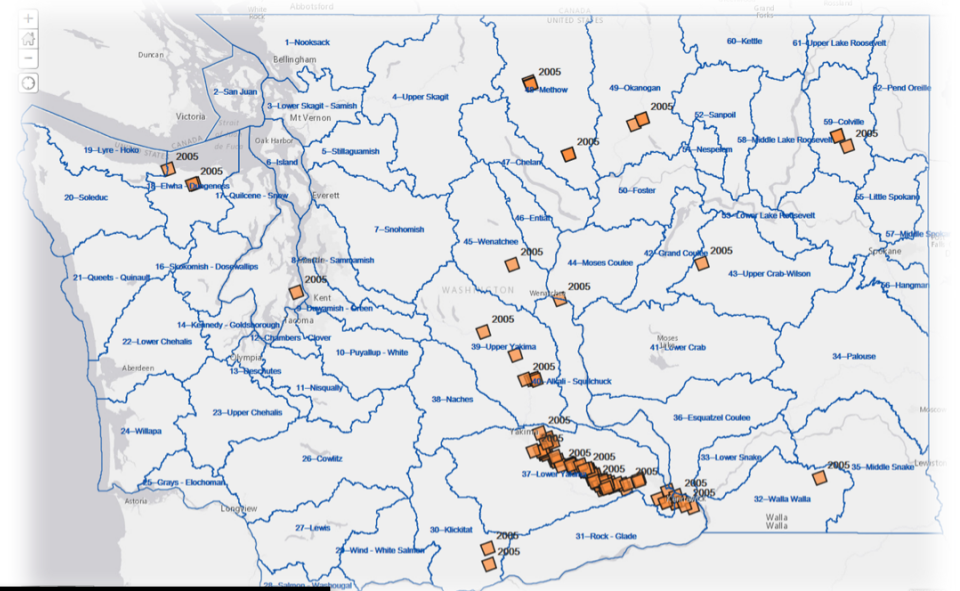
WRIA	WRIA Name	WSAC 06/02/16
32	Walla Walla	Below
33	Lower Snake	Above
34	Palouse	Below
35	Middle Snake	Above
36	Esquatzel Coulee	Above
37	Lower Yakima	Watch
38	Naches	Watch
39	Upper Yakima	Watch
40	Alkali-Squilchuck	Above
41	Lower Crab	Above
42	Grand Coulee	Above
43	Upper Crab-Wilson	Above
44	Moses Coulee	Above
45	Wenatchee	Below
46	Entiat	Below
47	Chelan	Watch
48	Methow	Watch
49	Okanogan	Watch
50	Foster	Above
51	Nespelem	Above
52	Sanpoil	Above
53	Lower Lake Roosevelt	Above
54	Lower Spokane	Watch
55	Little Spokane	Below
56	Hangman	Below
57	Middle Spokane	Below
58	Middle Lake Roosevelt	Above
59	Colville	Above
60	Kettle	Above
61	Upper Lake Roosevelt	Above
62	Pend Oreille	Above

31 WRIA Number    Below 75% (25)    Watch (15)    Above 75% (22)

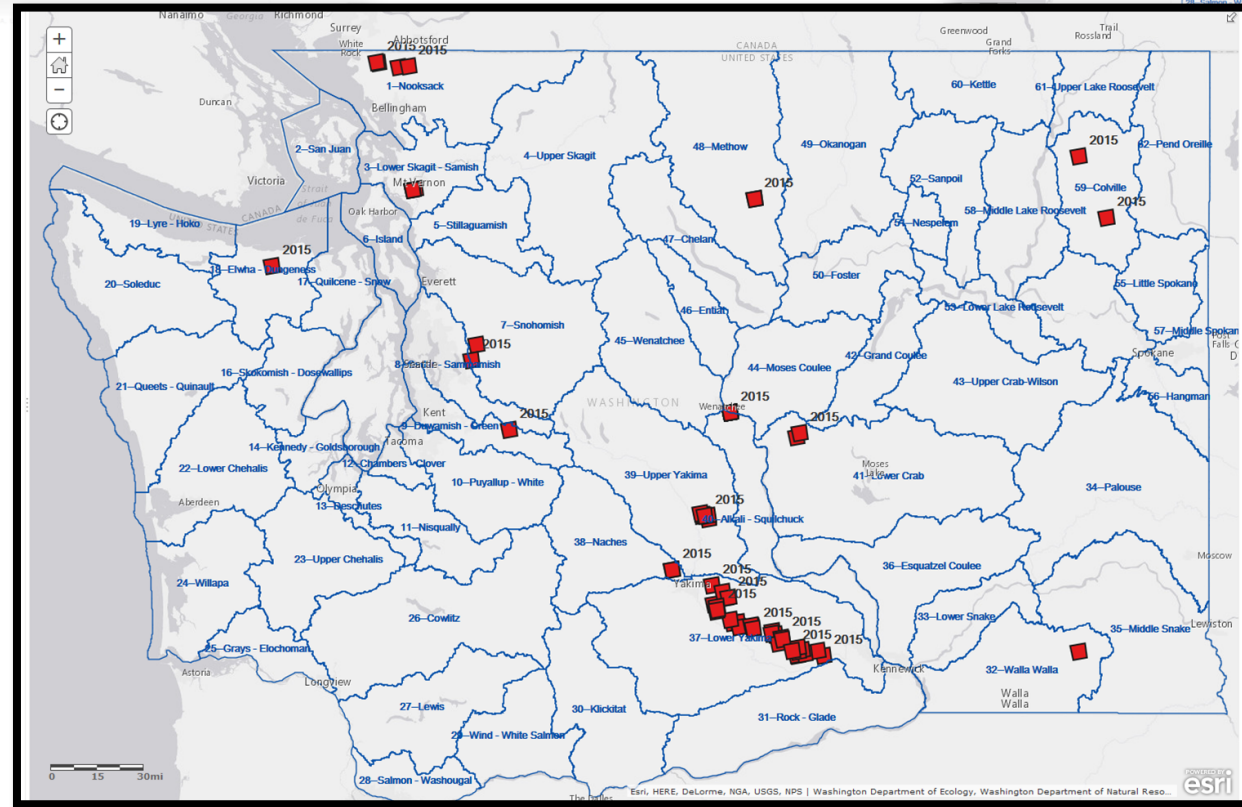
Cities in WRIAs below 75% include: Bellingham, Everett, Seattle, Tacoma, Olympia, Sequim, Port Townsend, Wenatchee, Walla Walla, Spokane



← 2001



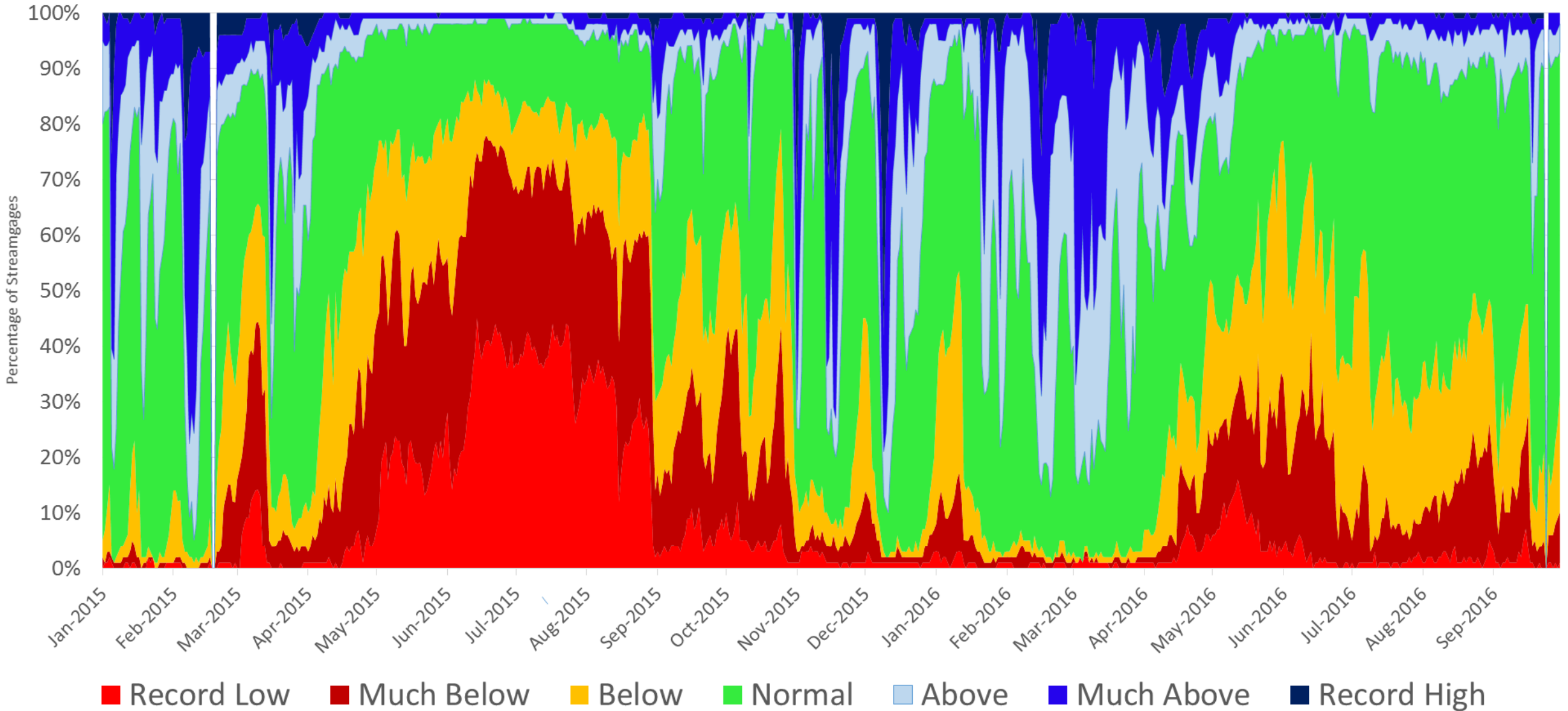
2005 →

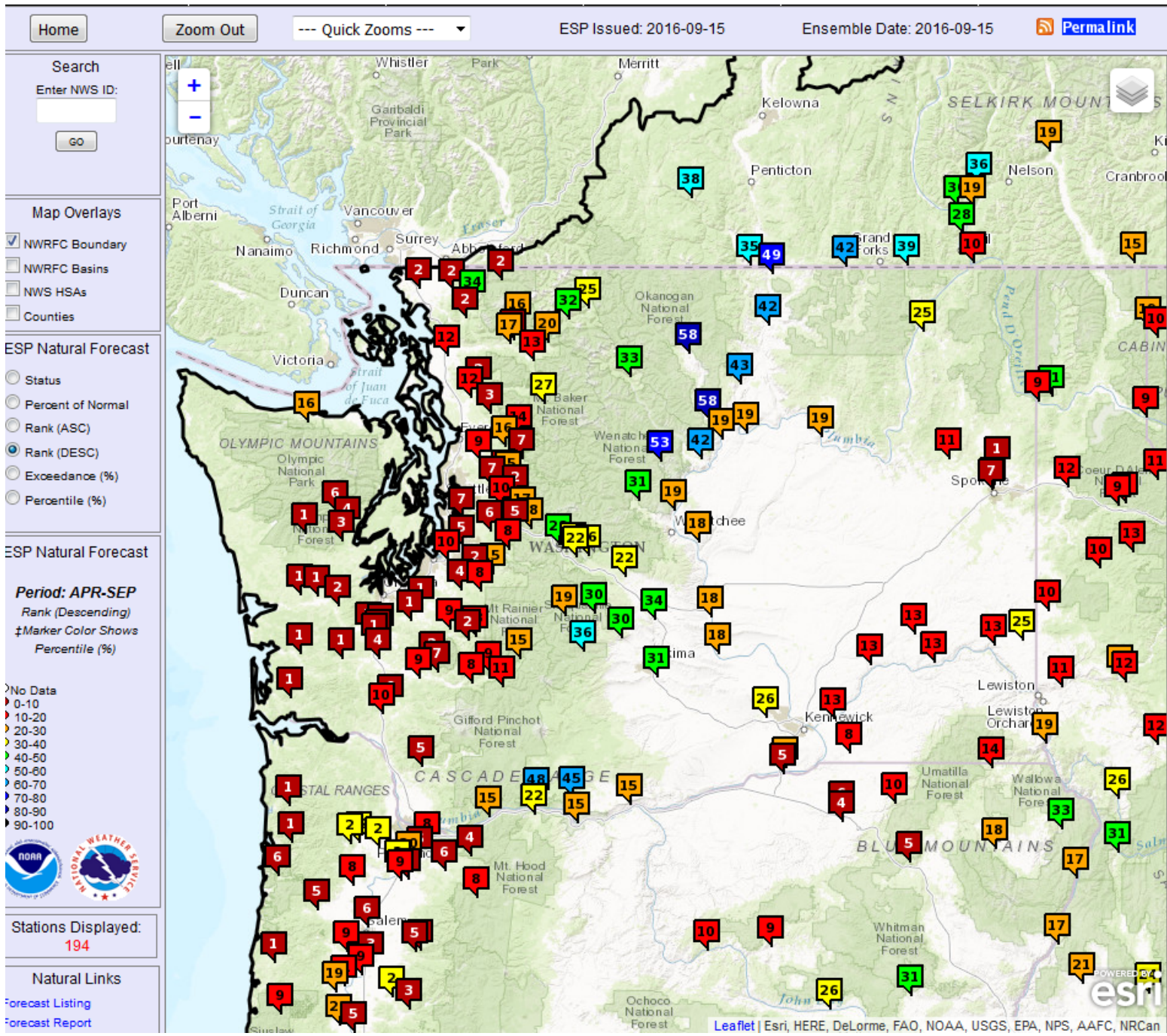


2015 →

Location of Emergency Drought Authorization Permits in 2001, 2005 and 2015

USGS WaterWatch -- Washington Rivers  
Time Series Plot Real Time Streamflow Compared to Historical Streamflow for the Same Day of Year  
(Jan 2015 - Sept 2016)





WY 2016 APR-SEPT Volume Runoff, expressed as rank for the past 68 years (e.g., 1 = Driest, 2= Second Driest, 68 is Wettest)

Source: Northwest River Forecast Center  
 (<http://www.nwrfc.noaa.gov/natural/index.html?version=20151001v2>)

# Water Supply Impacts

- NASS Crop Progress Reports indicate **a good year for agriculture**
- **Crops progressed earlier than normal:** strawberries at farmers' markets in late May, raspberries a month early north of Seattle, earliest cranberry bloom in recent history in Pacific County on the coast
- **Yakima Basin** had 100 percent supply for senior water right holders, **94 percent for pro-ratable irrigation districts**
- Low streamflows in some watersheds meant that **the State curtailed about 600 water right holders in order to protect senior water rights**
- **More moderate temperatures made a huge difference** this year for fish and also kept down water demand
- No systematic tracking of water systems invoking **voluntary or mandatory water use limitations**, but the media reported at least several cities doing so



# Drought Planning

- Update of Washington State Drought Contingency Plan
  - Consideration of multiple drought stages and triggers (e.g., normal, advisory, emergency)
  - Pre-staging of response actions
  - Improved forecasting (Office of Washington State Climatologist subgroup)
- Final Report on 2015 Drought Impacts to Agriculture due in December
- Water Supply Availability Committee will convene on December

