



WDFW Drought Impacts, Response, and Resiliency

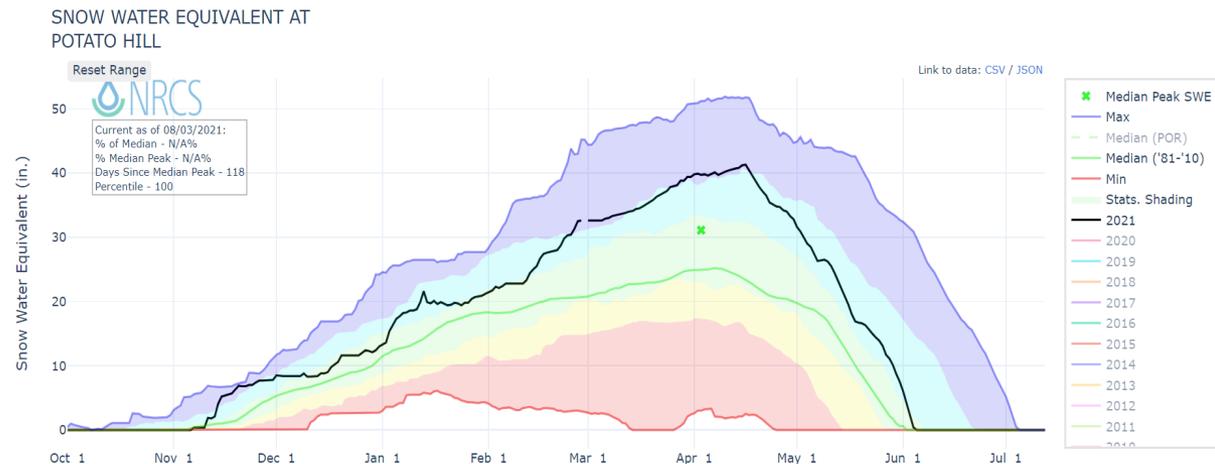
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Washington
Department of
**FISH and
WILDLIFE**

WDFW 2021 Drought Conditions

- Generally healthy snowpack
- Extremely low spring precipitation
- Extremely warm temperatures



WDFW 2021 Drought Impacts

- EHD in white-tail deer populations
- Increased disease in WDFW hatcheries
- Lack of precipitation impacting WDFW Ag leases and restoration work
- Extreme wildfire risk on WDFW wildlife areas



Drought Impacts to Salmonids

- High water temperatures cause stress and allows disease and infestations to flourish.
- Low streamflow volumes reduce habitat availability and can result in fish passage barriers.

LET 'EM PASS! Rock Dams Block Fish



**Rock dams like these block fish and are illegal.
Fish can't move upstream to find cool water, spawn, and feed.**

We need your help to maintain good fish habitat! Please be a responsible recreationist and do not leave dams or other structures in the stream.

Report dams to Washington Department of Fish and Wildlife at 1-877-933-9847 or email: WILDCOMM@dfw.wa.gov

Please provide:

- Location of obstruction (lat-long or GPS coordinates are best)
- Description of obstruction (send photo if possible)
- Date/Time
- Name and contact information (optional)



Report a Rock Dam



Drought Impact: Fish Die-offs

Thinking about sockeye mortalities: Okanogan 2015 vs. 2021

Wells Tailrace Temps 2015

Adult Passage Exposure Results

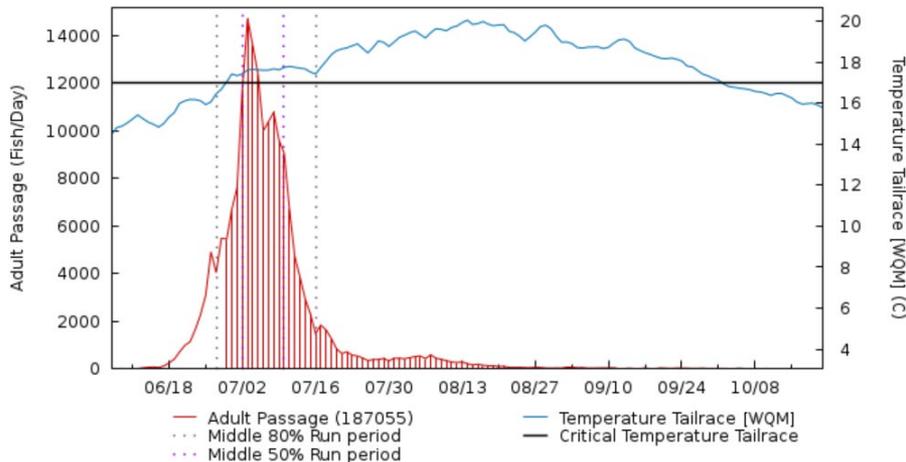
Performance Measures 2015 Wells (1/1-12/31)

Adult Sockeye

Temperature Tailrace

86.5% fish analyzed exposed above 17 C

93.8% exposed during Middle 80%, 100% exposed during Middle 50%



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Wells Tailrace Temps 2021

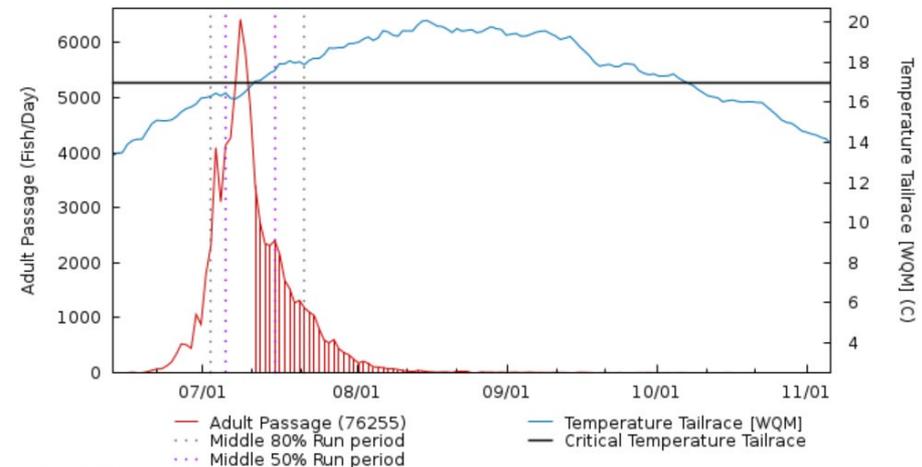
Performance Measures 2021 Wells (1/1-12/31)

Adult Sockeye

Temperature Tailrace

39.2% fish analyzed exposed above 17 C

35.6% exposed during Middle 80%, 30% exposed during Middle 50%



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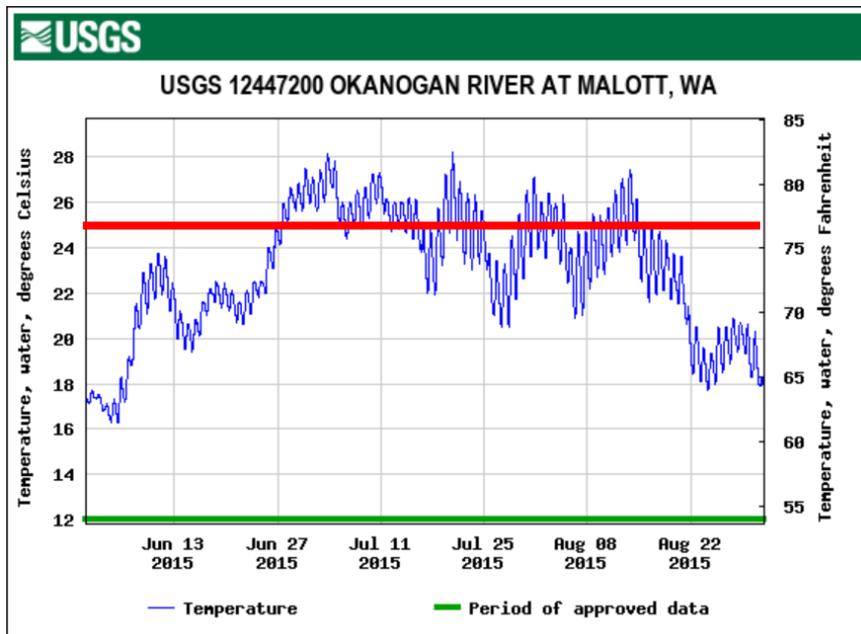
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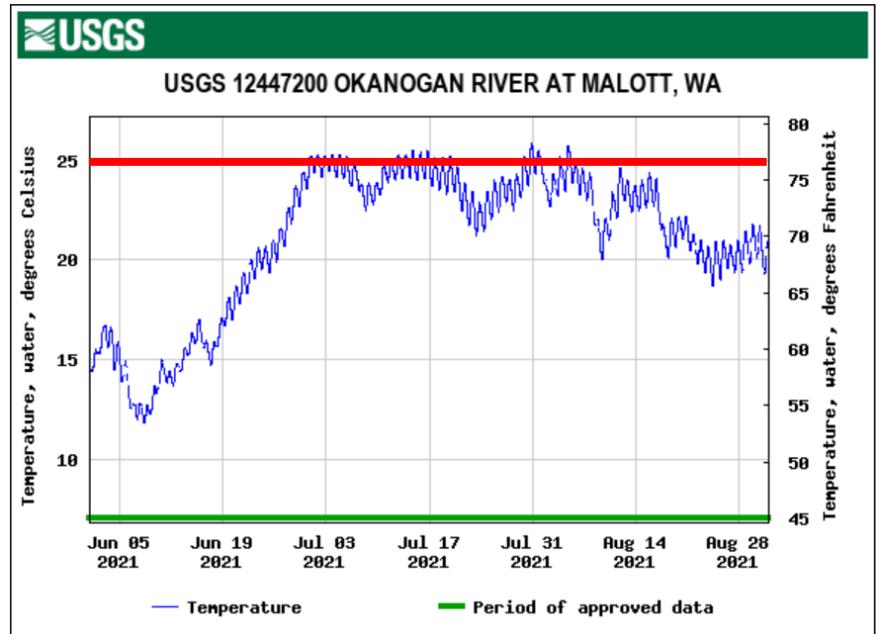
Drought Impact: Fish Die-offs

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Okanogan River Temps 2015



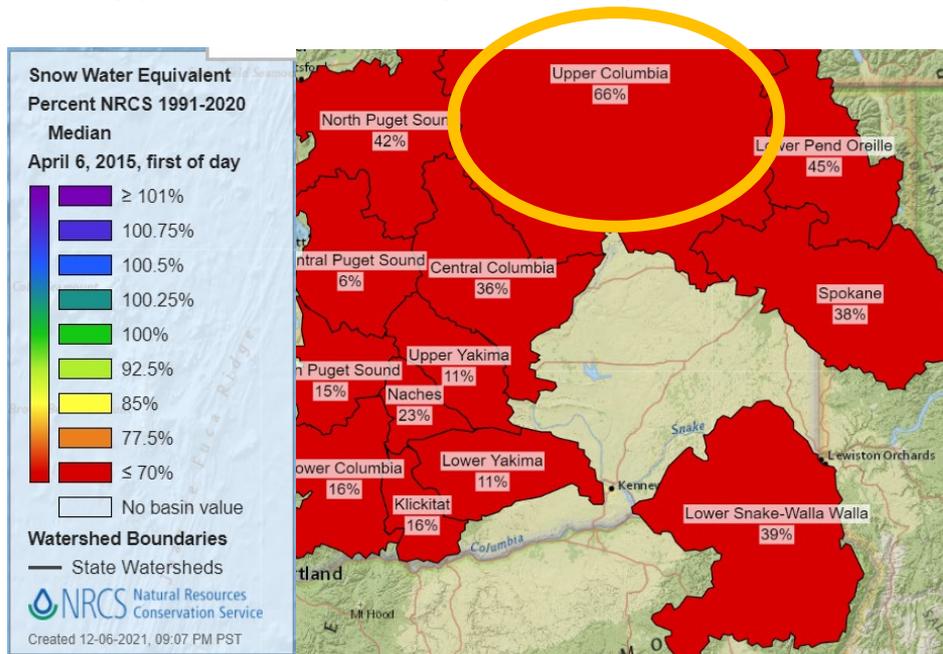
Okanogan River Temps 2021



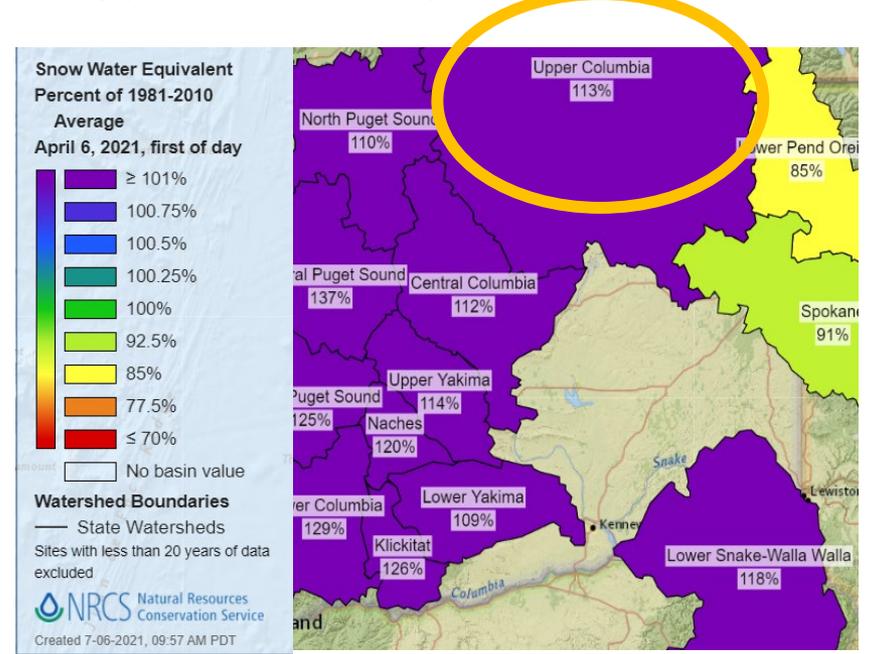
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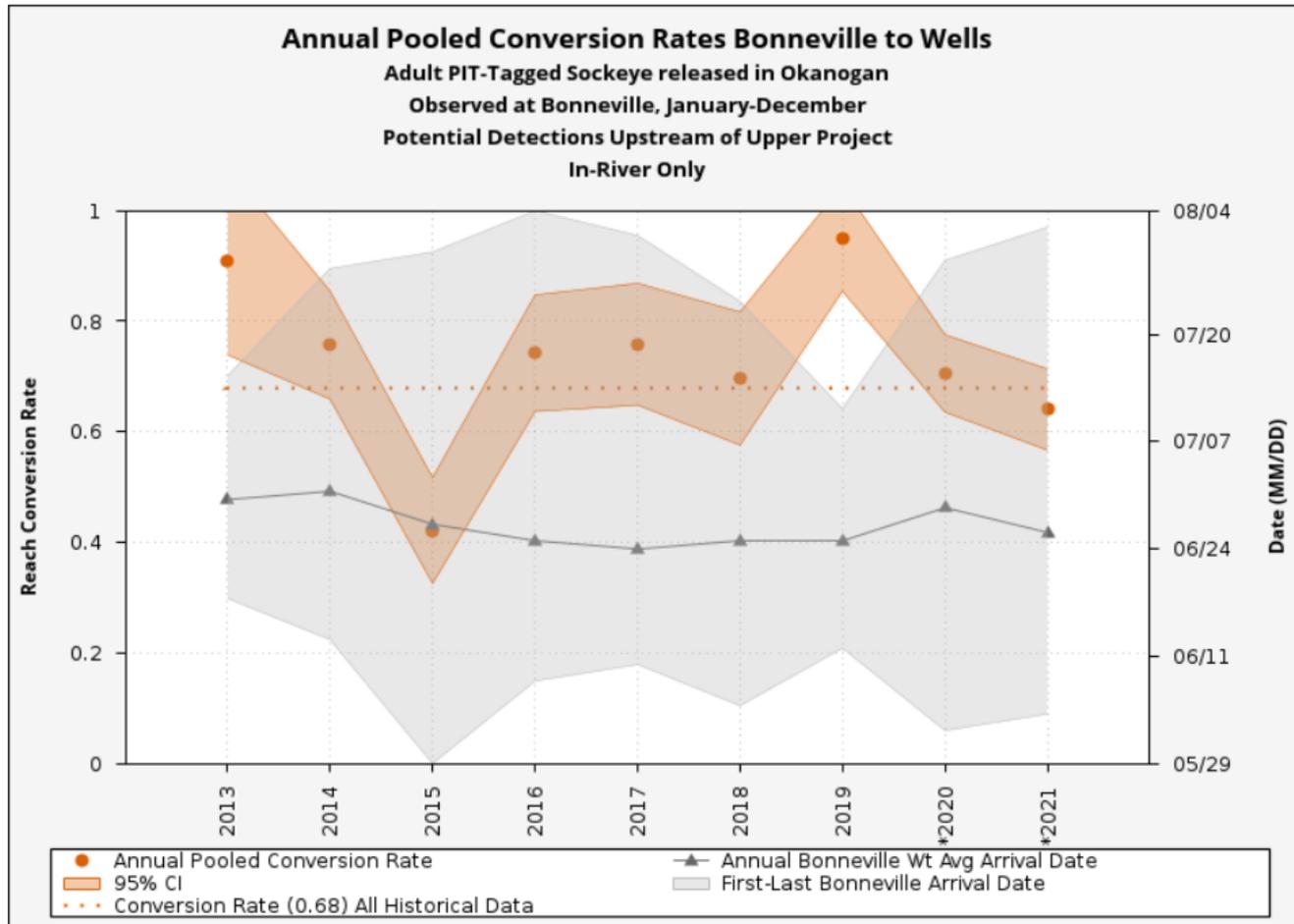
Upper Columbia April Snowpack 2015



Upper Columbia April Snowpack 2021



Drought Impact: Conversion Rates



Drought Resiliency

Work can be done every year to increase ecosystem resiliency to drought:

- Prescription burns
- Habitat restoration projects
- Integrated water resource planning



Final Thoughts

- 2021 was a wake-up call
- Additional planning is needed to identify emergency actions
- Funding is needed to support planning and resiliency efforts



Questions?