

USGS: NW Region

Examples of Drought Related Activities and Contacts

Regional Low Streamflow Assessment (Chris Konrad: cpkonrad@usgs.gov)

- Currently analyzing 500+ regulated/unregulated sites; WY-2015; 6 states
- Assess drought severity/extent at near normal rain/below normal snow sites
- Evaluate if WY-15 can serve as a model for climate change impacts

Vulnerability Assessment for Bull Trout (Jason Dunham: jdunham@usgs.gov)

- Bull trout physiology and behavior can be shaped by climate
- 5 states, >20,000 stream miles, suitable habitat, climate related threats
- Adopted in USFWS recovery plan & setting State conservation priorities

Habitat Resiliency Willamette River (Norm Buccola: nbuccola@usgs.gov)

- Main stem temperature response to climate-like flows in WY-15
- Factors defining resiliency in alcoves/side channel
- Where to plan for potential CWR habitat in future



Willamette Ri. side channel, near Santiam R.

U.S. Geological Survey

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Climate: Geomorphic Controls & Aquatic Ecosystems (Rose Wallick: rosewall@usgs.gov)

- Assess riparian/aquatic habitat responses to different stream flow regimes, geomorphic processes, & human activities --a framework for evaluating climate/drought impacts.
- Example; Willamette River --evaluate hydrologic, geomorphic and vegetative responses to seasonally varying flows from regulation at USACE dams; goal, adaptively manage flows to help minimize drought impacts to sensitive aquatic ecosystems.

Climate: Impacts to Streams, Springs, Wetlands (Marshall Gannett mgannett@usgs.gov)

- Studying how drought and climate affects GW flow to streams, springs, & wetlands.
- Role of recharge, surficial geology (glacial till) & elevation (frequency of snowpack warming).

Decision Support Tools Drought and Climatic Stress (James Hatten: jhatten@usgs.gov)

- Yakima Basin: Modeling tools developed to assess aquatic habitat availability/persistence; spawning and rearing (salmon and steelhead); max water temp, depth.
- Tools have recently been enhanced with downscaled-regional climate models to better assess future eco-



Swampy Lakes Fen