



**DEPARTMENT OF  
NATURAL RESOURCES**

**FOREST REGULATION DIVISION**

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**TO: Interested Parties**

**FROM: John McEntyre, Region-Operations Outreach Manager**

**SUBJECT: 2024 Fish Survey Season-Water Level and Streamflow Forecast**

The Department of Natural Resources (DNR), in consultation with the Department of Fish and Wildlife (WDFW), has collated information on water abundance. The following analysis of statewide water abundance for the 2024 fish survey season is to focus appropriate attention on potential drought conditions when scheduling and conducting fish surveys.<sup>1</sup> Many factors including drought influence the extent and distribution of fish species in a watershed. Drought conditions alter how fish species occupy or access streams.

Under Natural Resource Conservation Service (NRCS) definitions, drought conditions may be present where basins have 70 percent or less of the basin's snow water equivalent. Under Washington state statute, undue hardship is likely when a basin has 75 percent or less of the basin's normal water supply.<sup>2</sup> The 2024 NRCS Report estimated that the Washington state snowpack ("snow water equivalents") ranges from 30 to 78 percent of normal statewide as of February 5, 2024 (Figure 1). The February 2024, *Water Supply Outlook Report* displays basin precipitation percentages of near to above normal due to active storm patterns throughout much of the month of January. However, snowpack is generally below to well-below normal across the state of Washington.<sup>3</sup>

Washington water and fish managers review several forecasting products when considering a drought declaration under state statute and rule.<sup>4</sup> In addition, Washington references the National Oceanic and Atmospheric Administration's (NOAA) Northwest River Forecast Center (NWRFC) to estimate water supply for a given year. Figure 2 depicts the February, 5 2024, NWRFC water supply prediction for the period April - September 2024. As of this the first week of February, 2024, water supplies are predicted to range between 49 and 245 percent of normal during April – September

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<sup>1</sup> Forest Practices Board Manual [Section 13, Part 2](#) "Guidelines for Determining Fish Use for the Purpose of Typing Waters" (see also WAC [222-16-031](#) *Interim Water Typing System*).

<sup>2</sup> [Chapter 43.83B.011](#) RCW; Drought Conditions Definition

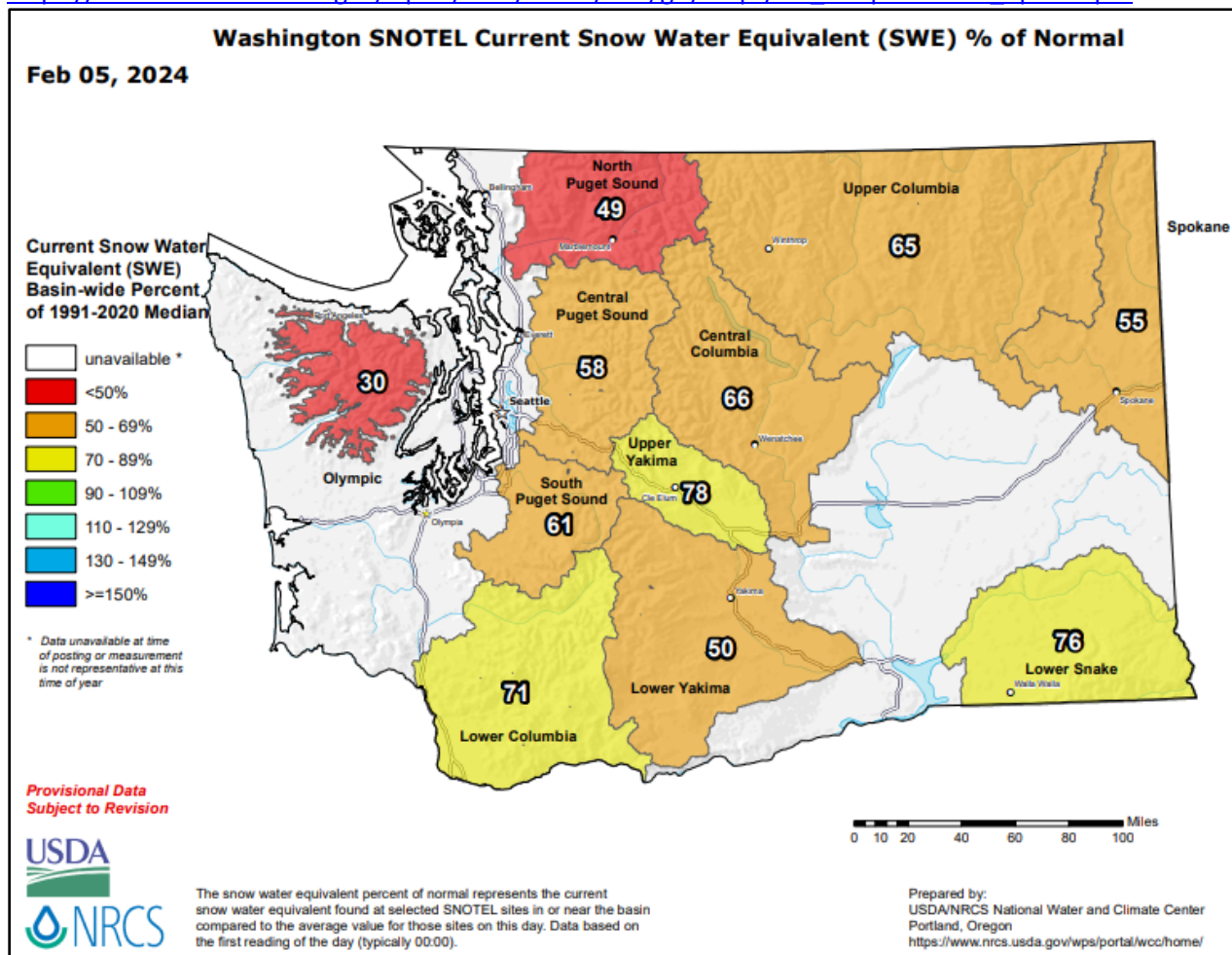
<sup>3</sup> NRCS February 1, 2024, Water Supply Outlook Report, page 4; Washington Water Supply Outlook report | NRCS Washington ([usda.gov](https://www.usda.gov))

<sup>4</sup> Title [43.83B](#) (400-901) RCW; Chapter [173-166](#) WAC

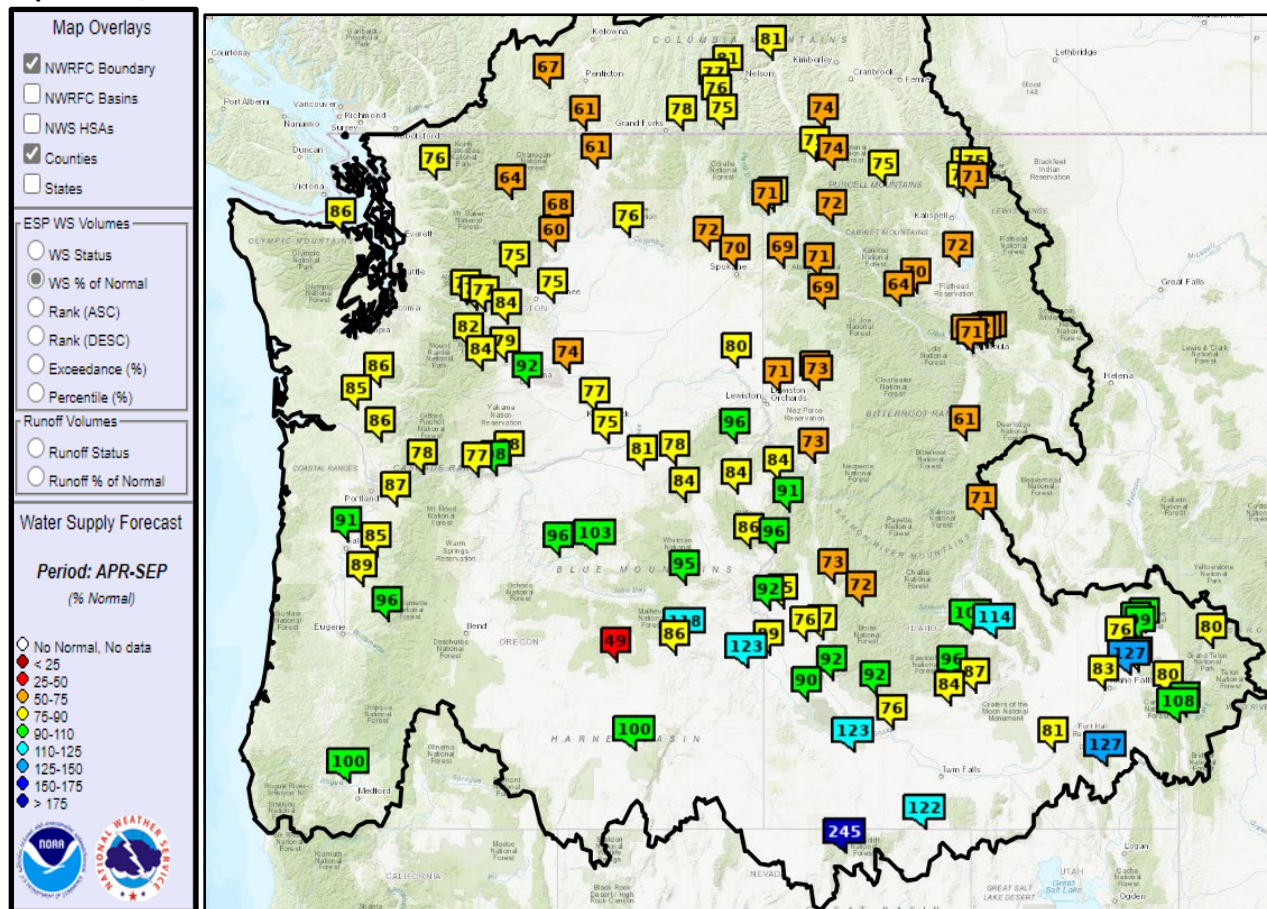
2024, but are predominantly expected to average about 82 percent of normal for Washington streams.

**Figure 1. Washington SNOTEL snow water equivalent percentage of normal monthly outlook by basin as of February 5, 2024.**

[https://www.wcc.nrcs.usda.gov/ftpref/data/water/wcs/gis/maps/wa\\_swepctnormal\\_update.pdf](https://www.wcc.nrcs.usda.gov/ftpref/data/water/wcs/gis/maps/wa_swepctnormal_update.pdf)



**Figure 2.** NOAA Northwest River Forecast Center water supply prediction for the period April through September, 2024.



The current snowpack levels (Figure 1) and predictions for streamflow (Figure 2) are predominantly below normal. As well, the January 2024 NRCS *Water Supply Outlook Report* issued in early January indicates conditions so far this winter are consistent with historical tendencies for moderate to strong El Niño events—the Pacific Northwest historically tends to be drier and warmer than normal, with lower snowpack in the Cascades and Olympics.<sup>5</sup> Surveyors should review specific stream flow conditions (using the links provided below) prior to conducting surveys in low-flow affected areas. Landowners should consult with their DNR Forest Practices Forester, the DNR Small Forest Landowner Regulation Assistance Fish and Wildlife Biologist, a WDFW habitat biologist, and/or tribal biologist prior to conducting a protocol survey during low-flow conditions.

<sup>5</sup> NRCS January 1, 2024, Water Supply Outlook Report, page 3; Washington Water Supply Outlook report | NRCS Washington ([usda.gov](https://www.usda.gov))

Proponents of water type changes must answer all questions in the Water Type Modification Form and should provide specific information (pictures are strongly encouraged) demonstrating whether stream flows and fish use determinations were affected by low-flow conditions, if present. If applicable, proponents should also provide information demonstrating whether fish use determinations were affected by mass wasting or stream scouring events. DNR will process water type modifications only when complete information is provided on the water type modification forms in support of the proponent's request (for example, justification solely on a phrase such as "flow was good" is considered insufficient).

Landowners and interested parties can find details regarding drought effects in specific basins by reviewing the following water supply forecast and stream flow resources:

- The Natural Resource Conservation Service *Current Water Supply Outlook Report*:  
[NRCS January 1, 2024, Water Supply Outlook Report](#)  
[NRCS February 1, 2024, Water Supply Outlook Report](#)  
[2 Title 43.83B \(400-901\) RCW; Chapter 173-166 WAC](#)
- For drought status under the Washington State definition, as well as information about the state drought declaration process, review Ecology's drought information:  
Statewide Conditions: <https://ecology.wa.gov/Water-Shorelines/Water-supply/Water-availability/Statewide-conditions>
- Ecology also provides links to a variety of water supply data and forecasting web sites:  
<https://ecology.wa.gov/Water-Shorelines/Water-supply/>
- For details regarding whether or not drought may affect a specific basin, please review the Northwest River Forecast Center (NWRFC) "Ensemble Streamflow Prediction (ESP) Water Supply Forecast as Percent of Average": <http://www.nwrfc.noaa.gov/ws/>.
- Please review stream flow conditions prior to conducting surveys in low-flow-affected areas. Review flows at specific Washington locations at:
  - Flow Monitoring Network:  
<https://fortress.wa.gov/ecy/eap/flows/regions/state.asp>
  - WA Current Streamflow Summary:  
<https://waecy.maps.arcgis.com/apps/Viewer/index.html?appid=832e254169e640fba6e117780e137e7b>

If you have questions about conducting protocol fish presence surveys or water typing in general, please contact Forest Practices staff at one of the six DNR region offices:

- Northeast: (509) 684-7474
- Northwest: (360) 856-3500
- Olympic: (360) 374-2800
- Pacific Cascade: (360) 577-2025
- Southeast: (509) 925-8510
- South Puget Sound: (360) 825-1631

cc:

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