



MEMORANDUM

TO: Water Resources Commission

FROM: Ryan Andrews, Hydrologist

SUBJECT: Agenda Item F, June 16, 2022
Water Resources Commission Meeting

Drought and Water Conditions Update

I. Introduction

During this informational report, staff will present an update on current drought conditions, state and federal drought actions, and coordination efforts.

II. Drought Conditions

According to a recent [study](#), the western United States is currently experiencing the driest 22-year period in more than 1,200 years, classifying it as a megadrought. The average drought severity since 2000 ranks as the most severe on record since the year 800 in terms of soil moisture deficits. Although there have been intermittent years of cool, wet weather, extreme dryness has prevailed. During this most recent 22-year period, years with significantly low soil moisture have been more frequent and severe than nearly all other 22-year intervals. Extreme soil moisture deficits contribute to low streamflows, poor agricultural productivity, elevated wildfire activity, and poor ecosystem health.

Oregon is in the midst of a significant multi-year drought event that began developing in early 2020. Drought conditions intensified in spring 2021 to include the second occurrence of exceptional drought (D4) in Oregon (on a scale of D0 to D4) since the inception of the [US Drought Monitor](#) in 2000. With the exception of northwestern Oregon, drought conditions have persisted in much of the state throughout the winter and spring of 2022. Water supply conditions have been impacted by near or record low carryover from 2021 in many reservoirs, record low streamflows, well below average snowpack, and elevated evaporative demand. ([Evaporative demand](#) is the amount of water that could be potentially lost to the atmosphere from the surface and is driven by factors such as temperature and wind.) Only recently did northwestern Oregon see some reprieve from drought conditions, while drought has continued across the remainder of the state. Long-term forecasts support the continuation of drought conditions due to the likelihood of above average temperatures and below average precipitation throughout the summer. Additional information on conditions will be provided during the presentation.

III. State and Federal Drought Emergencies

As of May 26, 2022, 15 counties have received Executive Orders which designate state drought emergencies under ORS 536, while one additional county has requested a drought declaration. In addition, 23 counties have been designated as primary counties for [crop disaster losses](#) by the U.S. Department of Agriculture due to drought conditions, with an additional six counties receiving contiguous county designations.

IV. Emergency Permits and Transfers

As of May 26, 2022, the Department has received 14 applications for [emergency drought permits](#) and five drought transfer requests from Crook, Jackson, Klamath, and Lake Counties.

Due to pervasive drought conditions and declining groundwater levels in the Klamath Basin, the Department will be issuing only one emergency use permit. That one emergency drought permit is for a limited amount of groundwater for an irrigation district with wells located west of the Klamath River. The decision to deny any other drought permits followed the review of groundwater levels and groundwater use data, which revealed groundwater level declines of approximately 20 feet over the past two years, and total declines of up to 40 feet in some parts of the project area since 2001.

V. Dry Domestic Wells or Reductions in Yield

The Department has received over 600 reports of [dry domestic wells or wells with reduced yields](#) across 25 counties since 2021, with over 300 received in 2022. The Department has created a form on its website for members of the public to report their dry wells. Information supplied on the forms allows staff hydrogeologists to evaluate changes in groundwater supplies and how those changes may be impacting water users. The Department will also notify those who submit forms of potential funding and assistance opportunities when available.

The Department launched its Well Abandonment, Repair, and Replacement funding opportunity in early June. During the initial phase, the Department will be accepting applications for financial assistance from low-to-moderate income households to repair, replace, or abandon their domestic wells that have been impacted by drought or wildfire. The Department anticipates a broader set of wells will be eligible for funding in future biennia; however, the current scope of impacted wells and households eligible for funding is based on meeting urgent public health needs for individuals impacted by disasters and direction provided by the Oregon Legislature during the December 2021 special Legislative Session.

VI. Conclusion

State and federal agencies are continuing to assess and respond to drought conditions. The persistence and elevated intensity of drought over recent decades has highlighted the need to improve the state's drought resiliency efforts and plan for a water-scarce future.