



MEMORANDUM

TO: Water Resources Commission

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SUBJECT: Agenda Item E, March 17, 2022
Water Resources Commission Meeting

Groundwater Allocation – Proposed Action Plan

I. Introduction

This report follows up on direction from the Water Resources Commission that staff develop recommendations for a plan of action that will lead to a modernized groundwater allocation policy that is more sustainable and protective of senior water right holders, both surface and groundwater. This report is for informational purposes. Staff welcome feedback from the Commission on the proposed action plan.

II. Background – Current Groundwater Allocation Approach

As discussed at the December 3, 2021 Commission meeting, groundwater in Oregon is allocated on an application-by-application basis using standards to identify whether an adverse impact would be immediate or delayed. Proposed uses are evaluated for two primary factors: can the aquifer sustain the new use, and what impact will the new use have on surface water.

Can the Aquifer Sustain New Use?

After many years of groundwater allocation, the Department is observing declines in groundwater levels in aquifer systems around Oregon with less connection between surface water and groundwater. These declines represent the removal of groundwater from storage in the aquifer such that the pumped groundwater exceeds the natural recharge to the aquifer system.

In general, proposed new groundwater uses in an area of declining groundwater levels are recommended for denial, while proposed uses in areas with reasonably stable water levels are recommended for approval. Where groundwater-level data in the vicinity of the proposed use is lacking, the application may be recommended for approval with a condition to collect water-level data from the well to observe future trends in the aquifer. As discussed in past reports to the Commission, there are many areas in the Oregon that do not have robust groundwater data to help with this determination. A significant effort is underway to better understand groundwater resources across the state, but this work will take years to complete.

Impacts on Surface Water

In areas with more connection between surface water and groundwater, allocation of groundwater captures water that would otherwise discharge to streams as baseflow. This groundwater capture represents the depletion of surface water supplies that in most basins across Oregon have enough flow to support only the most senior users during summer months.

Surface and groundwater supplies in much of the state have reached a limit whereby newly permitted groundwater uses increasingly come at the expense of existing surface water right holders. “Water is available” is one of the four criteria in Oregon Administrative Rule (OAR) 690-310-0130 to establish that a groundwater use will ensure the preservation of the public welfare, safety and health. Surface water availability has been calculated for more than two-thirds of the basins in Oregon. Currently, only proposed groundwater uses that are hydraulically connected to surface water and have the potential for substantial interference with surface water (PSI, as per OAR Chapter 690, Division 9) are subject to the surface water availability limitations.

Under the current Division 9 rules, proposed groundwater uses determined to have PSI with surface water are recommended for denial when surface water is not available for proposed new uses. Proposed groundwater uses with impacts to surface water determined to be relatively small within a single pumping season or that do not otherwise meet the requirements of PSI are generally recommended for approval. It is important to note that groundwater interference with surface water is evaluated only for the rate requested in the application and does not currently consider the cumulative effects of other existing groundwater appropriators already impacting surface water supplies within the basin.

In terms of protecting existing surface water uses, the current PSI approach has two notable drawbacks. First, reviewing only the potential impacts of the pending application does not account for the broader hydrologic impacts that develop in a basin over decades of groundwater allocation. Second, the current PSI approach incentivizes groundwater uses to occur further from surface water sources, thereby making the impacts to surface water more delayed and difficult to manage.

III. Recommendations

Staff recommend considering a range of options to improve the Department’s groundwater allocation practices to be more protective of existing surface and groundwater users. Through administrative rule changes, these options would revise and update the Department’s groundwater allocation policy and process to consider the source of water to wells, surface water availability, and the regulation history for surface water sources receiving groundwater baseflow. These options utilize relatively accessible data sets and consider the pre-existing allocations to senior users in a basin.

Option 1. Can the Aquifer Sustain New Use?

While the options presented below utilize surface water to determine overall water availability, groundwater may already be over appropriated as observed through declining water levels. This option proposes to build on work already conducted and presented to the Commission on “Areas of Groundwater Concern” (June 2021 WRC meeting). Areas where groundwater is documented

to be in persistent decline would, through rulemaking, be determined to be over appropriated with groundwater not available. Applications received in areas where groundwater has not been

determined to be over appropriated would receive an aquifer analysis to determine whether the aquifer is over appropriated. Where water-level data are lacking to make this finding, a process will be developed that requires a finding of *is* or *is not over appropriated*, thus eliminating the current option of *cannot be determined to be over-appropriated*. This process is not yet defined and will be brought forth for consideration at a future meeting.

Option 2. Impacts on Surface Water.

A potential revision in groundwater allocation policy could involve shifting the water availability determination that relies on OAR Chapter 690, Divisions 9 (Ground Water Interference with Surface Water), 300 (Definitions), and 400 (State Water Resources Policy), to a determination of whether water is available in the water availability basin in which the groundwater application is located. This modification would address the problem that the current permitting process does not account for the impacts of groundwater uses that generate long-term and cumulative impacts to senior surface water rights, because it would prevent new uses in basins where the Water Availability Reporting System (WARS) shows insufficient surface water available to match the stream depletion.

Not all basins are represented in WARS, so in basins where water availability has not been calculated other criteria for the water availability determination would need to be established. This could include the water distribution history in a basin; that is, how regularly are surface water right holders regulated each year by priority date on a given stream system.

Option 3. Impacts on Surface Water.

Another potential option is to determine whether water is available for any basin through the surface water regulation history of the basin without utilizing WARS. In this approach, the groundwater allocation process would account for the fact that there are existing surface water users in a basin that are regulated off each year through the distribution of surface water. Where groundwater and surface waters are hydraulically connected, this allocation process would prevent new groundwater uses from incrementally diminishing stream baseflow and impacting the senior surface water users reliant upon that resource.

Next Steps

As a next step, staff will continue to refine these ideas internally. Following this, staff recommend forming a groundwater allocation policy rules advisory committee (RAC) to get feedback on the options. For the RAC membership, the Department will seek people representing a broad range of interests that could be impacted by the rulemaking. Staff further recommend the RAC or a RAC subgroup include technical expertise in hydrology from another agency, university and/or consulting. The RAC will provide input on the groundwater allocation ideas explained in this report and other options that may come to light as a result of the discussions. Staff are looking to hold two or three RAC meetings this summer, with the possible notice of intent to do rulemaking occurring in fall of this year.

IV. Summary

This informational report outlines potential policy changes and public process steps needed to modernize the Department's approach to groundwater allocation in order to make the resource more sustainable and better protect existing surface and groundwater users.

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