Oregon
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MEMORANDUM

TO: Water Resources Commission

FROM: Jen Woody, Senior Hydrogeologist
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SUBJECT: Agenda Item E, October 13, 2016
Water Resources Commission Meeting

Status of Basalt Aquifers in the Walla Walla Subbasin

I. Introduction

Groundwater levels are declining in the basalt aquifer systems of the Walla Walla Subbasin. Due to these declines, the Department has not issued new permits for the basalt aquifers of this area since early 2013. Staff will brief the Commission on the status of groundwater in the Walla Walla Subbasin and recent efforts to work with the local community to address the situation.

This is an informational report. No Commission action is required at this time.

II. Background

The Walla Walla Subbasin, located in Northeastern Oregon, is a productive agricultural area. Historically, area crops included peas, orchard fruits, alfalfa, corn, and dry-land wheat. In recent years, existing and new agricultural areas are converting to vineyards. While grapes use less water than some traditional irrigated crops, the total irrigated acreage has increased as dry-land farms convert to irrigated vineyards.

Surface water in the area is generally fully appropriated during the times of year when it is most needed. As with other parts of the state, water users often look to groundwater to meet their needs when surface water is no longer available. There are two types of aquifers in the basin: an unconsolidated sedimentary alluvial aquifer overlying a series of Columbia River Basalt Group (basalt) aquifers. Irrigation from the alluvial aquifer began in the early 1900's. Irrigation from the basalt aquifers began in the 1940's and has increased in recent years. The City of Milton-Freewater also uses the basalt aquifers for municipal water supply, and has relied on this resource since the 1940's.

Groundwater levels are declining in both the alluvial and basalt aquifer systems in the Walla Walla Subbasin of Oregon. Over the past decade, an artificial groundwater

recharge project conducted by the Walla Walla Basin Watershed Council has slowed the rate of decline in some parts of the alluvial aquifer system. However, water levels in both the alluvial and the basalt aquifers continue to decline. In the basalt aquifer the decline continues at three to four feet per year across the subbasin, with the total decline since 1950 exceeding 100 feet in some places.

Growing awareness of systemic water level declines in the basalt aquifer system of the Walla Walla Subbasin in recent years has meant that all applications for new groundwater rights have been denied because they were deemed not to be within the capacity of the resource. They pose the potential for injury to existing users. Based on continued water level declines, the basalt aquifer is now considered over appropriated.

III. Discussion

The State's groundwater management policy sets out, in part, that rights to use groundwater be protected, reasonably stable groundwater levels be determined and maintained, and groundwater overdraft be prevented. In light of this policy direction and given concerns about the declining groundwater levels in the Walla Walla Subbasin, staff are actively engaging with local water users to develop a plan of action that will put the community on a more sustainable path for the use of groundwater.

The Department recognizes the importance of good communication with local water users on such an important and technically complex issue. Toward that end, in May 2016, the Department provided a presentation to more than 50 local irrigators in Milton-Freewater summarizing the hydrogeological setting of the area, as well as recent groundwater level trends for the basalt aquifer system. Senior groundwater users have expressed their concern about the stability of the resource; well yields for older wells have reportedly declined.

At the time of writing this report, the Department is scheduled to hold two public meetings to discuss groundwater management options for the basalt aquifers of the Walla Walla Subbasin, on September 29 and 30 in Milton-Freewater. At these meetings the Department plans to review the groundwater science and describe groundwater challenges and concerns in the basin. In addition, staff will discuss potential options and next steps for management of the resource.

Staff hopes to build a collaborative and constructive approach with the local community to address the groundwater issues. Significant time will be set aside for questions and feedback and attendees will be given the opportunity to sit down with staff to discuss their individual concerns. Follow-up question and feedback sessions are scheduled for October 24 and 25 to facilitate continued discussion.

At the October WRC meeting, staff will brief the Commission on the status of groundwater in the Walla Walla Subbasin, report on the results of the Milton-Freewater meetings and outline next steps.

IV. Conclusion

The Department has significant concerns about declining groundwater levels in the Walla Walla Subbasin. In recent months, staff have been working with the local water user community to build understanding of the issues and develop a plan to address the problem. Staff expect this issue will be in front of the Commission at future meetings as we take steps to address the situation.

Attachment:

Attachment 1 - Map of the Walla Walla Subbasin

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Attachment 1: Map of the Walla Walla Subbasin