Oregon
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MEMORANDUM

TO: Senator Lew Frederick, Co-Chair
Representative Brad Witt, Co-Chair
Joint Ways and Means Subcommittee on Natural Resources

C: Matt Stayner, Legislative Analyst
Legislative Fiscal Office

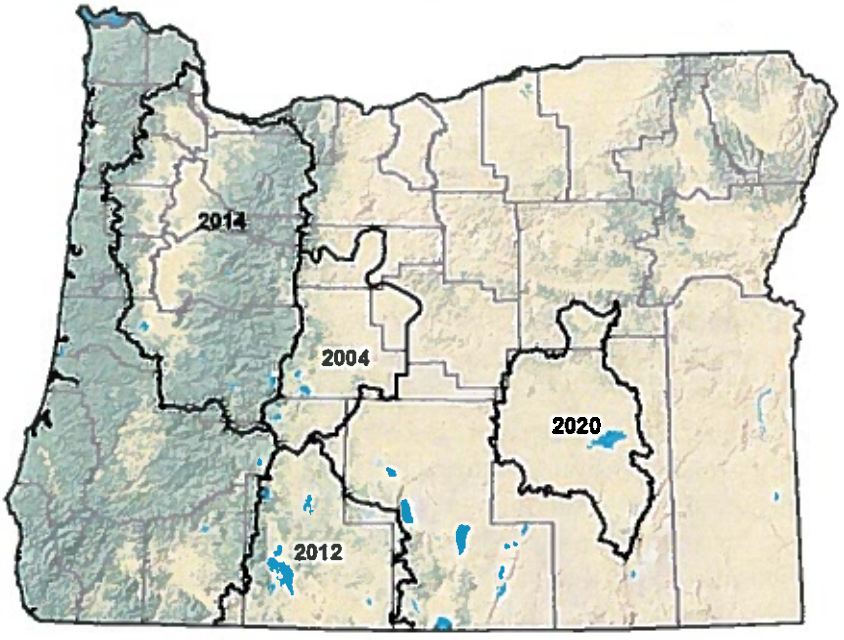
FROM: Thomas M. Byler, Director

SUBJECT: Follow-up Information on Studies Conducted by Department

Yesterday, during the public hearing on Senate Bill 5542, the Committee requested information on the Water Resources Department's current efforts conducting water resources studies. The question was asked in relation to the Department's Policy Option Package #101 related to basin-wide studies.

Staff members continue to collect information on a regular basis in order to build a long-term record that can help identify trends in water supply and water use. In an average year, Oregon's lakes, streams, and aquifers accommodate water that moves through the land, rock, soils, plants, mountains and valleys at different rates and volumes, fluctuating with the time of year and weather patterns. The dynamic nature of water makes it challenging to quantify. Understanding how this complex system works is the key to effectively managing Oregon's water resources.

Groundwater Basin Studies
The Department has completed three in-depth basin studies in cooperation with the USGS since 1990 (Deschutes, Klamath, and Willamette), and is currently conducting a fourth basin study in the Harney Basin. This map shows the locations and completion dates of these studies.



Basin-wide Groundwater Studies – The Department's Policy Option Package #101 is focused on allowing the Department to conduct an additional basin-wide groundwater study. Under current resources, the Department is able to conduct only one study at a time. The Department generally conducts these basin-wide studies in cooperation with the U.S. Geological Survey (USGS). Both cooperating agencies contribute staff and financial resources to collect, analyze, and report data in peer-reviewed publications.

Currently, the Department has one formal groundwater basin study underway, which was funded by the Oregon Legislature in 2016. The Greater Harney Valley Groundwater Area of Concern was delineated in Harney County around a region where groundwater development has occurred in excess of the capacity of the groundwater resource, resulting in groundwater level declines over the past decade. The Department and USGS are jointly conducting a groundwater study in the area that they expect to complete by 2020; the study will characterize the regional aquifer system, groundwater level trends, and groundwater use. Results of the study will help determine next steps for future groundwater management in the area.

Five agency scientists — three hydrogeologists and two hydrologists — contribute to the Harney Basin study, providing significant data and analysis and receiving periodic support from the local watermaster, hydrologic technicians, GIS/mapping specialists, and other Department staff. In addition, a Department planning coordinator organizes quarterly study update meetings with a local Groundwater Study Advisory Committee.

Basin-scale studies provide an in-depth and integrated analysis of the groundwater and surface water resources within a relatively large area defined by hydrologic boundaries. With these studies, the Department characterizes the physical characteristics of a basin and develops surface and groundwater budgets, including groundwater recharge and discharge locations, rates, and volumes. These investigations help the Department make decisions about permitting and management of groundwater in the context of an entire basin. Additional areas of the state would benefit from such studies if additional resources became available.

Surface Water Studies

The Water Resources Department is currently participating in two significant studies relating to surface water.

Willamette Reallocation Study – The Department continues to work with the U.S. Army Corps of Engineers (Corps) to complete the Willamette Basin Review, a planning study that examines the feasibility of reallocating stored water from the Willamette Valley Project reservoirs. The U.S. Bureau of Reclamation currently holds water right certificates to store 1.64 million acre-feet from the Corps' eleven storage reservoirs located on major tributaries of the Willamette River. Only a small portion of storage has been contracted for irrigation uses. A feasibility study to consider reallocation options of stored water was started in 1996 and postponed in 2000 to allow time for a federal consultation process initiated under the Endangered Species Act. The study is assessing the need of stored water for irrigation, municipal and ecological purposes. In recent years, the Department has worked closely with the Corps and local partners to gain state and federal funding to re-initiate this study. The Department secured $1.5 million from the 2013

Oregon Legislature to participate as the non-federal sponsor. The Department has one staff member dedicated to this project, which works with the Corps and coordinates other agencies involvement. The final Chief's Report is expected to be sent to the Assistant Secretary of the Army and the U.S. Office of Management and Budget in late 2018. Following this, the United States Congress will provide the authorization for implementing the final recommendation.

The Upper Deschutes Basin Study – The U.S. Bureau of Reclamation and the Deschutes Basin Study Work Group are working on the Upper Deschutes River Basin Study. In 2013, the Water Resources Department received $750,000 in Lottery Bond funds from the Legislature to support the study as non-Federal cost-share funds. The objectives of the study are to: develop a comprehensive analysis of water supply and demand; assess how existing operations and infrastructure will perform under projected future water supply conditions and demands; and consider options for addressing identified water needs. Several staff have a role in this basin study: a planning coordinator, a region manager, and a hydrologist, all participate and contribute technical data and water policy. The study is expected to serve as a foundation for future water management in the basin.