



Oregon

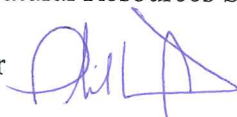
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MEMORANDUM

TO: Senator Chris Edwards, Co-Chair and
Representative Ben Unger, Co-Chair
Joint Ways and Means Natural Resources Subcommittee

FROM: Phillip C. Ward, Director 

SUBJECT: Response to March 28, 2013 Testimony of Jerry Schmidt
Before the Ways and Means' Natural Resources Subcommittee

Date: April 8, 2013

During the Department's budget hearings last week, Mr. Schmidt's written and verbal testimony suggested that Department budget documents from the 1990s indicate that the Department shifted priorities from water-level data collection to "computer modeling." The Department disagrees with this assertion.

Groundwater Basin Studies. The Department, working closely with the U.S. Geological Survey (USGS), has completed groundwater studies in the Deschutes, Klamath, and Willamette Basins, to identify and characterize future groundwater supplies, and determine the impact of groundwater use on surface water supplies. Basin-wide studies typically take four to five years to complete and involve multiple groundwater staff and hundreds of thousands of dollars in cost-share with the USGS.

The Value of Groundwater Flow Models. A major component of any groundwater study is the construction and calibration of a groundwater flow model. This involves the collection and analysis of groundwater-level data, to ensure that the model adequately simulates seasonal and annual water-level changes. These data include well locations, groundwater-level measurements, groundwater pumpage volumes, and measurements of the interaction of surface water and groundwater. The groundwater-level data collected during these investigations has augmented and enlarged, rather than diminished, as Mr. Schmidt implies, the groundwater-level monitoring in the state.

The Source of Groundwater Data. In addition to groundwater-level data from customers, the USGS, and other partners, the Department depends on a series of observation wells for groundwater data. During the 2012 calendar year, OWRD staff manually took 2,656 water levels in 1,018 observation wells in Oregon. Thousands of additional measurements came from 71 observation wells with automatic recorders installed.

There are two types of observation wells: State Observation Wells (363 of them in 2012) and project observation wells (685 in 2012). Project wells are used to investigate local or regional



groundwater conditions on a term of months to several years. By contrast, State Observation wells are intended to provide a long-term record of groundwater-level trends in representative aquifers throughout the state. Measurement frequency in State Observation Wells is generally quarterly or biannual.

The Department had 363 “current” State Observation Wells in 2012. These are wells reported as part of the Department’s Key Performance Measure #5; the benchmark year is 2001 when the state had 350 State Observation Wells.

Challenges Facing State Observation Wells. The State Observation Wells monitored by the Department are privately owned and long-term access is commonly an issue, as the Department is dependent on well owners for access to the wells. As property changes hands, some owners discontinue their participation in the network or decrease the Department’s access. In these cases, the Department tries to find a suitable replacement well in the same general area, where possible. Therefore, the number and location of state observation wells varies somewhat from year to year.

Also, over time, mechanical obstructions may prevent measurements in a well for a period of time until a pump is pulled or a well head is reconfigured. These wells are still considered to be “current” but may not be actively measured until physical access for measurements is re-established. As such, the number of actively measured “current” state observation wells fluctuates from year to year. In general, these are only a small fraction of the total number of wells on our current State Observation Well Network in any given year. The Department tries to resolve these problems as soon as possible; however, without dedicated funds to pull pumps and reestablish access, we are dependent upon the schedule and the resources of the landowner. Expanding this network with dedicated monitoring wells, to which staff have year-round access, would help immensely in basins where the State plans to work with the USGS on cooperative groundwater studies.

A summarizing point is that the State Observation Well Network is a valuable network of data points, but only represents about a third of the wells measured by the Department each year. Testimony provided by Mr. Schmidt implies the Department performs less groundwater data collection today than it did in the 1970s or 80s, and that pursuing today’s advanced technologies, such as groundwater modeling, is at the expense of data collection. The Department strongly disagrees with this characterization.