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MEMORANDUM

TO: Water Resources Commission

FROM: Douglas Woodcock, Ground Water Section Manager

SUBJECT: Agenda Item B, February 22, 2007
Water Resources Commission Meeting

Informational Update on Scenic Waterway Evaluations with Respect to Ground Water in the Grande Ronde Basin, Oregon

I. Issue Statement

Oregon statutes allow a small cumulative ground water interference with scenic waterway flows. The calculated interference with the scenic waterway in the Grande Ronde Basin has exceeded the cumulative interference established in statute. As a result, the Department is precluded from issuing new permits to appropriate hydraulically-connected ground water unless impacts to surface water are mitigated.

II. Background

In 1995 the state Scenic Waterway Act, ORS 390.835, was amended to include ground water interference with surface water as a consideration in maintaining scenic waterway flows. The amendment added, among other items, that the new ground water provisions would not apply

> "…*except upon a finding by the Water Resources Director based upon a preponderance of evidence that the use of ground water will measurably reduce the surface water flows necessary to maintain the free-flowing character of a scenic waterway in quantities necessary for recreation, fish and wildlife*."

The findings must be made using generally accepted hydrogeologic methods, using relevant and available field information, and must consider the timing of the projected impacts in relation to other factors, including but not limited to: changing climate, recharge, incidental precipitation, out-of-stream appropriations, and return flows.

The amendment defined "*measurably reduce*" as

> *"…the use authorized … will individually or cumulatively reduce surface water flows within the scenic waterway in excess of a combined cumulative total of one percent of the average daily flow or one cubic foot per second, whichever is less…" (termed the one percent/one cfs standard).*

The amendment stated that ground water uses exempted under ORS 537.545 shall not be limited by the new scenic waterway ground water considerations. Mitigation was also added as a consideration, and any water permit or certificate may include mitigation conditions to ensure the free-flowing character of the scenic waterway.

A provision was included that the Water Resources Department, Oregon Parks and Recreation Department, Oregon Department of Fish and Wildlife, Oregon Department of Environmental Quality, and the Division of State lands can unanimously agree to exceed the "one percent/one cfs standard," provided it will not significantly impair the free-flowing character of the waters in quantities necessary for recreation, fish, and wildlife.

III. Discussion

The Department evaluates all new ground water applications for hydraulic connection and potential for substantial interference with local surface waters. Within or above scenic waterways, ground water applications are further evaluated to determine if a preponderance of evidence exists that indicates the proposed use will measurably reduce surface water flows necessary to maintain the free-flowing character of the scenic waterway.

A generally accepted hydrogeologic method is required to perform the scenic waterway evaluations. For this, Ground Water staff rely on peer-reviewed analytical models to calculate interference between a proposed ground water use and local surface waters. The analysis used is consistent with the Department's surface water availability model (also peer reviewed) in that the calculation of water use is based upon average crop consumption by basin, rather than a permitted or proposed rate of use. This results in a more accurate reflection of consumptive uses, and is less likely to include return flows as a consumed use.

If scenic waterway flows are not met and the subsequent cumulative interference exceeds one percent of the average daily flow or one cubic foot per second, whichever is less, the flows have been measurably reduced. The Department is precluded from issuing any permits that would further contribute to a reduction in flow.

The one cubic foot per second standard has been exceeded in the Grande Ronde Basin. The Grande Ronde Basin contains basin-fill or alluvial aquifers in hydraulic connection with surface water. Developing ground water from these aquifers ultimately reduces surface water flows. Scenic waterway flows in the Grande Ronde Basin are currently not met nine months out of the year. Tracking of ground water uses from the basin-fill aquifer has determined that more than

one cubic foot per second of interference has occurred. Therefore, the flows, by definition, have been measurably reduced. The Grande Ronde Basin contains the only scenic waterway flows that have been determined to be measurably reduced.

Several applications proposing to use ground water from the basin-fill sediments in the Grande Ronde Basin have been proposed to be denied in the last year because the interference threshold with scenic waterway flows has been exceeded. Differing concerns have been raised by landowners that either the proposed denials have closed the basin to further appropriation or that additional development will further reduce scenic waterway flows. The basin is not closed to further appropriation; however, new permitted uses that develop ground water from aquifers that contribute to stream flow must include mitigation for impacts to surface water.

The Department is meeting with local interests to explain how applications are reviewed under the scenic waterway statute and to provide information on options for new ground water development. Those options include developing ground water not in hydraulic connection with local surface water, such as deep bedrock aquifers, and mitigating for the impacts to scenic waterway flows. Discussions are ongoing about what measures constitute effective mitigation in the Grande Ronde Basin.

IV. Summary

Ground water interference with scenic waterway flows in the Grande Ronde Basin has been determined to exceed one cubic foot per second and the flows are deemed, by statute, to be measurably reduced. The Department is precluded from issuing new permits from the basin-fill aquifers that are in hydraulic connection with surface water unless impacts to stream flow are mitigated.

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