



# Oregon

Theodore R. Kulongoski, Governor

## Water Resources Department

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### MEMORANDUM

TO: Water Resources Commission

FROM: Barry Norris, State Engineer

SUBJECT: Agenda Item O, November 20, 2009  
Water Resources Commission Meeting

### Umatilla Critical Area Recharge Project Results

#### I. Introduction

The February 2008 Legislative Assembly approved Senate Bill 1069. The Governor signed the bill, which provided \$750,000 to the Department for conducting a study to determine the feasibility of storing surface water below ground in the Umatilla Basin Critical Ground Water Areas. Storing water below ground is commonly referred to as Aquifer Storage and Recovery or Artificial Recharge. The Department contracted with a team of consultants led by IRZ Consulting LLC (IRZ) of Hermiston, Oregon to complete the work. The project was completed in June 2009.

#### II. Discussion

IRZ completed a feasibility study for storing Columbia River water below ground within the designated Critical Ground Water Areas in the Umatilla Basin in June 2009. The study confirms the feasibility, both technically and economically, of using both Aquifer Storage and Recovery and Artificial Recharge techniques to store water. A considerable amount of information resulted from the study including water quality information, information about basin hydrology, and geology, and information about the economic benefits of completing the project.

The project will involve diverting surface water during the winter to two locations: Echo Meadows alluvial aquifer and County Line alluvial aquifer. Artificial Recharge will be used to charge these alluvial aquifers. Some of the recharged surface water will be stored

for summer time use, some will be used for environmental benefits including return flow to the Umatilla River, and some of it will be removed and injected into basalt aquifers for storage and subsequent use. The cost for a system that will provide 100,000 acre-feet of water for ground water storage is estimated to be \$100,000,000.

Fred Ziari is president and CEO of IRZ Consulting LLC. He will present a detailed account of the feasibility study to the Commission.

### **III. Conclusion**

This is an informational item only. No Commission action is requested.

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