Oregon Water Resources Department

Water Conservation, Reuse and Storage Grant Program

Evaluation for September 2, 2008 Applications

APPLICANT:	**City of Dallas**		
STUDY TYPE:	Storage Other Than Above-Ground (including Aquifer Storage and Recovery [ASR])		
APPLICATION NO.:	GB0008 09		
STUDY NAME:	City of Dallas Aquifer Storage and Recover Program Optimization/Expansion Studies		
BASIN:	Willamette	**WRD DISTRICT:**	16
WRD FUNDS REQUESTED:	$74,600	**TOTAL COST:**	$150,000

APPLICATION DESCRIPTION:

The City of Dallas is currently pilot testing a single-well 0.33-million gallon per day (MGD) aquifer storage and recovery (ASR) system utilizing the saline Siletz River Volcanics as the receiving aquifer. During recharge of the ASR system, injected source water locally displaces saline groundwater in the aquifer. Early pilot testing results show that a fresh water storage zone can be developed in the Siletz River Volcanics, confirm that potable water can be recovered from the system, and indicate recovery efficiency has increased over successive pilot testing cycles.

This feasibility study will use existing data sets to develop and calibrate operational models of aquifer geometry and dual-density flow characteristics in the Siletz River Volcanics aquifer. These advanced numerical models will provide a technical basis for optimizing storage capacity and recovery efficiency from the City's existing ASR well and for decision making during expansion of the City's ASR program to meet their goal of a 1-MGD capacity ASR system.

APPLICATION REVIEW TEAM EVALUATION:

The Application Review Team discussed the experimental nature of the study, which proposes to create a groundwater model to examine the feasibility of different injection and recovery rates that might minimize mixing of fresh stored water with the native groundwater. The team recognized that the City is currently testing ASR in the Siletz River Volcanic aquifer and has found it to be technically challenging because of the fractured and brackish nature of the aquifer.

The team also recognized that the City of Dallas and Polk County have a significant water supply need and that this type of ASR project in a low-yielding, low quality (saline) aquifer could be a piece of the solution, but would probably not yield a sufficient volume of water to answer all water supply needs. However, if this study is successful it could be replicated by other communities that have similar groundwater issues.

The study is a priority for funding under SB 1069 because it is identified on the Department’s statewide water assessment and inventory of potential conservation opportunities. The study could begin in January 2009 and be completed by July 2009.

Application Review Team Funding Recommendation: Do Fund: Medium Priority at $74,600.

COMMENTS:
None received.

STAFF RECOMMENDATION:
Do Fund at $70,870.

The staff recommendation reflects a 5 percent across the board funding reduction on all studies.

Commission Action:

On December 5, 2008, the Water Resources Commission took action to:

> ***"Release funding to all feasibility study applicants the Commission authorized at its' November 20 meeting, at a level representing 95% of staff recommendations, and move forward with grant agreement negotiations and signatures."***

This feasibility study received an award amount of $67,326.