Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
Evaluation for September 2, 2008 Applications

APPLICANT:	**City of Cottage Grove**		
STUDY TYPE:	Reuse		
APPLICATION NO.:	GR0001 09		
STUDY NAME:	Cottage Grove Effluent Re-Use Feasibility Study		
BASIN:	Willamette	**WRD DISTRICT:**	2
WRD FUNDS REQUESTED:	$24,500	**TOTAL COST:**	$49,500

APPLICATION DESCRIPTION:
The City of Cottage Grove recently completed an $11 million upgrade to their wastewater treatment system. In an effort to further reduce water quality impacts of its wastewater treatment facility, the City would like to study the feasibility of re-using a significant portion of its treated effluent from its wastewater treatement system for irrigation purposes. The treated effluent is currently released directly into the Coast Fork of the Willamette River. Potential users of the irrigation water would be Middlefield Golf Course, several City parks and the planned 14-acre Bohemia Park, which plans to include a significant water feature. In addition to the water quality benefits of not releasing the treated effluent into the Coast Fork of the Willamette River, the City would also see a reduced demand on its municipal water supply, which is drawn from Row River, Layng Creek and Prather Creek.

The wastewater treatment facility has a design average dry-weather flow of 1.8 million gallons per day (MGD) while the design average wet-weather flow is 3.5 MGD. The treatment plant produces Class A reclaimed water. The reduced demand would be calculated as part of the feasibility study, but the maximum effluent available for irrigation during the summer months would be approximately 1.5 MGD.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team found this to be a well written application with good local support and a strong economic development/community benefit component. All planning study elements were appropriate for achieving a well-articulated goal. The City has already received a commitment from the golf course to use reuse water and has initiated discussions with the Oregon Department of Transportation for potentially using reuse water for irrigation needs.

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 on January 1, 2009 and be completed by December 31, 2009.

Application Review Team Funding Recommendation: Do Fund: High Priority at $24,500.

COMMENTS:
None received.

RECOMMENDATION:
Do Fund at $23,275.

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

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
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APPLICANT:	**City of Veneta**		
STUDY TYPE:	Water Conservation		
APPLICATION NO.:	GC0002 09		
STUDY NAME:	City of Veneta Conservation Project – Conservation of Backwash Water		
BASIN:	Willamette	**WRD DISTRICT:**	2
WRD FUNDS REQUESTED:	$13,000	**TOTAL COST:**	$26,000

APPLICATION DESCRIPTION:
The City of Veneta's water is supplied entirely from groundwater. Currently, the City's wells cannot produce enough water to meet peak seasonal demands. During the process of pumping goundwater, filters help to remove excess iron from the water. The City scrubs the filters daily by reversing the water flow through the filters and then disposing of that water and the accumulated unwanted material. This is called the "backwash" process. The City currently looses an average of 25,000 gallons per day during the backwash process. This is equal to 4.8% of total water use. During the backwash process the wells are shut down.

The engineering study will identify and assess a range of options for conservation and use of the "backwash" water and safely disposing of the accumulated iron and other particles. Potential alternatives include the use of a membrane treatment to produce high quality drinking water from the original backwash water and produce a small volumne of non-useable backwash water or a microfiltration cartridge to recover 100 percent of the backwash water.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team found this to be a good pilot conservation study. The associated project, if successful, would be low impact and would assist the City in meeting its peak seasonal demands. Other communities with similar high iron problems could learn from this study. The team noted that bacteria can accumulate in backwash water which can cause difficulties for the treatment facility if the backwash water is recycled through the treatment facility for reuse. Consequently, there is not a way to use the backwash water and it is currently wasted.

The team recommended funding all aspects of the proposed study except for the final design which went beyond the feasibility study and therefore was not eligible for funding under SB 1069. The applicant indicated that $2,500 of grant funds were requested for the final design.

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 on January 1, 2009 and be completed by April 30, 2009.

Application Review Team Funding Recommendation: Do Fund: High Priority at $10,500. Do not fund final design.

COMMENTS:
None received.

RECOMMENDATION:
Do Fund at $9,975. Do not fund final design.

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

Oregon Water Resources Department
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APPLICANT:	**Central Oregon Irrigation District**		
STUDY TYPE:	Water Conservation		
APPLICATION NO.:	GC0003 09		
STUDY NAME:	I-Lateral Water Conservation Feasibility Study		
BASIN:	Deschutes	**WRD DISTRICT:**	11
WRD FUNDS REQUESTED:	$11,000	**TOTAL COST:**	$23,900

APPLICATION DESCRIPTION:
Central Oregon Irrigation District's I-Lateral in Alfalfa, Oregon serves 1,712 acres. The feasibility study seeks to determine the cost effectiveness of piping or lining a 1.5 mile section of the I-Lateral. This section of the I-Lateral has very little elevation gain and also has high sedimentation. If the section can be piped or lined, it is estimated that 4.50 cubic feet per second (cfs) of water could be conserved, of which at least 2.25 cfs could be permanently converted to instream water rights in the Deschutes River through the use of the Allocation of Conserved Water Program. The restoration of streamflow in the Deschutes River is needed to improve fish habitat during the peak summer/irrigation season.

The study seeks to address ditch integrity issues caused by standing water, water seeping through the banks, rodent burrowing, sink holes, and silt build-up. The study also seeks to address high moss problems, water distribution problems associated with very limited elevation change, and above average maintenance costs due to all of these issues.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team found this to be a good straightforward study with a clear goal: to determine if it is economical to pipe or line a 1.5 mile section of the I-Lateral. The team recognized that this is a unique study because the area proposed to be studied is very flat and, therefore, has additional difficulties not associated with other piping or lining projects. Since there are many areas with limited elevation changes, the study may serve as a pilot for other irrigation districts.

The study has broad local support from five irrigation districts in central Oregon (not including the applicant), as well as the Deschutes River Conservancy. The team recognized that many of the irrigation districts in central Oregon, including the applicant, have successfully used the Allocation of Conserved Water Program and that there was a high likelihood for success.

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 on January 2, 2009 and be completed by July 15, 2009.

Application Review Team Funding Recommendation: Do Fund: High Priority at $11,000.

COMMENTS:
None received.

RECOMMENDATION:
Do Fund at $10,450.

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

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
Evaluation for September 2, 2008 Applications

APPLICANT:	**City of Bend**		
STUDY TYPE:	Water Conservation		
APPLICATION NO.:	GC0004 09		
STUDY NAME:	City of Bend Long-Term Water Supply Alternatives Analysis Conservation Project		
BASIN:	Deschutes	**WRD DISTRICT:**	11
WRD FUNDS REQUESTED:	$403,000	**TOTAL COST:**	$806,000

APPLICATION DESCRIPTION:
In 2007, the City of Bend completed a Water System Master Plan Update that indicated that the City needed to expand supply, storage and pumping capacities to meet demands through 2030. The preliminary cost estimates for upgrading and modifying the existing surface water supply is $50 million. Due to the magnitude of the project costs, the City is looking at potential alternatives to the surface water supply.

The City seeks a comprehensive feasibility study evaluating long-term water supply alternatives. Currently, the City's two main sources of water are large springs, which are diverted into Bridge Creek, and large capacity wells located throughout the City. The alternatives analysis will focus on the City's Bridge Creek surface water supply. Key alternatives to be considered include: converting Bend's surface water supply to groundwater; moving Bend's point of diversion downstream; and other alternatives that may leave more water instream to benefit fish and related resources. The study will estimate costs of surface water system upgrades and develop a comparative economic analysis of other water supply alternatives. The evaluation of alternatives will consider efficiency and conservation, resource benefits, hydroelectric power, water rights, water quality and treatment, outside funding, long-term costs, and factors such a disruptions to the public and ease of implementation. A preferred alternative would be identified to meet the City's long-term water supply needs while maximizing efficiency and conservation.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team found this to be a very expansive study, which had broad local support. In general the team liked the project, particularly the conservation elements. However, the application would have benefitted by concisely stating more tangible goals. For example, a feasibility study focused on moving the point of diversion. The team believed that some planning study elements were not eligible for funding under SB 1069. These elements included the hydropower evaluation and tasks associated with an extensive public involvement component that did not appear to be part of a feasibility study.

The team considered recommending funding several tasks, including Water Resource Evaluation, Water Treatment Evaluation, Efficiency and Conservation Evaluation, and Alternatives Evaluation and Selection. Ultimately, however, the team felt that only the Efficiency and Conservation Evaluation task should be recommended for funding at this time.

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 on or before January 1, 2009 and be completed by December 31, 2009.

Application Review Team Funding Recommendation: Do Fund: Contingent on Adequate Funding. If funds are available, fund Task 9: Efficiency and Conservation Evaluation for $18,000.

COMMENTS:

Letters of support for this application were received from Patrick Griffiths, Water Resources Coordinator, City of Bend, and Tod Heisler, Executive Director, Deschutes River Conservancy. Mr. Griffiths indicated that the City has had to make "major cuts" to their Long-Term Water Supply Alternatives Analysis Conservation Project due to reduced revenues. Due to these fiscal constraints the City no longer intends to pursue Task 9: Efficiency and Conservation Evaluation which was recommended for funding by the Application Review Team. Bend can complete this task as part of its conservation analysis for its 2010 Water Management and Conservation Plan update.

The City is currently rethinking how water is diverted and transported and includes instream and environmental concerns in its analysis. The City has three main drivers: 1) Meet the EPA LT-2 surface water treatment rules; 2) Replace an 11-mile transmission line; and 3) Reduce the risk of fire in the watershed. Bend's priorities for grant funding are Task 6.5: Water Rights and Water Strategy Support, Task 6.6: Water Resources Evaluation Report, and Task 3.3: Middle Deschutes River Temperature Evaluation. Tasks 6.5 and 6.6 would involve a water rights and flow feasibility analysis that would allow Bend to continue to use their existing rights and meet additional goals including those for instream flows. Task 3.3 would evaluate the effects of flows on temperature in the Middle Deschutes River and consider future increases in flows that could occur by transferring existing surface water rights to groundwater rights.

Mr. Heisler indicated that the water quantity and water quality components of the study are "key" to the mission of the Deschutes River Conservancy. He states that it is important to fund the flow analysis and study temperature changes that could result from Bend's water supply project in order to understand the potential impacts of this project on Tumalo Creek.

RECOMMENDATION:

Do Fund at $33,367. Fund Task 6.5: Water Rights and Water Strategy Support, except for the portion involving evaluating water rights for hydropower evaluation. A hydropower evaluation is beyond the scope of the Water Conservation, Reuse and Storage Grant Program. Fund Task 6.6: Water Resources Evaluation Report and Task 3.3: Middle Deschutes River Temperature Evaluation.

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
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APPLICANT:	**City of Sisters**		
STUDY TYPE:	Water Conservation		
APPLICATION NO.:	GC0005 09		
STUDY NAME:	City of Sisters Water Management and Conservation Plan		
BASIN:	Deschutes	**WRD DISTRICT:**	11
WRD FUNDS REQUESTED:	$20,000	**TOTAL COST:**	$40,000

APPLICATION DESCRIPTION:
The City of Sisters anticipates a 3.13% annual growth rate for the next 20 years. In 2003, its average per capita demand was 346 gallons per day, with the maximum per capita demand being 1,118 gallons per day. The City uses two groundwater rights for its potable water supply. In addition to these two rights, the City holds seven surface water rights for municipal and irrigation use, one storage right for municipal use, and five groundwater and surface water rights on the Lazy Z Ranch for irrigation use. Using the surface water rights is cost prohibitive due to operation and maintenance costs associated with a water treatment facility that would be required.

The City of Sisters seeks to prepare a Water Management and Conservation Plan under OAR Chapter 690, Division 86 to thoroughly research and identify the most effective and efficient means of pursing conservation. The City's water use is greatly influenced by tourism. To meet growing demands, the City intends to rely on new sources of water as well as relying heavily upon conservation.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team noted the City's high per capita water use and the different water rights used for irrigation within the City, including the City's and the school district's rights, as well as other rights. The team also discussed the water right condition requiring that the City complete an updated Water Management and Conservation Plan by July 13, 2009.

The team found that the water curtailment element of a Water Management and Conservation Plan was not associated with a feasibility study and had concerns that other elements of the plan, such as inventory of the District's water rights, may not be associated with a feasibility study, and therefore these tasks would not be eligible for funding under SB 1069.

The team felt that given the limited funding associated with the Water Conservation, Reuse and Storage Grant Program, and the severe water quantity problems facing the state, that other applications should be funded prior to this application.

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 13, 2009.

Application Review Team Funding Recommendation: Do Not Fund

COMMENTS:
Letters of support for this application were received from Eileen Stein, City Manager for the City of Sisters and Adam Sussman, GSI Water Solutions. Ms. Stein indicates that the population of the City of Sisters doubled between 2000 and 2007, and that the City is trying to secure its future water supply to meet the needs of current and future populations. The City views a viable Water Management and Conservation Plan as key element to the City's future. Both Ms. Stein and Mr. Sussman expressed concern that the Application Review Team added a criterion that was not part of the grant application material. Specifically, that the Application Review Team did not recommend funding the application because it was a "required" plan. If the City had known of this criterion, they would not have expended the resources to apply for the grant application.

RECOMMENDATION:
Do not fund.

Note: This is one of three applications that were forwarded to the 2008 Oregon Water Supply Conservation Initiative (OWSCI) Community Match Funding Program to be considered for funding along with other similar grant applications submitted to that program.

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
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APPLICANT:	**Malheur County Soil and Water Conservation District**		
STUDY TYPE:	Water Conservation		
APPLICATION NO.:	GC0006 09		
STUDY NAME:	Owyhee/Malheur LIDAR Assistance		
BASIN:	Owyhee/Malheur	**WRD DISTRICT:**	9
WRD FUNDS REQUESTED:	$192,456	**TOTAL COST:**	$472,537

APPLICATION DESCRIPTION:
Malheur County agriculture accounts for 85 percent of the economic activity in the county. To meet agricultural needs, the water delivery systems of the Owyhee Irrigation District, South Board of Control, Warmsprings Irrigation District, and Vale Irrigation District were constructed in the early 1900's. These water delivery systems are aging and cannot be expected to provide reliable water to farmers. Although some on-farm water conservation practices have been implemented, no conservation associated with the delivery systems have been undertaken because of the huge costs associated with such projects.

The goal of this study is to develop a system-wide conservation plan. The conservation plan consists of two central elements. First, an on-going inventory using Global Positioning System (GPS) technology will provide digital reference and attributes for Owyhee Irrigation District, South Board of Control, Warmsprings Irrigation District, and Vale Irrigation District. Second, high accuracy Light Detection and Ranging (LIDAR) data will be purchased through outside contractors. Using these two elements local, state, and federal agencies will be able to accumulate, organize, maintain and create a conservation plan. The conservation plan will give the irrigation districts the tools, information and research needed to secure funding to renovate the aged water delivery system, conserve water, and improve water quality.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team understood that Malheur County has the most irrigated acres in the state. The team recognized that this was a worthwhile project and that there is a state consortium headed by the Oregon Department of Geology and Mineral Industries to collect Light Detection and Ranging (LIDAR) data. The team discussed the advantages of LIDAR, including providing elevation data to within six inches, which can allow preliminary designs. The team also recognized that there was a huge potential to conserve water and that water quality issues are significant in Malheur County.

The team had concerns that there was not a clear feasibility study goal, only data collection. The team would have liked to have seen a better defined conservation goal with a clear end date. While the team supported the collection of data, they did not feel it was appropriate to fund it through this feasibility study grant program. The team also understood that the in-kind match for the GIS data collection had been modified from $98/hour to $14/hour (to reflect the Malheur County Soil and Water Conservation District's actual cost, rather than what a consult might charge). This changed the total match for this item from $163,072 to $23,296.

The team felt that given the limited funding associated with the Water Conservation, Reuse and Storage Grant Program, and the severe water quantity problems facing the state, that other applications should be funded prior to this application.

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 December 2008 and be completed by January 2011.

Application Review Team Funding Recommendation: Do Not Fund.

COMMENTS:
None received.

RECOMMENDATION:
Do Not Fund.

Oregon Water Resources Department
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APPLICANT:	**City of Dallas**		
STUDY TYPE:	Reuse		
APPLICATION NO.:	GR0007 09		
STUDY NAME:	City of Dallas Wastewater Reuse Project		
BASIN:	Willamette	**WRD DISTRICT:**	16
WRD FUNDS REQUESTED:	$63,000	**TOTAL COST:**	$126,000

APPLICATION DESCRIPTION:
The City of Dallas stores water from Rickreall Creek in Mercer Reservoir. The reservoir provides the majority of the water supply for the City during the summer and early fall months. The reservoir may not be able to meet the City's demands during droughts and there is a projected demand growth of 2.5 million gallons per day. Substituting reuse water where potable water is currently used or could be used would mitigate the need for an additional future reservoir or to convey water from an alternate source such as the Siletz or Willamette Rivers.

This study evaluates the technical, social, environmental, regluatory, and financial feasibility of providing reuse water from the City's wastewater treatment plant to parks, school grounds, residents, businesses, and industry. The study involves identifiying reuse application opportunities and quantifying the demand for reuse water; indentifying infrastructure needs along with capital and operation and maintenenance costs; evaluating system development charges and rates; assessing regulatory and environmental constraints; and promoting public acceptance through public involvement. The study would provide the City with a clear understanding of the constraints associated with its conceptual reuse project and could provide 1-2 million gallons per day that would primarily be used during the peak irrigation season, but could also be available year-round for industrial users.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team recognized that the City of Dallas wastewater treatment facility currently has a reuse project that irrigates poplar fields. The team also noted the potential to meet peak urban irrigation demands, which could result in a reduction of withdrawals from Rickreall Creek.

The team had concerns about whether many of the major tasks, such as the Wastewater Plant Reuse Facility Plan, Public Meetings and Financial Planning, were associated with a feasibility study and was appropriate for funding under the Water Conservation, Reuse and Grant Program. The team felt that given the limited funding associated with the Water Conservation, Reuse and Storage Grant Program, and the severe water quantity problems facing the state, that other applications should be funded prior to this application.

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 December 2009.

Application Review Team Funding Recommendation: Do not fund.

COMMENTS:
None received.

RECOMMENDATION:
Do not fund.

Oregon Water Resources Department
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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.

RECOMMENDATION:
Do Fund at $70,870.

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

Oregon Water Resources Department
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APPLICANT:	**Baker Valley Soil and Water Conservation District / Smith Ditch District Improvement Company**		
STUDY TYPE:	Water Conservation		
APPLICATION NO.:	GC0009 09		
STUDY NAME:	Smith Ditch Water Delivery Conservation Project		
BASIN:	Powder	**WRD DISTRICT:**	8
WRD FUNDS REQUESTED:	$25,000	**TOTAL COST:**	$95,000

APPLICATION DESCRIPTION:
The Smith Ditch is an unlined 18-mile long irrigation ditch which diverts water supplied by the Powder River and Phillips Reservoir. The ditch serves 17 users and is used for irrigating 2,600 acres. The loss factor of the ditch is between 20 and 40 percent. A portion of the ditch is located in a live slide area with 600 feet of tunnel in close proximity to the neighborhoods of Baker City and two miles running through the city limits. The ditch is a possible danger to the residents in the area.

The feasibility study would determine the best alternative for eliminating the open ditch, conserving water, providing a more efficient irrigation water conveyance, and eliminating a safety hazard to residents.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team found that there was strong community support for this application, which seeks to eliminate the Smith Ditch. In the past, the Smith Ditch has leaked into a subdivision and is a safety hazard. One alternative being considered is to install a new pumping station downstream and utilize the Corral Ditch to convey the irrigation water. This could offer significant instream benefits by leaving up to 65 cubic feet per second in the Powder River for 10 miles. It would also require modifications to the Corral Ditch to handle the increase volume, though it is anticipated that less water will need to be diverted since the ditch losses would be eliminated.

As part of the feasibility study, the team recommends that the applicant evaluate using the Allocation Of Conserved Water Program. If the Conserved Water Program was used, the water savings associated with the project could be protected for instream benefits.

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 March 2009 and be completed by June 1, 2011.

Application Review Team Funding Recommendation: Do Fund: High Priority at $25,000.

PUBLIC COMMENTS:
None received.

RECOMMENDATION:
Do Fund at $23,750.

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

Oregon Water Resources Department
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APPLICANT:	**City of Ashland**		
STUDY TYPE:	Water Conservation and Reuse		
APPLICATION NO.:	GC0010 09		
STUDY NAME:	Right Water Right Use Planning Study		
BASIN:	Rogue	**WRD DISTRICT:**	13
WRD FUNDS REQUESTED:	$225,000	**TOTAL COST:**	$452,500

APPLICATION DESCRIPTION:
The City of Ashland has two fundamental water challenges associated with long-term community sustainability: 1) Provide reliable and safe potable water for anticipated community growth; and 2) Improve the health of Ashland Creek and Bear Creek by increasing summer streamflows and lowering temperatures to improve fish habitat.

Ashland's proposed study is a holistic approach to water use. The goal of the study is to define the interrelationships between all of the available sources of water, including the use of irrigation water and recycled/reuse treated effluent, to offset irrigation demand within the City. Additionally, the study seeks to specifically identify benefits and challenges of using irrigation water with the existing construct of providers and regulatory oversight.

The study will define the *Right Water for the Right Use* by evaluating all the environmental parameters, all of the community needs, promoting acceptability of using recycled water, and ultimately developing a sustainable conservation and irrigation program to meet the City's needs to 2058.

APPLICATION REVIEW TEAM EVALUATION:
This was the only "combination" application in the group: both a water conservation and a reuse feasibility study. The Application Review Team recognized the holistic approach of this application and found that it had a clear goal that was consistent with the intent of SB 1069. Although the goal to conserve limited potable water supplies and utilize available water resources to maximize community and environmental benefits was clear, the potential impact of the associated project was not as well defined. There could be 2.2 million gallons per day of Class A treated water available for irrigation use and Bear Creek could benefit from the additional flows.

The team recognized that unlike many potential studies, this study could not begin immediately, but it could begin within three months of being awarded a grant. The team found that the last four study tasks: develop justification for the preferred alternative; develop final report and present to the City Council; coordinate with Ad Hoc Water Reuse and Conservation Task Force; and report to the Ashland City Council every 6 months went beyond the feasibility study component and were not consistent with SB 1069.

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 within three months of

receiving grant approval and be completed by June 2010.

Application Review Team Funding Recommendation: Do Fund: Medium Priority at $177,750. Do not fund the last four tasks: Develop justification for the preferred alternative; Develop final report and present to the City Council; Coordinate with Ad Hoc Water Reuse and Conservation Task Force; Report to the Ashland City Council every 6 months.

COMMENTS:
Letters of support for this application were received from Senator Alan Bates, Representative Peter Buckley, and Frances Oyung on behalf of Bear Creek Watershed Council. These letters indicate that the planning study would allow Ashland to seek a comprehensive solution to its water constraints of limited storage capacity; wastewater treatment plant effluent currently not meeting water quality standards for temperature; potable water source vulnerable to floods, drought, and climate change; and, stakeholder's perceptions of the use of treated effluent as an irrigation water source.

RECOMMENDATION:
Do Fund at $168,863. Do not fund the last four tasks: Develop justification for the preferred alternative; Develop final report and present to the City Council; Coordinate with Ad Hoc Water Reuse and Conservation Task Force; Report to the Ashland City Council every 6 months.

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

Oregon Water Resources Department
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APPLICANT:	**Sunriver Environmental LLC / Deschutes County**		
STUDY TYPE:	Reuse		
APPLICATION NO.:	GR0011 09		
STUDY NAME:	South County Area Reuse Project		
BASIN:	Deschutes	**WRD DISTRICT:**	11
WRD FUNDS REQUESTED:	$127,298	**TOTAL COST:**	$254,595

APPLICATION DESCRIPTION:

Sunriver irrigates one golf course and some landscape features with groundwater and it also provides water and sewer service to two adjacent destination resorts that irrigate golf courses using groundwater. The groundwater and surface water in the area are hydrologically connected, and the Deschutes River does not always meet instream flow needs and water quality standards for dissolved oxygen, pH, and chlorophyll a.

The planning study would investigate the feasibility of reusing treated sewage as recycled water. Water replaced by the use of recycled water will be made available for other development in the Upper Deschutes River Basin. This primary goal develops new sources of reclaimed water to replace groundwater that is currently used. A secondary goal is to replace inadequate septic systems in a portion of LaPine that are contributing to groundwater contamination. These goals would be accomplished by extending sewers from Sunriver into South Deschutes County to replace inadequate septic systems.

Water replaced by the use of recycled water will be made available for other developments in the Upper Deschutes River Basin. If 880 houses could be connected to the Sunriver sewerage facility, enough recycled water would be available to supply the demands of a golf course, about 260 acre-feet. The associated project, if implemented, could reduce return flows by replacing septic systems. The applicant indicates that the potential improvement in water quality should offset the reduction in flows.

APPLICATION REVIEW TEAM EVALUATION:

The Application Review Team found the applicant had experience in water reuse project management and that there were potential water quality benefits through the replacement of inadequate septic systems in South Deschutes County and through the treatment of residential wastewater to the Sunriver wastewater treatment facilities. The team found that there was local support for the study.

The team recognized that this was primarily a groundwater water quality and sewerage study, and not a study to resolve water supply issues. This area of the Deschutes Basin has sufficient water to meet its existing water right demands. However, due to the interconnectivity with the middle and lower Deschutes Basin and potential interference with the State Scenic Waterway, no new water rights are being issued without mitigation. The application has an interest in making new water available "that could be applied to a higher or better use," but no specific demand was indicated.

The team felt that given the limited funding associated with the Water Conservation, Reuse and Storage Grant Program, and the severe water quantity problems facing the state, that other applications should be funded prior to this application.

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 on January 1, 2009 and be completed by April 1, 2010.

Application Review Team Funding Recommendation: Do Not Fund.

COMMENTS:
Letters of support for this application were received from Representative Gene Whisnant (two letters); a joint letter from Deschutes County Commissioners Dennis R. Luke, Chair, Tammy Baney, Vice Chair, and Michael M. Daly, Commissioner; David B. Ogden, President of Special Road District #1, Deschutes County; Carl Jansen, Senior Commissioner, Spring River Road District and President, Upper Deschutes River Coalition (included with this letter was a petition signed by 31 residents of the Sunriver area supportive of the feasibility study); and residents Mike Fox, Norm Brookhart, Jim Murphy, and Ron Hoffman.

These letters indicate that there is strong support for a feasibility study to evaluate the potential for treating sewage from more than 1,000 households south of the Sunriver Resort. Currently, the sewage generated by homeowners goes into septic tanks and drain-fields and there is a concern that these septic systems may ultimately contaminate the local, shallow groundwater aquifer with nitrate, which may exceed drinking water standards. Deschutes County has adopted a "local rule" that requires the septic systems to be upgraded, and "system enhancements" are required by DEQ. The estimated costs for nitrate reduction unit upgrades for each septic system are $10,000 plus an annual maintenance fee of $500. Although there are vacant residential lots in the Upper Deschutes Basin, there is not existing water available for development. Collecting, treating and reusing the effluent water could free up water that would then become available to new developments.

A letter in opposition was received from Merlyn Webster. Mr. Webster indicated that the current use of the proposed expansion lands was intended and approved to support only Sunriver and no other communities. He is opposed to any "design creep" and states that the grant should not be awarded unless the applicants plan to relocate the operation closer to the new customers.

RECOMMENDATION:
Do Not Fund.

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
Evaluation for September 2, 2008 Applications

APPLICANT:	**City of Medford, Water Reclamation Division**		
STUDY TYPE:	Water Conservation		
APPLICATION NO.:	GC0012 09		
STUDY NAME:	Water for Irrigation, Streams and Economy (WISE)		
BASIN:	Rogue	**WRD DISTRICT:**	13
WRD FUNDS REQUESTED:	$500,000	**TOTAL COST:**	$1,000,000

APPLICATION DESCRIPTION:
The Water for Irrigation, Streams and Economy (WISE) Project is conducting a Feasibility Study and Environmental Impact Statement (FS/EIS) to provide long term integrated water resource management in the Little Butte Creek and Bear Creek watersheds. Conservation alternatives that have been developed included replacing existing earthen canals with pipelines, using reclaimed effluent for irrigation and using conserved water to improve stream flows. The Little Butte Creek watershed provides prime Coho salmon spawning habitat for the Rogue River Basin, and the Bear Creek watershed is well known for its fruit and other agricultural products. The WISE Project Advisory Committee, with 19 members representing instream, agricultural, irrigation and municipal interests, is leading this effort, which includes public outreach beyond the requirements of the FS/EIS. This planning study is designed to gather and analyze the relevant data and information to develop the best possible product and provide all stakeholders the opportunity to participate in the project development and planning.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team was very familiar with and supportive of the WISE Project. However, most of the funding request did not seem applicable to the feasibility study concept of this grant program, as it was associated with National Environmental Protection Act (NEPA) and Environmental Impact Statements (EIS) that were geared more to the implementation phase of the project. Additionally, a great deal of work has already been done on water quality, especially temperature, and the instream flow needs of fish. Examples of these studies that were discussed included the Bear Creek Total Maximum Daily Load (TMDL) study, the Bureau of Reclamation instream flow study, and Bureau of Reclamation studies associated with Section 7 Endangered Species Act consultation. The team agreed that additional information would be collected by the new studies, but that it would only incrementally add to the information already available. Given the limited funds that are available, the team had the greatest interest in funding the Water Distribution and On-Farm Irrigation Conservation task and the Stormwater Management Evaluation task (the irrigation ditches are used as part of the stormwater management system). Ultimately, however, due to limited funds, the team only recommended funding the Water Distribution and On-Farm Irrigation Conservation task.

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 on or before January 1, 2009 and be completed by June 30, 2010.

Application Review Team Funding Recommendation: Do Fund: High Priority at $30,000. Limit funding to the Water Distribution and On-Farm Irrigation Conservation task.

COMMENTS:
A letter of support for this application was received from Frances Oyung on behalf of Bear Creek Watershed Council. The Council supports the goals of WISE and has been a member of the Project Advisory Committee since the formation of the project. The Council believes that this project is critical to the future of water resource management in the watershed and supports the feasibility study and Environmental Impact Statement.

RECOMMENDATION:
Do Fund at $28,500. Limit funding to the Water Distribution and On-Farm Irrigation Conservation task.

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

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
Evaluation for September 2, 2008 Applications

APPLICANT:	**Klamath Basin Rangeland Trust**		
STUDY TYPE:	Water Conservation		
APPLICATION NO.:	GC0013 09		
STUDY NAME:	Planning study for the establishment of a water transaction program in the Upper Klamath Basin		
BASIN:	Klamath	**WRD DISTRICT:**	17
WRD FUNDS REQUESTED:	$71,500	**TOTAL COST:**	$151,239

APPLICATION DESCRIPTION:

This planning study is to design a water transaction program for the Upper Klamath Lake watershed. Previous modeling determined that an additional 30,000 acre-feet of water needs to flow into the lake each year in order to balance fishery, agriculture, and Tribal needs in, around and downstream from the lake. Klamath Basin Rangeland Trust will build upon existing data, short-term instream leases, and partnerships to develop a plan for a water transactions program to keep needed water instream and flowing to the lake. The National Fish and Wildlife Foundation currently administer a water transactions program in the Columbia Basin and are interested in expanding their program to the Upper Klamath Basin. The planning study will be used to identify flow targets, develop an administrative transaction structure, a pricing framework, and a funding structure for the program.

APPLICATION REVIEW TEAM EVALUATION:

The Application Review Team found this application to be unique because while most applications sought to address the Department's co-equal goal of addressing Oregon's water supply needs, this application, more than any other application, sought to address the Department's co-equal goal of restoring and protecting streamflows and watersheds. Klamath Basin Rangeland Trust (KBRT) has been involved in leasing water rights instream since 2004. In the last five years, KBRT has a remarkably successful record of restoring streamflows. In 2007, KBRT was involved in instream leases that restored more streamflows in Oregon than any other non-profit organization. KBRT was second only to leases that were done directly with WRD in the total quantity of streamflows restored. If this feasibility study is successful, it could serve as a model for other areas of the state.

The application could have been strengthened with additional letters of support (there was only one letter from the Klamath Watershed Partnership). However, the application indicates that cooperators in the study include: the National Fish and Wildlife Foundation, Oregon Watershed Enhancement Board, Sustainable Northwest, Klamath Watershed Partnership (who wrote a letter of support), and the Klamath Tribes. Information from other organizations, including the Oregon Department of Fish and Wildlife and Klamath Water Users Association, is planned to be used.

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 on January 1, 2009 and be completed by December 31, 2010.

Application Review Team Funding Recommendation: Do Fund: High Priority at $71,500.

COMMENTS:
None received.

RECOMMENDATION:
Do Fund at $67,925.

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

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
Evaluation for September 2, 2008 Applications

APPLICANT:	**Baker County: Powder Basin Water and Stream Health Committee**		
STUDY TYPE:	Above Ground Storage		
APPLICATION NO.:	GA0014 09		
STUDY NAME:	Water and Stream Health Feasibility Study – Tasks 1, 2, 3		
BASIN:	Powder	**WRD DISTRICT:**	8
WRD FUNDS REQUESTED:	$500,000	**TOTAL COST:**	$1,000,000

APPLICATION DESCRIPTION:

The Powder Basin Water and Stream Health Committee (WASH) goal is to "enhance water quantity and quality in the Powder Basin." The Powder Basin has 10-14 inches of annual precipitation and high elevation topography with deep snowpack. Water storage is expected to be an effective solution to a chronic water supply problem. WASH, in cooperation with the Bureau of Reclamation, is scheduled to complete a Hydrologic Analysis of the entire basin by May 2009.

WASH, in cooperation with the Bureau of Reclamation, is proposing a feasibility study of a yet-to-be determined storage site. The feasibility study will refine the identified alternatives, collect missing data, and develop engineering solutions. Studies will be needed to support the development of alternatives including: hydrology, water rights, hydraulics, geotechnical investigations, engineering, and design analysis. The alternatives once refined will go through an evaluation and assessment process. The evaluation will include technical development and cost estimate, environmental impact and economic viability evaluation, and identification of political, legal and administrative issues.

APPLICATION REVIEW TEAM EVALUATION:

The Application Review Team found this application to be in the early stages of a feasibility study. The team recognized that there was very broad support for WASH and the application. Additionally, the Oregon Department of Agriculture has water right reservations with a 1996 priority date that could be utilized with the associated project.

The team was supportive of the study's goal, but felt that the application would have been strengthened by narrowing the study's scope. For instance, 74 potential storage sites are under consideration; however, a much smaller number of sites seem to be the primary candidates for storage. A stronger discussion of the instream needs would have been useful. Additionally, the team felt that many of the line items had high budget requirements, such as the 4,000 hours associated with hydrology and economics.

The study is a priority for funding under SB 1069 since it includes provisions for using stored water to augment instream flows to conserve, maintain and enhance aquatic life, fish life or other ecological values. The study could begin on or before June 1, 2009 and be completed by July 1, 2012.

Application Review Team Funding Recommendation: Do Not Fund.

COMMENTS:
Letters of support for this application were received from U.S. Senator Gordon H. Smith; Representative Cliff Bentz; a joint letter from Fred Warner, Jr., Chairman, Baker County Commissioners and Tom Mac Kerns, Chair, WASH Committee; a joint letter from Mayor Bob Strom, City of Halfway, Kerry Gulick, Vice President, Pine Valley Community Watershed Project, and Rick Bryan, owner Old Pine Market (in Halfway); Peggy S. Browne, Coordinator, Water & Stream Health Committee; Jerry Franke, Manager Burnt River Irrigation District; Aaron Umpleby, Manager, Powder Valley Water Control District; and Cal Foster, Baker Valley Rancher.

These letters indicate that by June 2009 the Powder Basin Water & Stream Health (WASH) Committee will have narrowed down the 74 potential water storage sites to one preferred site. The WASH Committee has broad support, including funding from at least 16 entities, and has federal authorization for optimization and feasibility studies to be conducted in the Powder and Burnt River Basins. The project would address WRD's water supply goal and Economic and Community Development Department's economic goal through the creation of a multi-purpose water storage facility.

Ms. Browne indicated that funding from the Water Resources Department would help maintain the project's momentum, and recommended funding at least a portion of the study, such as "Task 1:" Data Collection: Water Quality, Hydrology, Economic Analysis, Cultural Resources, Real Estate/Land Ownership, Fish and Wildlife, Recreation, Geology/Geotechnical.

RECOMMENDATION:
Do Fund at $20,000; contingent on contract negotiations to ensure that all provisions of the statute are met. Limit funding to Task 1: Data Collection.

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
Evaluation for September 2, 2008 Applications

APPLICANT:	**Grande Ronde Model Watershed**		
STUDY TYPE:	Storage Other Than Above-Ground (including Aquifer Storage and Recovery [ASR])		
APPLICATION NO.:	GB0015 09		
STUDY NAME:	Union and Wallowa Counties Watershed Storage		
BASIN:	Grande Ronde	**WRD DISTRICT:**	6
WRD FUNDS REQUESTED:	$100,000	**TOTAL COST:**	$220,000

APPLICATION DESCRIPTION:
The planning study will evaluate the potential applications of managed underground storage techniques in Bear Creek, Lostine River, upper Catherine Creek and the upper Grande Ronde River watersheds. The goals are to determine feasible ways to augment late season stream flows that are currently consumed by irrigation and to help mitigate declining groundwater tables in the upper Grande Ronde Valley. The study will also consider whether artificial recharge can be used in the Bear Creek and Lostine River watersheds, and whether artificial recharge and aquifer storage and recovery options are available in the upper Catherine Creek and upper Grande Ronde River watersheds.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team was confident that the goals could be achieved, in part because the watershed council is well organized and highly motivated. The team found the feasibility study tasks to be logical and clearly identified. The geology and groundwater resources of the upper Catherine Creek and upper Grande Ronde River watersheds were believed to be better suited to this type of study than the Bear Creek and Lostine River watersheds. The greatest need was also felt to be in the upper Catherine Creek and upper Grande Ronde River watersheds. Consequently, since grant funds were limited the team felt the most benefit would be achieved by funding the upper Catherine Creek and upper Grande Ronde River watersheds studies.

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 on January 1, 2009 and be completed by September 1, 2010.

Funding Recommendation: Do Fund: High Priority at $51,500. Fully fund the studies in the upper Catherine Creek and upper Grande Ronde River watersheds.

COMMENTS:
A letter of support for this application was received from Donald G. Sampson, Executive Director of the Confederated Tribes of the Umatilla Indian Reservation. Mr. Sampson indicates that local demands on water resources will continue to increase while threats to endangered fish species will continue. Understanding the potential of aquifers in the Grande Ronde sub basin enhances the opportunities to "assure a plentiful supply of water for farms, fish, and people."

RECOMMENDATION:

Do Fund at $48,925; contingent on contract negotiations to ensure that all provisions of the statute are met. Fully fund the studies in the upper Catherine Creek and upper Grande Ronde River watersheds.

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

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
Evaluation for September 2, 2008 Applications

APPLICANT:	**Mosier Watershed Council**		
STUDY TYPE:	Storage Other Than Above-Ground (including Aquifer Storage and Recovery [ASR])		
APPLICATION NO.:	GB0016 09		
STUDY NAME:	Mosier Aquifer Recovery Feasibility Study		
BASIN:	Hood	**WRD DISTRICT:**	3
WRD FUNDS REQUESTED:	$167,224	**TOTAL COST:**	$806,259

APPLICATION DESCRIPTION:
Groundwater levels have been declining in the agriculture-dependent Mosier Valley since significant irrigation pumping began in the 1960s. In 2005, the Mosier Watershed Council, in partnership with the U.S. Geologic Survey, initiated Phase I of a geologic study and ground modeling process to determine Mosier's sustainable groundwater yield. Phase I is to be completed in December 2008.

Phase II of the study, associated with this grant application, is to evaluate the feasibility of implementing Artificial Recharge (AR) or Aquifer Storage and Recovery (ASR) to maintain that sustainable yield. Hydrogeological, physical, regulatory, ecological and economic feasibilities of AR or ASR and other alternatives are to be considered. The goal is to meet the long-term water needs of the residents and agricultural economy of Mosier Valley, predicted to be approximately 1,900 acre-feet per year, in a sustainable way that will reverse the current groundwater decline and the resulting decline in Mosier Creek base flows. Achievement of that goal will be based on evaluating the feasibility of pursuing AR or ASR or above-ground storage and conservation alternatives.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team recognized that the top two basalt aquifers have limited use, and declines in the third basalt aquifer indicate water supply problems. The team generally found the applicant had clear tasks, goals, and anticipated outcome for the study. The applicant demonstrated wide community involvement, including having 11 letters of support from diverse interests. The feasibility study will utilize the U.S. Geologic Survey groundwater model to clarify underground storage opportunities.

The application mentioned evaluating above-ground storage options and conservation potentials. These activities are not described in the budget elements and the team considered recommending that the grant be restricted to the AR/ASR, but ultimately did not recommend this restriction.

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 May 2010.

Application Review Team Funding Recommendation: Do Fund: High Priority at $167,224.

COMMENTS:
None received.

RECOMMENDATION:
Do Fund at $158,863; contingent on contract negotiations to ensure that all provisions of the statute are met.

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

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
Evaluation for September 2, 2008 Applications

APPLICANT:	**City of Florence**		
STUDY TYPE:	Water Conservation		
APPLICATION NO.:	GC0017 09		
STUDY NAME:	City of Florence Water Management and Conservation Plan		
BASIN:	Mid Coast	**WRD DISTRICT:**	2
WRD FUNDS REQUESTED:	$20,000	**TOTAL COST:**	$40,000

APPLICATION DESCRIPTION:
The City of Florence plans for an average annual growth rate of 3.5 percent, however it anticipates that its water demand will grow at a slower rate. Nonetheless, the City will likely exceed its water supply by 2010, and treatment capacity by 2011. The City holds four water rights, three being for groundwater use, and one for surface water use from Munsel Creek. Munsel Creek contains elevated levels of iron and the City has not appropriated water from it for a number of years. The three groundwater rights produce less than the amount authorized by the water rights.

The City of Florence seeks to prepare a Division 86 Water Management and Conservation Plan under OAR Chapter 690, Division 86 to thoroughly research and identify the most effective and efficient means of pursing conservation. To meet growing demands, the City intends to rely on new sources of water as well as relying heavily upon conservation.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team discussed the City's water right situation as well the water right condition requiring that the City prepare a Water Management and Conservation Plan by September 19, 2009. The team noted the letter of support from Heceta Water District (which also requested grant funds for preparing a Water Management and Conservation Plan), but there was no indication that the two entities would work together to develop plans. If the team were to recommend funding the City of Florence's Water Management and Conservation, it indicated that it would want to see that the plan was developed in coordination with Heceta Water District, which has its source of water from Clear Lake, which flows into Munsel Lake and then into Munsel Creek, for which the City of Florence has a water right.

The team found that the water curtailment element of a Water Management and Conservation Plan was not associated with a feasibility study and had concerns that other elements of the plan, such as inventory of the District's water rights, may not be associated with a feasibility study, and therefore these tasks would not be eligible for funding under SB 1069.

The team felt that given the limited funding associated with the Water Conservation, Reuse and Storage Grant Program, and the severe water quantity problems facing the state, that other applications should be funded prior to this application.

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 September 19, 2009.

Application Review Team Funding Recommendation: Do Not Fund

COMMENTS:
A letter of support for this application was received from Adam Sussman, GSI Water Solutions. Mr. Sussman expressed concern that the Application Review Team added a criterion that was not part of the grant application material. Specifically, that the Application Review Team did not recommend funding the application because it was a "required" plan. If the City had known of this criterion, they would not have expended the resources to apply for the grant application.

RECOMMENDATION:
Do not fund.

Note: This is one of three applications that were forwarded to the 2008 Oregon Water Supply Conservation Initiative (OWSCI) Community Match Funding Program to be considered for funding along with other similar grant applications submitted to that program.

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
Evaluation for September 2, 2008 Applications

APPLICANT:	**Middle Fork Irrigation District**		
STUDY TYPE:	Above Ground Storage		
APPLICATION NO.:	GA0018 09		
STUDY NAME:	Laurance Lake Additional Reservoir Storage		
BASIN:	Hood	**WRD DISTRICT:**	3
WRD FUNDS REQUESTED:	$28,000	**TOTAL COST:**	$56,000

APPLICATION DESCRIPTION:
Laurance Lake Reservoir on the Clear Branch of the Middle Fork of the Hood River has temperature and supply issues during typical summer months. Middle Fork Irrigation District has the right to store up to 3,550 acre-feet of water, with the excess runoff passing over the spillway.

This study is to assess the feasibility of raising the reservoir approximately three feet above the currently spill elevation. This elevation change allows for the storage of an additional 350 to 400 acre-feet of water during the spring runoff. This new storage is an attenuation of the typical runoff flows and would help to improve water temperature and supply issues during mandatory discharge releases. The study must address storage reliability at this higher reservoir level; the technical aspects of dam safety due to a slightly higher reservoir water level; impacts to the possible inundation of some of the U.S. Forest Service Laurance Lake Campgrounds; methods associated with development of a structure to raise the reservoir water elevation; and enhancement of the aquatic life and Bull Trout habitat in and below Laurance Lake.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team found the application to be a straightforward proposal which could add 10 percent to the District's storage. The proposed project associated with this feasibility study is on U.S. Forest Service ground and would require a modification of the District's water right. The team recognized that there is a potential benefit to the fisheries through stabilization of water temperature in Laurance Lake and providing increased later summer flows in Clear Branch below the dam. However, the team also recognized that the associated project could inundate Bull Trout habitat.

The study is a priority for funding under SB 1069 since it includes provisions for using stored water to augment instream flows to conserve, maintain and enhance aquatic life, fish life or other ecological values. The study could begin immediately and be completed by March 2010.

Application Review Team Funding Recommendation: Do Fund: Contingent on Adequate Funding. If funds are available, fund at $28,000.

COMMENTS:
None received.

RECOMMENDATION:
Do Not Fund.

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
Evaluation for September 2, 2008 Applications

APPLICANT:	**Joint Water Commission**		
STUDY TYPE:	Storage Other Than Above-Ground (including Aquifer Storage and Recovery [ASR])		
APPLICATION NO.:	GB0019 09		
STUDY NAME:	Joint Water Commission Aquifer and Storage Recovery Feasibility Study		
BASIN:	Willamette	**WRD DISTRICT:**	18
WRD FUNDS REQUESTED:	$200,000	**TOTAL COST:**	$17,972,752

APPLICATION DESCRIPTION:
The Joint Water Commission (JWC) includes the Cities of Hillsboro, Forest Grove, Beaverton, Tigard, and Tualatin Valley Water District. It is anticipated that within the next 20 to 30 years, 400,000 additional people will move into Washington County. To meet the needs of the Tualatin Basin and the growing population, the Tualatin Basin Water Supply Project began studying water supply alternatives eight years ago, including using Willamette River water and raising Scoggins Reservoir on the Tualatin River.

The goal of this study is to provide the JWC and member agencies with all the relevant Aquifer Storage and Recovery (ASR) information related to a joint ASR project and the potential costs and benefits of such a project. The benefits of the program include delaying a treatment plant expansion and new transmission line costs, decreasing withdrawals on the Tualatin River during the peak season, and creating efficient water management within the JWC system.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team recognized the value in exploring underground storage in this area and determining how much of the peak season water supply needs could be met by a cooperative ASR development program. To better evaluate the application, the team would have liked to have seen more detailed goals and tasks.

The team was concerned that the applicant had not committed to including the statutorily required study components in its feasibility study. The application also lacked any letters of support and noted that virtually all of the tasks, except the production of the final report, are scheduled to be completed prior to the Water Resources Commission awarding grants. The team did not believe that the production of the report qualified as a feasibility study.

The team felt that given the limited funding associated with the Water Conservation, Reuse and Storage Grant Program, and the severe water quantity problems facing the state, that other applications should be funded prior to this application.

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 began in April 2008 and is scheduled for completion by December 2008 or early 2009.

Application Review Team Funding Recommendation: Do Not Fund.

COMMENTS:
None received.

RECOMMENDATION:
Do Not Fund.

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
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APPLICANT:	**City of Hillsboro / City of Beaverton**		
STUDY TYPE:	Water Conservation		
APPLICATION NO.:	GC0020 09		
STUDY NAME:	Water Sense Rebate Feasibility Study		
BASIN:	Willamette	**WRD DISTRICT:**	18
WRD FUNDS REQUESTED:	$15,000	**TOTAL COST:**	$30,000

APPLICATION DESCRIPTION:
The City of Hillsboro has had a high efficiency washing machine rebate program in place for more than six years. The program has been highly successful and the washing machine market has been transformed in Hillsboro. The popularity of the rebate program and the need for financial and retrofit incentive programs provides an opportunity to develop different rebate programs that will better target water efficiency standards and should increase water savings and drop per capita consumption. Beaverton does not currently have a rebate program. Hillsboro and Beaverton would like to pioneer programs in partnership with the Environmental Protection Agency (EPA) Water Sense labeling program.

The goal of this study would be to evaluate the cost benefit analysis and feasibility of a Water Sense Rebate Program for the Cities of Hillsboro and Beaverton. The information gained from this study will help assist in program and policy revisions to a conservation rebate program that meets OAR Chapter 690, Division 86 rules (Water Management and Conservation Plans), and may reduce the overall per capita demand on the water system. The information will be presented to the Hillsboro Utilities Commission and Beaverton City Council, and portions of the study may be implemented based on staff resources, budget availability and policy adoptions.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team recognized that some of the most difficult data to gather are related to participation rates in rebate programs. The locally developed data collected from this study has a high probability of being acceptable to the Greater Portland Metropolitan Area.

The application discusses the success of Hillsboro washing machine rebate program, but no other potential rebate programs are mentioned. The team would have liked additional information on the type of rebate programs being considered. The team would have also liked to have had greater details concerning the current water demand, and how the associated project would meet the demand. The team recognized that this was one of the questions the study would seek to answer, but still felt that a "ball park" estimate could have been provided, and the study would have refined this estimate.

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 July 2009 and be completed by March 2010.

Application Review Team Funding Recommendation: Do Fund: Contingent on Adequate Funding at $15,000.

COMMENTS:
A letter of support for this application was received from Niki Iverson and Tacy Steele, City of Hillsboro. The letter indicated that the application should have received a higher priority ranking and that the study will analyze the administrative costs and water savings of several different products to determine the most cost effective programs for the Cities to implement. The study seeks to answer several policy questions, including: "Which products will result in the biggest water savings for the smallest investment? What products are consumers most interested or receptive to changing out? How much should the rebate be to minimize free-riders? What is the value of the water that is saved through a WaterSense rebate program? How does the cost of the rebate program compare to the cost of new source/capacity development? What are total projected savings over the life of the product?"

Kimberley Priestley of WaterWatch indicated that a higher percentage of funding should be dedicated to conservation and reuse projects.

RECOMMENDATION:
Do Fund at $15,000.

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
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APPLICANT:	**City of Tigard / Clean Water Services**		
STUDY TYPE:	Reuse		
APPLICATION NO.:	GR0021 09		
STUDY NAME:	Tigard-Area Water Reuse Study		
BASIN:	Willamette	**WRD DISTRICT:**	18
WRD FUNDS REQUESTED:	$70,000	**TOTAL COST:**	$142,000

APPLICATION DESCRIPTION:
Since 1984, Clean Water Services has been producing reuse water for irrigation within the Cities of Tigard and Durham. The goal of the study is to expand the reuse of wastewater treatment plant effluent to enhance an "urban stream" identified as a project in the Tigard City Center Renewal Plan, improve the livability of the Tigard downtown core, and augment the flow of Fanno Creek. Fanno Creek is a tributary to the Tualatin River that is impacted by low summertime flows – its lowest flow was 1 cubic foot per second (cfs) in September 2001, and frequently is less than 5 cfs in July and August. Fanno Creek also exceeds temperature standards established for protecting salmonids.

This study will evaluate the feasibility of expanding the reuse of effluent from Clean Water Service's 21 million gallon per day Durham Advanced Wastewater Treatment Facility to serve the City of Tigard downtown area and reduce the demands on Fanno Creek. The planning study would identify the: 1) Potential demand for reuse water in Tigard; 2) Benefits and impacts of reducing discharge to the Tualatin River; 3) Capital improvements needed to deliver reuse water to meet the demand; 4) Operational and maintenance costs associated with identified capital improvements; 5) Public acceptance issues that must be addressed in order to implement a successful reuse program in a downtown area; and 6) Opportunities to use reuse water to offset irrigation withdrawals during the summer, thus restoring Fanno Creek summertime flows.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team recognized that the City of Tigard is already using reuse water on park facilities near its wastewater treatment facility and has attained a good level of public acceptance. The team also recognized that the applicants relied on good water supply demand and future water supply needs assessments, that there was good local support from the business community and golf courses for using a significant portion of the 21 million gallons per day wastewater treatment effluent capacity. There was also the potential of both improving streamflows and water quality in Fanno Creek.

The team was concerned that the last three study elements (Tasks 9, 10, and 11: develop implementation plan, identify permit requirements, and indentify funding sources) were going too far into implementation and were not appropriate for this feasibility study grant program to fund.

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 December 1, 2009.

Application Review Team Funding Recommendation: Do Fund: Medium Priority at $53,000. Do not fund Tasks 9, 10, and 11: Develop implementation plan; Identify permit requirements; Identify funding sources.

COMMENTS:
None received.

RECOMMENDATION:
Do Fund at $50,350. Do not fund Tasks 9, 10, and 11: Develop implementation plan; Identify permit requirements; Identify funding sources.

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

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
Evaluation for September 2, 2008 Applications

APPLICANT:	**City of Corvallis**		
STUDY TYPE:	Reuse		
APPLICATION NO.:	GR0022 09		
STUDY NAME:	City of Corvallis Wastewater Reclamation Plant Water Recycling Project		
BASIN:	Willamette	**WRD DISTRICT:**	16
WRD FUNDS REQUESTED:	$174,700	**TOTAL COST:**	$356,000

APPLICATION DESCRIPTION:
The City of Corvallis is looking for alternate discharge options for treated wastewater to comply with the Willamette River temperature Total Maximum Daily Load (TMDL) and eliminate direct discharge to the river. The City has evaluated regulatory requirements and economic impacts of current and continued long-term discharge to the Willamette over the next 50 years. It also conducted a screening evaluation was conducted for alternate indirect river discharges. Because of this screening evaluation, three water reuse alternatives were identified as potential solutions to protect water quantity and quality in the future and to enhance community livability by providing a sustainable water resource. Water quantity needs that could be addressed by the associated project include: agricultural irrigation, urban irrigation, wetland restoration, wildlife habitat expansion, augmenting streamflows, and conserving water from the Willamette River and local streams.

This planning study builds upon a Preliminary Assessment of Recycled Water Facilities (completed in July 2006) and the Regulatory and Economic Impacts Evaluation and Reuse Alternatives Preliminary Screening (completed in July 2008). The purpose of this study is to perform a comprehensive feasibility cost analysis for the three water reuse alternatives previously identified and select the most suitable alternative. The feasibility study will be presented to the public for input and opinions to determine the most acceptable reuse alternative.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team found the application to have an impressive listing of professional/human resource qualifications, federal interest in the project (Willamette Valley National Wildlife Refuge) and potential water quality benefits. Additionally, the team liked that this study will build on previous studies.

However, the team did not have consensus as to whether this step of the project was actually a feasibility study. All agreed that the evaluation for alternate river discharges completed in step two was a feasibility study. Some felt that this step of the project was a continuation of and refinement of the previous feasibility study. Others felt that the project had moved on to the implementation stage. The reason for this confusion was that all tasks except for "Task 2.2: Water Recycling Screened Alternatives Evaluation" appeared to be directly linked with selection of the preferred alternative, and not part of a feasibility study. There was consensus that the application could have been strengthened by expanding upon and describing how some of the other components (such as "Task 2.1: Conduct Water Reuse Citizen Survey") were part of a feasibility study. There was also consensus that Tasks 2.6 – 2.10 (Investigate Successful Water Recycling Public Involvement Programs, Prepare Public Information and Involvement Plan, Prepare Water Recycling Project Presentation and Graphics, Public

Meeting and Open Houses, and Conduct Ongoing Public Information Activities) were into the project implementation phase.

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 on January 1, 2009 and be completed by December 31, 2009.

Application Review Team Funding Recommendation: Do Not Fund.

COMMENTS:
Representative Jackie Dingfelder verbally indicated that she would like to see more Water Conservation and Reuse applications funded, and supported the City of Corvallis Wastewater Reclamation Plant Water Recycling Project as a means to determine if reuse water was a viable option for the City to address its water supply and water quality needs.

Kimberley Priestley of WaterWatch also indicated that a higher percentage of funding should be dedicated to conservation and reuse projects.

RECOMMENDATION:
Do Fund at $24,988. Limit funding to Task 2.1: Conduct Water Reuse Citizen Survey.

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
Evaluation for September 2, 2008 Applications

APPLICANT:	**Hillsboro Water Department / City of Portland Water Bureau**		
STUDY TYPE:	Water Conservation		
APPLICATION NO.:	GC0023 09		
STUDY NAME:	HET Rebate / Market Transformation Pilot Program		
BASIN:	Willamette	**WRD DISTRICT:**	18
WRD FUNDS REQUESTED:	$76,500	**TOTAL COST:**	$153,000

APPLICATION DESCRIPTION:
In the next 50 years, the population and water demands will be increasing across the Greater Portland Metropolitan Area. Although high efficiency toilets (HET) are not the answer to all water supply needs, toilets have historically been the largest indoor residential water user and decreasing flush demands to 1.28 gallons per flush has the potential to dramatically decrease indoor water demands.

The purpose of this pilot program is to test-run rebates for HET. This market transformation program is being organized sub-regionally and includes Cities of Portland, Hillsboro, Tigard and Lake Oswego, as well as Tualatin Valley Water District, Clackamas River Providers and Rockwood Water Peoples Utility District (PUD). If the pilot is successful, HET toilets will be mainstreamed as viable and cost-effective options for plumbing installations. For the pilot, rebate programs will be synchronized as much as possible to lessen confusion for retailers and potential HET customers. Also, to ensure that the program not only reduces water demands, but also is a "green" program, in the larger sense, all toilets exchanged for the rebate must be recycled. Toilets can be dropped at the roundup locations or other potential drop-off sites or toilets can be taken to Environmental Conscience Recycling and recycled for $1.00.

APPLICATION REVIEW TEAM EVALUATION:
The application requested funds for use as rebates and for marketing the program. Applicants provided no description of a feasibility study, evaluation program or information gathering. The Department did not forward this application to the Application Review Team for review.

COMMENTS:
A joint letter of support for this application was received from Niki Iverson, City of Hillsboro, and Lorna Stickel, Portland Water Bureau. The letter indicated that the application did not receive the "proper review" and that the pilot program did indeed meet the application criteria. They indicate that the criteria for review of a pilot program should be better defined and that the Department should not have refused to rate the application.

RECOMMENDATION:
Not Eligible for Funding.

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
Evaluation for September 2, 2008 Applications

APPLICANT:	**Kerns Rainbow Ranch, Inc.**		
STUDY TYPE:	Above Ground Storage		
APPLICATION NO.:	GA0024 09		
STUDY NAME:	Surface Water Storage Assessment		
BASIN:	Powder	**WRD DISTRICT:**	8
WRD FUNDS REQUESTED:	$67,000	**TOTAL COST:**	$134,000

APPLICATION DESCRIPTION:
Kerns Rainbow Ranch, Inc. currently operates without any storage capability, which creates problems for managing and effective irrigation water management program. The basis for an effective irrigation water management program is to apply the correct quantity of water when needed. In the Kerns' situation the excess spring run-off escapes them and they experience water shortages later in the season which prevents adequate irrigation and reduces yields and crop quality. In late season, the Kerns depend on groundwater, but the energy costs associated with the groundwater has been increasing and the groundwater level is declining.

The assessment study will evaluate the feasibility of, and potential for, construction of six supplemental irrigation water storage structures located on the Kerns' property. The storage is needed for irrigation during mid-July through October. The assessment study will include site geologic and soil evaluations, suitability for dam construction, analysis of hazard potential, water storage and fill volume calculations, preliminary engineering of dam/retaining structures, necessity/options for sealing of containment area, specifications and location of construction materials, and preliminary design of a connecting delivery system to the existing irrigation system. There will also be an evaluation of any necessary wetland mitigation(s) as well as wildlife benefits and enhancements.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team was generally supportive of this application, as it clearly addresses a water supply problem and does not appear to do harm to instream resources. As such, it appears to be consistent with the Oregon Plan and Senate Bill 1069. The application focuses on capturing water that comes from intermittent streams that do not "go anywhere." However, the applicant does raise the possibility of filling the reservoirs during drought years from Rock, Willow or Pine Creeks. Consequently, the feasibility study would need to address any potential instream impacts to fish and aquatic life on these streams.

Tasks 8 -11 (Preliminary design review and approval; Begin permit applications for selected sites; Design at 75% for selected sites; Approve designs of selected sites) seem to go beyond the feasibility study phase and into the project design phase.

The study is <u>not</u> a priority for funding under SB 1069 since it does not includes provisions for using stored water to augment instream flows to conserve, maintain and enhance aquatic life, fish life or other ecological values. The study could begin on January 1, 2009 and be completed by September 30, 2010.

Application Review Team Funding Recommendation: Do Fund: Contingent on Adequate Funding. If funds are available, fund Tasks 1-7 only (for $46,000); do not fund Tasks 8-11 (Preliminary design review and approval; Begin permit applications for selected sites; Design at 75% for selected sites; Approve designs of selected sites).

COMMENTS:

None received.

RECOMMENDATION:

Do Not Fund.

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
Evaluation for September 2, 2008 Applications

APPLICANT:	**Deschutes River Conservancy / North Unit Irrigation District**		
STUDY TYPE:	Water Conservation		
APPLICATION NO.:	GC0025 09		
STUDY NAME:	North Unit Irrigation District Main Canal Conservation Project Design		
BASIN:	Deschutes	**WRD DISTRICT:**	11
WRD FUNDS REQUESTED:	$240,265	**TOTAL COST:**	$510,555

APPLICATION DESCRIPTION:
The Deschutes River Conservancy (DRC) and the North Unit Irrigation District (NUID) are partnering to produce a preliminary design for a water conservation project. The associated project will enhance irrigation conveyance efficiencies within NUID and improve instream flows in the Deschutes and Crooked Rivers. When completed, the project will produce up to 19,300 acre feet of new water supply to help meet existing agricultural and environmental water supply needs. It will enhance instream flows in 130 miles of river, including the upper Deschutes River in the winter and the middle Deschutes River and lower Crooked River during the summer.

This proposal will build on a feasibility study commissioned by the DRC and performed by HDR Engineering in 2006. The study evaluated the potential water conservation benefits of lining approximately 19 miles of NUID's main canal. The proposed work would build on this study and move this conservation project from the feasibility stage to a preliminary design. The design will provide the basis for the development of a financing and implementation plan.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team felt that this was a good, straightforward study. It had a lively discussion concerning whether or not this was a feasibility study and applicable for funding under SB 1069. The team recognized that the first phase of the feasibility study had already been completed and determined that this next stage was also a feasibility study, with the exception of Task 7: Project design.

The team recognized that the DRC has an excellent track record of completing large, expensive projects that reduce operational costs for irrigation districts and improve streamflows. The instream benefits from the associated project are significant: in the lower Crooked River during the summer it could supply up to 14,475 acre-feet annually for instream flows (90 percent of estimated need); in the upper Deschutes River in the winter, it could secure 9.5 cubic feet per second (cfs), increasing the base flow by almost 50 percent; and, in the middle Deschutes River, the summer flows could increase by 4 cfs (3 percent).

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 immediately and be completed by December 31, 2009.

Application Review Team Funding Recommendation: Do Fund: High Priority at $193,874. Do not fund Task 7: Project design.

COMMENTS:
None received.

RECOMMENDATION:
Do Fund at $184,180. Do not fund Task 7: Project design.

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

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
Evaluation for September 2, 2008 Applications

APPLICANT:	**City of Rockaway Beach**		
STUDY TYPE:	Above Ground Storage		
APPLICATION NO.:	GA0026 09		
STUDY NAME:	Water Impoundment Relocation Feasibility Study		
BASIN:	North Coast	**WRD DISTRICT:**	1
WRD FUNDS REQUESTED:	$14,500	**TOTAL COST:**	$29,000

APPLICATION DESCRIPTION:
The City of Rockaway Beach diverts its water from Jetty Creek. The Jetty Creek point of diversion dam has several problems, including: 1) high runoff during storm events that causes spikes in raw water turbidity that increase the cost of water treatment; 2) sedimentation requires frequent dredging; 3) low summer streamflows create difficulty for the City in meeting its water demands, as well as maintaining the instream water rights; and 4) the dam creates a fish passage barrier.

This planning study seeks to determine the feasibility of relocating the City's existing instream raw water impoundment on Jetty Creek to a side channel location, which will improve fish passage. The City also plans to install a control device to ensure that the instream water right is met prior to diverting water for municipal needs. The study is needed to identify the engineering and financial feasibility of the associated project, as well as the potential environmental impacts. Key components of the study include: site evaluation; geotechnical investigation; hydrologic analysis; and a biological inventory. These items will provide the foundational information that will be used to determine the overall engineering, financial, regulatory and environmental feasibility.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team felt this feasibility study was associated with a great project. The associated project would improve the City's water supply problems and would also have significant environmental benefits through the elimination of a fish passage barrier, improvement in instream flows (through installation of a control device), and elimination of the need to do instream dredging.

The application was a little confusing in that it describes an instream impoundment with a designed storage capacity of 750,000 gallons, but has been reduced in size to less than half its nominal capacity due to sedimentation. This dam is not a storage facility, but is a point of diversion for the City's water rights. Because of the water right implications associated with changing the point of diversion, the team believes that, as part of the feasibility study, the City should conduct an analysis of the water right issues associated with relocating the City's raw water impoundment to a side channel location.

The study is <u>not</u> a priority for funding under SB 1069 since it does not includes provisions for using stored water to augment instream flows to conserve, maintain and enhance aquatic life, fish life or other ecological values. The study could begin on or before January 1, 2009 and be completed by December 31, 2009.

Application Review Team Funding Recommendation: Do Fund: High Priority at $14,500. Require analysis of water right issues.

COMMENTS:
None received.

RECOMMENDATION:
Do Fund at $13,775; contingent on contract negotiations to ensure that all provisions of the statute are met. Require analysis of water right issues.

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

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
Evaluation for September 2, 2008 Applications

APPLICANT:	**Heceta Water District**		
STUDY TYPE:	Water Conservation		
APPLICATION NO.:	GC0027 09		
STUDY NAME:	Water Management and Conservation Plan		
BASIN:	Mid Coast	**WRD DISTRICT:**	2
WRD FUNDS REQUESTED:	$6,250	**TOTAL COST:**	$12,500

APPLICATION DESCRIPTION:
The Heceta Water District serves approximately 4,500 customers north of Florence. The District's sole drinking water source is Clear Lake.

The Heceta Water District is proposing to develop a Division 86 Water Management and Conservation Plan (WMCP). The WCMP will focus on four key elements to provide an overall management plan for the City's water resources. These key elements include: (1) a description of the District's water system that includes descriptions of water customers, water use and demand, reliability and adequacy of water sources, and water system infrastructure; (2) evaluation of current and potential water conservations activities, programs, and measures that will reduce average and peak water demands; (3) a curtailment plan that can be implemented during water emergencies; and (4) an analysis of the existing water source ability to meet future demands. The goal of the WMCP will be to develop a strategy to reduce the average water demand per capita by at least 10 percent.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team recognized that Heceta Water District is required to complete an updated Water Management and Conservation Plan by October 21, 2010. If the team were to recommend funding Heceta Water District's Water Management and Conservation it indicated that it would want to see that the plan developed in coordination with the City of Florence. Heceta Water District's source of water is Clear Lake, which flows into Munsel Lake and then into Munsel Creek, for which the City of Florence has a water right.

The team found that the water curtailment element of a Water Management and Conservation Plan was not associated with a feasibility study and had concerns that other elements of the plan, such as inventory of the District's water rights, may not be associated with a feasibility study, and therefore these tasks would not be eligible for funding under SB 1069.

The team felt that given the limited funding associated with the Water Conservation, Reuse and Storage Grant Program, and the severe water quantity problems facing the state, that other applications should be funded prior to this application.

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 October 1, 2009.

Application Review Team Funding Recommendation: Do Not Fund.

COMMENTS:
Adam Sussman, GSI Water Solutions, expressed concern that the Application Review Team added a criterion that was not part of the grant application material. Specifically, that the Application Review Team did not recommend funding Water Management and Conservation Plan applications because they were a "required" plan. If the District had known of this criterion, they might not have expended the resources to apply for the grant application.

RECOMMENDATION:
Do not fund.

Note: This is one of three applications that were forwarded to the 2008 Oregon Water Supply Conservation Initiative (OWSCI) Community Match Funding Program to be considered for funding along with other similar grant applications submitted to that program.

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
Evaluation for September 2, 2008 Applications

APPLICANT:	**Eagle Point Irrigation District / Medford Water Commission**		
STUDY TYPE:	Above Ground Storage		
APPLICATION NO.:	GA0028 09		
STUDY NAME:	Willow Lake/Big Butte Creek Enhancement Project		
BASIN:	Rogue	**WRD DISTRICT:**	13
WRD FUNDS REQUESTED:	$75,000	**TOTAL COST:**	$150,000

APPLICATION DESCRIPTION:

Eagle Point Irrigation District (EPID) and the Medford Water Commission (MWC) are the primary water right holders in the Big Butte Creek watershed. EPID services approximately 8,000 acres of land through a water right on South Fork Big Butte Creek. MWC provides domestic water to over 130,000 people around Medford through a series of water rights on Big Butte Creek and the Rogue River. Willow Lake is used to balance the water needs of these two entities. Water is released from the lake when natural flows in South Fork Big Butte Creek are insufficient to meet water right requirements. Droughts, decreased rain and snow, and warmer weather patterns have challenged both water systems' ability to meet customer's water demands.

The goal of this planning study is to determine the feasibility of the development of proactive strategies to manage the water in Big Butte Creek. To accomplish this goal, three separate tasks have been identified: 1) To complete the feasibility study on increasing the storage capacity of Willow Lake by 300 to 1,700 acre-feet (the associated project represents less than 5 percent of EPID and MWC's needs, but Willow Lake only receives 2,800 acre-feet of refill water, so the associated project would represent 10 to 50 percent of the water supply needed during droughts); 2) Develop a computer basin model to forecast demands and test different water management strategies; and 3) To analyze the ecological impact of flow withdrawal, alternative means of supply, and environmental impacts, and develop stream flow and water temperature goals for early fall Spring Chinook spawning season in Big Butte Creek.

APPLICATION REVIEW TEAM EVALUATION:

The Application Review Team found the application to be well written and the study well thought out. The feasibility study would evaluate raising the dam to provide more water for irrigation, domestic use, and flow enhancement for improving fish habitat. The applicant's three major tasks are reasonable and appropriate. The applicant did not evaluate other alternatives very thoroughly; however, the other alternatives would probably involve new storage in different locations which would be on fish bearing stream. Since this Willow Lake Reservoir is an existing storage structure, any change to the storage capacity would not impact fish passage.

The study is a priority for funding under SB 1069 since it includes provisions for using stored water to augment instream flows to conserve, maintain and enhance aquatic life, fish life or other ecological values. The study could begin on January 1, 2009 and be completed by December 31, 2009.

Application Review Team Funding Recommendation: Do Fund: Medium Priority at $75,000.

COMMENTS:
A letters of support for this application was received from Dan Van Dyke, District Fish Biologist, Oregon Department of Fish and Wildlife. Mr. Van Dyke indicated that Big Butte Creek in the lone Rogue tributary that has a self-sustaining population of spring Chinook salmon. ODFW supports efforts that would increase the ambient spring flow remaining instream in Big Butte Creek and support a feasibility study that would include a review of downstream impacts to temperature and fish populations.

RECOMMENDATION:
Do Fund at $71,250; contingent on contract negotiations to ensure that all provisions of the statute are met.

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

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
Evaluation for September 2, 2008 Applications

APPLICANT:	**Calapooia Watershed Council**		
STUDY TYPE:	Water Conservation		
APPLICATION NO.:	GC0029 09		
STUDY NAME:	Calapooia River-Sodom Ditch Water Resource Conservation and Management Project		
BASIN:	Willamette	**WRD DISTRICT:**	2
WRD FUNDS REQUESTED:	$199,100	**TOTAL COST:**	$398,200

APPLICATION DESCRIPTION:

In the 1880s, Sodom Ditch was built in the middle Calapooia Watershed to serve as a high water diversion to minimize flooding and divert water around Thompson's Mill. In 2004, the Oregon Parks and Recreation Department (OPRD) purchased Thompson's Mill and has been working to address complex flow issues. Sodom Dam is the most significant fish passage barrier in the Calapooia Watershed. OPRD has received funding from the National Oceanic and Atmospheric Administration and the Oregon Watershed Enhancement Board to implement dam removal. However, OPRD has now realized that a more sophisticated investigation is needed to ensure that once the Sodom Dam is removed water will continue to flow down the Calapooia River.

The Calapooia Watershed Council has partnered with state and federal agencies and landowners to address fish passage impairment at Sodom Dam through dam removal. This diversion dam has historically ensured that flows continue down through the Calapooia river and Sodom Ditch. Without the dam, the river would go dry during summer months.

The goal of the project associated with this planning study is to develop an alternative means of supplying water in the Calapooia channel other than a diversion dam in order to deliver water to water users, to maintain the best use of valuable instream water rights, and maintain ecological flows in the Calapooia channel considering its high quality fish habitat. This planning study will utilize extensive hydrologic and geomorphic analyses to develop a flow management plan that examines the 10-mile river system below the bifurcation point caused by the Sodom Dam.

APPLICATION REVIEW TEAM EVALUATION:

The Application Review Team found this to be a well written application which described a very complex situation. The team appreciated that there was insufficient information to move forward with dam removal, and recognized the potential fish passage benefits, as well as benefits due to eliminating flooding problems down Sodom Ditch and the protecting of water rights. The team felt that Stakeholder Communication element was not directly tied to a feasibility study, but otherwise believed that the study was generally eligible for funding under the Water Conservation, Reuse and Storage Grant Program. However, the team believed that the study was more appropriate for funding through the Oregon Watershed Enhancement Board, or possibly through Economic and Community Development as it is more of a fish passage problem and has no direct water conservation element, aside from making sure that the Calapooia River is not dewatered. Additionally, the

team did not believe that the proposed use of the one-dimensional steady state hydraulic model HEC-RAS would yield the necessary information for analyzing a three-dimensional flow problem.

The team felt that given the limited funding associated with the Water Conservation, Reuse and Storage Grant Program, and the severe water quantity problems facing the state, that other applications should be funded prior to this application.

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 Winter 2009 and be completed by Winter 2010.

Application Review Team Funding Recommendation: Do Not Fund.

COMMENTS:
None received.

RECOMMENDATION:
Do Not Fund.

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
Evaluation for September 2, 2008 Applications

APPLICANT:	**Lower Powder Irrigation District**		
STUDY TYPE:	Water Conservation		
APPLICATION NO.:	GC0030 09		
STUDY NAME:	Keating Valley Water Conservation Assessment		
BASIN:	Powder	**WRD DISTRICT:**	8
WRD FUNDS REQUESTED:	$42,500	**TOTAL COST:**	$85,000

APPLICATION DESCRIPTION:
The Lower Powder Irrigation District supplies water to 8,085 acres. Due to ditch loss and unmeasured diversions, the downstream users receive only a portion of their water rights.

The Keating Valley Water Conservation Assessment is a cooperative, multiphase project that will produce a plan to assess current conditions, determine desired future conditions, and identify opportunities for water conservation in the Lower Powder Irrigation District. The study will gather data from agency partners and map all existing ditches, headgates, and other structures from Thief Valley Reservoir to the junction of Highway 86 and Powder River at the south end of the valley. The study will gather data on irrigation system types, soils, locate headgates and other structures in the ditch system, and put it into digital format. The data will be used to determine individual site improvements, priority improvement areas, priority water loss areas, water storage sites, condition of current irrigation delivery systems, agricultural wetland areas, energy needs for improvements, and capacity of the system for efficiency improvements, both structural and social. In addition, the study will address the potential benefits to fish, wildlife, and recreationists.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team recognized that there could be significant future water savings based on the implementation of projects that would be identified in the feasibility study. The team found the application to be focused primarily on a preliminary data collection phase, which would eventually lead to a water conservation feasibility study. There was additional information included related to increasing the storage at Thief Valley Reservoir that did not appear to have a direct connection to the conservation assessment.

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 immediately and be completed by December 31, 2009.

Application Review Team Funding Recommendation: Do Fund: Contingent on Adequate Funding. If funds are available, fund at $42,500.

COMMENTS:
Letter of support for this application was received from Walt Jury, President, Lower Powder River Irrigation

District and Joseph and Lois Eckley, residents. Mr. Jury indicated that Thief Valley Reservoir goes dry, even in good water years. When the reservoir is drained, agriculture losses production, and the warm, deoxygenated water kills life in a thirteen mile section of the Wild and Scenic Powder River. Lower Powder River Irrigation District is at the point where their "entire system needs to be overhauled for the benefit of agriculture, wildlife and recreation." He indicated that the District needs an independent study to determine how to best use their water. The Eckley's indicated the study would help conserve water, grow better crops and streamline the delivery system.

RECOMMENDATION:
Do Not Fund.

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
Evaluation for September 2, 2008 Applications

APPLICANT:	**City of Damascus**		
STUDY TYPE:	Reuse		
APPLICATION NO.:	GR0031 09		
STUDY NAME:	East Damascus Regional Water Reuse and Wastewater Management Feasibility Study		
BASIN:	Willamette	**WRD DISTRICT:**	20
WRD FUNDS REQUESTED:	$75,000	**TOTAL COST:**	$150,000

APPLICATION DESCRIPTION:

The build-out population of newly formed City of Damascus is approximately 60,000 people, of which 20,000 might be expected to reside on the eastern side of Damascus. The eastern side is semi-rural and far from existing water and wastewater infrastructure, but prime for development as Damascus formulates their first Comprehensive Plan. A regional cooperative wastewater/water reuse plan could provide 2 million gallons per day of reclaimed water and wastewater facilities for East Damascus while helping to meet a significant portion of the water supply needs for the surrounding communities. This feasibility study will investigate separate but related opportunities for Southeast as well and Northeast Damascus, evaluating reuse options and partnership opportunities as Damascus seeks to solve the wastewater collection and treatment issues in combination with reclaimed water solutions.

Wastewater solutions for Southeast Damascus include upgrades of the existing Clackamas County treatment facility in Boring, production of reclaimed water, partnerships with Sunrise Water Authority, and distribution back into Damascus. Solutions for Northeast Damascus include partnerships with Gresham and Troutdale, and possible satellite water reclamation facilities.

APPLICATION REVIEW TEAM EVALUATION:

The Application Review Team liked the regional scope of this feasibility study and the City of Damascus' efforts to incorporate water reuse and wastewater infrastructure into a strategic water management plan to meet pending and future development pressures. The applicant clearly articulated the study's technical approach, and the team felt the City was being proactive in evaluating "purple pipe" (dual piping for potable water and reuse water). The applicant had a good review of comparable and successful reuse projects and had letters of support from potential partners in Clackamas County.

The team recognized that the associated project could have water quality benefits, but was concerned that it could negatively affect return flows into the Clackamas Basin. The applicant indicated that reliance on returns from fish and downstream water right holders will be evaluated and addressed as part of the feasibility study.

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 September 30, 2009.

Application Review Team Funding Recommendation: Do Fund: High Priority at $75,000.

COMMENTS:
A letter of support for this application was received from David S. Rouse, Environmental Services Director, City of Gresham. Mr. Rouse indicates that the City of Gresham has a significant interest in reuse water as a component of their long-term water supply strategy. Gresham has been conducting its own reuse studies, and supports the feasibility study that the City of Damascus is doing and will cooperate and coordinate with the City of Damascus's study.

RECOMMENDATION:
Do Fund at $71,250.

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

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
Evaluation for September 2, 2008 Applications

APPLICANT:	**Polk County**		
STUDY TYPE:	Above Ground Storage		
APPLICATION NO.:	GA0032 09		
STUDY NAME:	Lincoln/Polk County Regional Water Source Development		
BASIN:	Mid Coast/Willamette	**WRD DISTRICT:**	1, 16
WRD FUNDS REQUESTED:	$349,434	**TOTAL COST:**	$698,868

APPLICATION DESCRIPTION:

Polk and Lincoln Counties are facing increasing water demand and increasingly scarce water supplies. In 2004, the Polk County Water Providers Regional Water Needs Assessment was completed. It showed that by 2020, the Cities of Monmouth, Independence, Dallas and Falls City will exceed their available supply by 2.35 million gallons per day, and by 2040, it will be 9.32 million gallons per day. In 2008, the Lincoln County Water Needs Assessment was started and is nearly finished. Preliminary results show that Lincoln County has similar needs to Polk County.

Polk and Lincoln Counties are seeking to meet regional water needs through a collaborative effort to evaluate a storage reservoir in Valsetz that could meet water needs through 2050 for municipal water providers and agricultural users in both Lincoln and Polk counties. This storage site would be located near the coastal mountain divide. Impounded water would be diverted in both directions, serving Lincoln County on the west side through the Siletz River and Polk County on the east side through the Luckiamute River. In order to continue to pursue this opportunity, a planning study consisting of streamflow and environmental data collection for the Siletz and Luckiamute River watersheds, hydrologic, streamflow and water rights analyses, a baseline environmental impacts study and storage concept and alternatives analyses are needed.

APPLICATION REVIEW TEAM EVALUATION:

The Application Review Team found that the associated project could be very large, and could provide significantly more water than is needed by both counties. For example, a 100-foot high dam would impound 195,000 acre-feet of water; though only 30,000 acre-feet is needed to meet the consumptive municipal demands of both counties by 2050. The concept for the study and project is simple, a regional solution to Lincoln and Polk County's water supply problem. The associated project would comply with statute which requires that if water is going to be pumped out of a basin it must go to a regional project. Being a regional study, the applicant did not explore other alternatives to meet their water needs, because the other alternatives were not of a regional scale. The application had broad support from entities in both Polk and Lincoln County.

The team recognized that the associated project would inundate major wetlands and meadows, including a large elk habitat area. It could also have a significant impact on fisheries; particularly in the Siletz Basin. In the Luckiamute Basin, the associated project could improve water quality problems. The team felt that it would be appropriate to fund the study, since SB 1069 requires that an above-ground storage feasibility study of this type include certain elements, including "analyses of environmental harm or impacts from the proposed storage project."

However, the team was surprised by some of the budget and cost share elements for the feasibility study. For example, an additional $27,000 was requested for hydrologic analyses when $160,834 had previously been expended. Given the limited funding available in the Water Conservation, Reuse and Storage Grant Program, the team recommended funding the feasibility study, but at less than the full amount requested.

The study is a priority for funding under SB 1069 since it includes provisions for using stored water to augment instream flows to conserve, maintain and enhance aquatic life, fish life or other ecological values. The study could begin on December 1, 2008 and be completed by December 18, 2009.

Application Review Team Funding Recommendation: Do Fund: High Priority at $180,000.

COMMENTS:
Letters of support were received from Terry Thompson, Lincoln County Commissioner and Mark Millikan, Board President, Buell Red Prairie Water District. Commissioner Thompson indicated that the study would complement existing work being done to meet local water needs in Lincoln County. He indicates that there is the potential for a "significant-sized storage facility" that could meet municipal and quasi-municipal needs of Lincoln and Polk Counties as well as increasing summer flows in the Siletz River to improve water quality and enhance fish habitat. Mr. Millikan indicated interest in participating in the study.

Letters in opposition were received from Lisa A. Brown, WaterWatch, and Barry McPherson. Ms. Brown indicated that: 1) The study fails to include required components and that the recommendation to fund is not in compliance with law; 2) Review of the application is premature because the water needs assessment report associated with the $20,000 WRD grant to Polk County under the Oregon Water Supply Conservation Initiative in not yet available; 3) The associated project poses significant problems for salmon and steelhead, including species protected under the Endangered Species Act and listed as State Sensitive; 4) If the rule providing prioritization for above ground storage projects that include a provision to augment instream flows for fish (OAR 690-600-0030(3)) factored into the funding determination, the analysis needs to be revised since such augmentation would not benefit fish, since streamflows in the affected river reaches are "not depressed;" and, 5) The proposed study should not be funded because it fits so poorly within the Criteria and Evaluation Guidance.

Mr. McPherson had a career in fishery research and management in Oregon. He indicates that the probability of a dam being built at Valsetz is "extremely low" so public funds should not be invested in the project. Any proposed dam on the Siletz would generate strong opposition from around Oregon and the U.S. because of the unique fish runs and value of Siletz River fisheries to sport and commercial fisheries. The Siletz River is one of only three coastal rivers in Oregon that supports indigenous runs of summer steelhead, and one of a minority of coastal rivers in Oregon that support runs of spring Chinook salmon. In addition to these two unique fish runs, the Siletz also supports fall Chinook salmon, Coho salmon, winter steelhead, and sea-run cutthroat trout. A dam in the upper Siletz Basin would create an un-natural streamflow and temperature regime downstream; it would alter water chemistry, propagate fish disease organisms, and may generate toxins to fish, all of which would compromise the health of the native fish. Mr. McPherson states that he is not opposed to all dams, particularly dams less than 10 feet high. He indicates that funding should be prioritized for conservation projects, and not for funding dam projects, especially for out-of-basin diversions.

RECOMMENDATION:
Do Fund at $171,000; contingent on contract negotiations to ensure that all provisions of the statute are met.

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

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
Evaluation for September 2, 2008 Applications

APPLICANT:	**Pacific Hydro-Geology, Inc.**		
STUDY TYPE:	Storage Other Than Above-Ground (including Aquifer Storage and Recovery [ASR])		
APPLICATION NO.:	GB0033 09		
STUDY NAME:	Mt. Angel Area Aquifer Storage and Recovery Feasibility Study		
BASIN:	Willamette	**WRD DISTRICT:**	16
WRD FUNDS REQUESTED:	$46,616	**TOTAL COST:**	$93,232

APPLICATION DESCRIPTION:
In response to the declining groundwater levels in the Mt. Angel area, Dickman Farms, Kraemer Farms, Kraemer's Nursery, and Fessler Nursery have implemented conservation to save water and stabilize the aquifer so that their 5-year renewable water right permits may be renewed. Their conservation efforts have not been adequate to stabilize the water levels within the Mt. Angel Ground Water Limited Area.

This planning study focuses on evaluating the feasibility of using Aquifer Storage and Recovery (ASR) as an alternate source of water along Zollner Creek, Abiqua Creek and Butte Creek, which will use infiltration galleries constructed next to the streams to pre-treat water to meet drinking water standards. A shallow alluvial aquifer as also been identified as a source of water for one of the associated projects.

This study is designed to provide information that will meet the requirements for ASR limited licenses, and will adequately describe the response of the aquifer system during the testing phase. The study has been divided into five tasks that include a hydrogeology report, water quality testing, water compatibility analysis, water level monitoring and two annual reports.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team discussed whether this study was a pure study rather than a feasibility analysis. The team concluded that it was a feasibility study because it is difficult to know if Aquifer Storage and Recovery will work until doing a pilot test, and a pilot test could be part of a feasibility study. The study proposes to evaluate the feasibility of using bank filtration for treating water for ASR. This approach has successfully been used in areas outside of Oregon, but has not been used here.

The team would have liked more details about how the study would be conducted. There were also some technical assumptions with which the team was not entirely comfortable. For example, the assumption that the aquifer parameters at one irrigation well could be assumed to apply to the three others wells in the proposed study. Nonetheless, the team recognized that if the pilot test proved successful it would demonstrate a low cost, effective water treatment method for agricultural underground storage.

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 immediately and be completed by December 2010.

Application Review Team Funding Recommendation: Do Fund: Contingent on Adequate Funding. If funds are available, fund at $46,616.

COMMENTS:
None received.

RECOMMENDATION:
Do Not Fund.

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
Evaluation for September 2, 2008 Applications

APPLICANT:	**Metropolitan Wastewater Management Commission**		
STUDY TYPE:	Reuse		
APPLICATION NO.:	GR0034 09		
STUDY NAME:	Eugene/Springfield Regional Water Reclamation Recycled Water Implementation		
BASIN:	Willamette	**WRD DISTRICT:**	2
WRD FUNDS REQUESTED:	$300,000	**TOTAL COST:**	$29,705,000

APPLICATION DESCRIPTION:
The Metropolitan Wastewater Management Commission (MWMC) serves the Eugene/Springfield area and has existing and potential capabilities of producing Class A and Class C recycled water for community applications. The goal of this study is to implement the three phases of effluent reuse prescribed by the 2004 MWMC Facilities Plan which include 3.75 million gallons per day (mgd) reuse for July and August irrigation, expanded crop irrigation at MWMC-managed facilities, and 2.5 to 10 mgd of Class A greenspace irrigation.

Furthermore, this study will seek potential early user-partners to pilot recycled use in the community. The combined effort will be guided by collaboration with local municipalities, irrigation associations, and water utilities to plan for future use and availability of recycled water. This study includes technical and economic evaluations and engineering design to steer planning decisions. Conservation and protection of groundwater, municipal supply, and instream water will be considered in usage evaluations.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team felt that a more focused explanation of the feasibility study would have improved the application. The team also desired additional information in order to have confidence that the wetland studies would aid in feasibility determinations.

The team was supportive of using recycled water for cleaning aggregate, rather than diverting river water for this purpose. The team also recognized that evaluating the potential for reuse in the gravel enterprise area would be important to decisions regarding the size and extent of distribution piping and associated costs. However, since the Metropolitan Wastewater Management Commission already uses recycled water for aggregate cleaning, the team felt that the water quantity and quality needs of aggregate cleaning should have already been understood.

The team recognized that the $29 million cost share included project implementation costs, which are not allowable as cost share, but staff contacted the applicant and received clarifying information showing that the applicant met the minimum 50 percent cost share requirement for the grant application.

The team felt that given the limited funding associated with the Water Conservation, Reuse and Storage Grant Program, and the severe water quantity problems facing the state, that other applications should be funded prior

to this application.

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 August 31, 2011.

Application Review Team Funding Recommendation: Do Not Fund.

COMMENTS:
None received.

RECOMMENDATION:
Do Not Fund.

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
Evaluation for September 2, 2008 Applications

APPLICANT:	**East Valley Water District**		
STUDY TYPE:	Above Ground Storage		
APPLICATION NO.:	GA0035 09		
STUDY NAME:	Drift Creek Storage Project		
BASIN:	Willamette	**WRD DISTRICT:**	16
WRD FUNDS REQUESTED:	$500,000	**TOTAL COST:**	$1,007,010

APPLICATION DESCRIPTION:
The East Valley Water District required a source of stable water supply for 15,000 acres of agricultural development. Conditional "time-limited" permit and temporary transfers now in place are not long-term and some of the time-limited permits have been canceled this year. The goal of the associated project is to provide the needed long-term stable water supply for the district farms through the development of an on-channel reservoir in the upper Pudding watershed on Drift Creek. The proposed reservoir would impound at least 12,000 acre-feet of water and will relieve pressure in the three limited groundwater areas in the District's service area. The associated project will also relieve over-appropriated surface water sources.

The proposed studies will finalize costs and conditions for developing the reservoir. Tasks to be performed include: determining a wetland mitigation plan; analyze water delivery methods; determine fish passage mitigation requirements; comprehensive water quality analysis; cultural historical analysis, instream flow analysis and water right evaluation; fish habitat surveys; geotechnical investigations; defining critical path analysis for remaining tasks; identifying local permitting procedures; and providing engineering analysis of construction costs.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team found the application to be well written and provided a detailed task list. The District has performed a number of studies in the last three years and they have a firm understanding of all permitting requirements. The application has broad local support as well as some statewide support. The team felt that there were limited options for the District; however the team would have liked to have seen a more detailed quantification of the need for the associated project.

The associated project could improve water quality, but blockage of fish passage would be a concern. The applicant will need to analyze peak flows as well as the other required elements for an on-channel reservoir project.

The team recommended funding the study, but had concerns related to three tasks, which it did not recommend funding. These three tasks are the pre-construction engineering/economic feasibility task, which appeared to be pushing the line between a feasibility study and initial stages of implementation; the analysis of water delivery system task, which was previously funded by Oregon Water Supply Conservation Initiative and therefore the team did not feel that it was appropriate to refund it; and the design of mitigation strategies (fish passage) task,

which could involve designing a fish ladder, and therefore would not be a feasibility study.

The study is a priority for funding under SB 1069 since it includes provisions for using stored water to augment instream flows to conserve, maintain and enhance aquatic life, fish life or other ecological values. The study could begin immediately and be completed by December 31, 2010.

Application Review Team Funding Recommendation: Do Fund: High Priority at $272,581. Do not fund the following three tasks: Pre-construction engineering/economic feasibility; Analysis of water delivery system; Design of mitigation strategies (fish passage).

COMMENTS:

Letters of support for this application were received from Senator Kurt Schrader; a joint letter from Marion County Commissioners Samuel Brentano, Janet Carlson, and Patti Milne; Anita Winkler, Oregon Water Resources Congress; and David W. Leibbrandt, Murray, Smith & Associates, Inc.

These letters indicate that the studies conducted under the grant will finalize costs and conditions for developing a reservoir for the East Valley Water District that includes the Glad Tidings, Mt. Angel and Victor Point Groundwater Limited Areas. The reservoir shows strong promise of providing "real benefit" to the Silverton, Mt. Angel, and Molalla water shortage problems and will benefit local agricultural interests, small town economies, mitigate receding groundwater conditions, relieve over-appropriated surface water sources, benefit fish habitat, and reduce flooding risk.

RECOMMENDATION:

Do Fund at $258,952; contingent on contract negotiations to ensure that all provisions of the statute are met. Do not fund the following three tasks: Pre-construction engineering/economic feasibility; Analysis of water delivery system; Design of mitigation strategies (fish passage).

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

Oregon Water Resources Department
Water Conservation, Reuse and Storage Grant Program
Evaluation for September 2, 2008 Applications

APPLICANT:	**City of Port Orford**		
STUDY TYPE:	Above Ground Storage		
APPLICATION NO.:	GA0036 09		
STUDY NAME:	City of Port Orford Hubbard Creek Impoundment Expansion Project		
BASIN:	South Coast	**WRD DISTRICT:**	19
WRD FUNDS REQUESTED:	$100,000	**TOTAL COST:**	$200,000

APPLICATION DESCRIPTION:
The City of Port Orford owns and operates the existing Hubbard Creek Impoundment for the City's raw water source. The City has senior water rights on Hubbard Creek which allow the City to appropriate up to 1.25 cfs from a 3.3 acre-foot reservoir. During late summer, inflow to the reservoir frequently declines to less than the City's usage, causing the water levels in the reservoir to drop to critical levels, and preventing the City from withdrawing its full rate. Conservation is an accepted practice, particularly in the summer, and it is not uncommon for the City to issue curtailment measures in August and September.

The Hubbard Creek Impoundment feasibility study would evaluate raising the reservoir by 11 feet which would allow the City to impound an additional 52 acre-feet. The additional storage is necessary for the City to reliably meet water demands during the late summer and to prevent complete water supply shortfalls from occurring in the next five to ten years, and it would satisfy the City's 50-year peak month demand of 237 gallons per day per household.

This study will address the uncertainties associated with the expansion. The primary goal of the study is to produce an environmental assessment and preliminary engineering report for the associated project. These documents will identify the feasibility of the associated project including identifying the scope and cost of the project and any additional mitigation measures required to address any environmental consequences or benefits resulting from the implementation of the project.

APPLICATION REVIEW TEAM EVALUATION:
The Application Review Team felt the application did an excellent job of presenting information showing that the expansion of the Hubbard Creek Impoundment appeared to be the most viable alternative to meeting the City's water supply needs. The application also did a good job of describing the technical aspects of the planning study, which include a topographic survey to allow estimating the stage-storage relationship; geotechnical investigations to evaluate the existing impoundment foundation; resources investigations (including those required by SB 1069); and, a preliminary engineering report to analyze the existing infrastructure. The application could have been strengthened by more thoroughly evaluating the permit requirements of the associated project, as well as including letters of support for the feasibility study.

Due to the relatively small size of the proposed impoundment expansion project, the team doubted that streamflows could be augmented in a significant way. Notwithstanding this, the study is a priority for funding

under SB 1069 since it includes provisions for using stored water to augment instream flows to conserve, maintain and enhance aquatic life, fish life or other ecological values. The study could begin in November 2008 and be completed by December 2009.

Application Review Team Funding Recommendation: Do Fund: High Priority at $100,000.

COMMENTS:
Letter of support were received from Mayor Jim Auborn, City of Port Orford; John Hewitt, President, Port Orford City Council; and Michael Murphy, City Administrator, City of Port Orford. These letters indicated that in late summer Hubbard Creek can run dry. The study is important to assure an adequate supply of water during the summer months to existing residents and businesses and to provide for growth. This project is a high priority project on the City's current Water Master Plan and is the most cost effective and efficient alternative available to meet the needs of the City.

RECOMMENDATION:
Do Fund at $95,000; contingent on contract negotiations to ensure that all provisions of the statute are met.

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