



GR0034 09

OREGON WATER RESOURCE DEPARTMENT  
WATER CONSERVATION, REUSE AND STORAGE  
GRANT PROGRAM

RECEIVED

SEP 02 2008

WATER RESOURCES DEPT  
SALEM, OREGON

**I. Grant Information**

Project Name: Eugene/Springfield Regional Water Reclamation Recycled Water Implementation

Type of Grant Requested:  Water Conservation  Reuse  Above Ground Storage  
 Storage Other Than Above-Ground [Including Aquifer Storage and Recovery (ASR)]

Program Funding Dollars Requested: \$ \$300,000 Total cost of planning study: \$ \$29,705,000

Note: Request may not exceed \$500,000

**II. Applicant Information**

<b>Applicant Name:</b> <i>Peter Ruffier</i>	<b>Co-Applicant Name:</b> <i>Chuck Gottfried</i>
<b>Organization:</b> <i>Metropolitan Wastewater Management Commission</i>	<b>Organization:</b> <i>Metropolitan Wastewater Management Commission</i>
<b>Address:</b> <i>225 5<sup>th</sup> Street Springfield, OR 97477</i>	<b>Address:</b> <i>225 5<sup>th</sup> Street Springfield, OR 97477</i>
<b>Phone:</b> <i>541-682-8606</i>	<b>Phone:</b> <i>541-736-1023</i>
<b>Fax:</b>	<b>Fax:</b>
<b>Email:</b> <i>Peter.J.RUFFIER@ci.eugene.or.us</i>	<b>Email:</b> <i>cgottfried@ci.springfield.or.us</i>

<b>Fiscal Officer Name:</b> <i>Bob Duey</i>	<b>Principle Contact:</b> <i>Todd Miller</i>
<b>Organization:</b> <i>City of Springfield</i>	<b>Organization:</b> <i>City of Springfield</i>
<b>Address:</b> <i>225 5<sup>th</sup> Street Springfield, OR 9747</i>	<b>Address:</b> <i>225 5<sup>th</sup> Street Springfield, OR 97477</i>
<b>Phone:</b> <i>541-726-3740</i>	<b>Phone:</b> <i>541-736-7137</i>
<b>Fax:</b>	<b>Fax:</b>
<b>Email:</b> <i>rduey@ci.springfield.or.us</i>	<b>Email:</b> <i>tmiller@ci.springfield.or.us</i>

**Certification:**

I certify that this application is a true and accurate representation of the proposed work for a project planning study and that I am authorized to sign as the Applicant or Co-Applicant. By the following signature, the Applicant certifies that they are aware of the requirements of an Oregon Water Resources Department grant and are prepared to implement the project if awarded.

Applicant Signature: *Peter J. Ruffier* Date: *Sept. 9, 2008*

Print Name: *Peter Ruffier* Title: *Acting General Manager*

**III. Planning Study Summary**

Please give a brief summary of the planning study using no more than 150 words.

*The Metropolitan Wastewater Management Commission (MWMC) serves the Eugene/Springfield area and has existing and potential capabilities of producing Class C and Class A recycled water for community applications. This study will accelerate the application of recycled water use for currently identified irrigation, industrial use, and wetland enhancement to perfect production and delivery capabilities of MWMC. 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.*

## IV. Grant Specifics

### Section A. Common Criteria

**Instructions:** Answer all questions in this section by typing the answer below the question. It is anticipated that completed applications will result in additional pages.

1. Describe how the planning study will be performed. Include:
  - a. A description of the planning schedule/timeline, which includes identifying all key tasks. (Section VI provides an opportunity for a “graphical” representation of the schedule.)

*The study will be conducted over 2009 and 2010 and may culminate in community uses of Class C and Class A water in 2011. Assessments of water needs, potential users, and current infrastructure will occur primarily in 2009, and planning, design, and possible construction work will occur in 2010.*

- b. When the planning study could begin.

*January 2009*

2. Provide a description of the relevant professional qualifications and/or experience of the person(s) that will play key roles in performing the planning study. If the personnel have not been decided upon, include a description of the professional qualifications and/or experience of the person(s) you anticipate will play key roles in performing the planning study.

*The project manager for this study will be Todd Miller, Assistant Project Manager with City of Springfield Environmental Services. Mr. Miller has 20 years of experience in water resource quality, protection, investigation, restoration, and planning working for private, government, and non-profit entities. Mr. Miller is a Registered Geologist and holds a BS in Biology-Geology and an MS in Environmental Studies. His experience spans geotechnical investigations, aquifer studies, watershed planning, and stream restoration and he has 15 years experience in project management, coordination, and collaboration. Mr. Miller will coordinate the study with the following MWMC project team.*

*Peter Ruffier is the current MWMC General Manager and has been the Eugene Wastewater Division Director since 1992. Mr. Ruffier has been actively involved in state and federal water quality programs and research projects. Examples of these activities include appointment to the Oregon Governor’s Willamette River Basin Task Force; appointment to a Technical Advisory Committee to the Oregon Department of Environmental Quality (DEQ) on the development of biocriteria water quality standards; member of the Oregon DEQ’s Policy Advisory Committee for the Triennial Water Quality Standards Review; memberships on the Water Environment Research Foundation (WERF) Project Steering Committees for Whole Effluent Toxicity Testing Issues; the Chemical Frequency, Magnitude, and Duration vs. Ecological Impact project; and a WERF sediment toxicity project. Mr. Ruffier has also served as Chair of the Oregon Association of Clean Water Agencies for the years 1996 and 1997 and is the current Secretary/Treasurer of the Association, as well as a member of the Oregon League of Cities Water Committee.*

*Josh Newman, PE, is a supervising civil engineer with MWMC. Mr. Newman has a master's in Environmental Engineering and 20 years experience in facility planning and the operation and design of wastewater treatment and water reclamation plants. Mr. Newman was previously secretary of the Water Reuse Association in San Diego.*

*Aaron Collett, PE, is an engineer with MWMC and holds a BS in Environmental Engineering and a master's in civil engineering-construction engineering management. Mr. Collett's engineering work*

*focused on hydrology, sustainable engineering, water treatment, and watershed issues. He has managed capital projects for the past 2 years and has 6 year previous experience in environmental consulting.*

*Other key MWMC project staff includes David Breitenstein, who is the MWMC Wastewater Plant Manager and has 27 years experience in wastewater systems operation; Rachael Chilton, MWMC's Public Information & Education Specialist; Ken Vanderford, the City of Eugene Wastewater Division Residuals Supervisor, and Tom Mendes, an environmental data analyst with the City of Eugene Wastewater Division.*

*MWMC will continue partnerships and contract services on this study with several local partners including staff of the Eugene Water and Electric Board and associates of Oregon State University's Institute for Water and Watersheds. MWMC expects to define additional consultant needs on this study with a planning and engineering firm having experience in community recycled water use and implementation.*

3. What local, state or federal project permitting requirements/issues do you anticipate in order for the planning study to be conducted?

*Most or all of the study can be conducted without permits. The following permits may be required dependant on the outcome of planning recommendations:*

*\* Well construction permits. A proposed hydrogeological investigation could include groundwater monitoring wells requiring well construction permits through OWRD.*

*\* NPDES permits. Pending results of this study, the implementation of recycled water use for expanded irrigation use and discharge to created wetlands could require NPDES permits through DEQ.*

*\*Construction and Right-of-Way permits. Positive outcomes of early phases of this study to evaluate irrigation, industrial, and wetland applications could result in pipeline construction requiring construction permits through Lane County and the City of Eugene. Some associated work at the treatment plant related to filtration and disinfection is currently covered by permits; additional permits may be required for future plant construction.*

4. Are permits/governmental approvals required for the planning study? If yes, indicate whether you have obtained the necessary permits/governmental approval. If you have not obtained the necessary permits/governmental approval, describe the steps you have taken to obtain them.

*Planning efforts for recycled water use has been endorsed for further investigation by the MWMC commissioners (June 2008 meeting). No other permits or government approvals are needed to conduct the planning study. However, this study may result in early opportunities for recycled water use applications on city-owned lands; approvals for any potential pilot study would be coordinated with city staff.*

5. Describe your goal (which must be based on evaluating the feasibility of developing a water conservation, reuse or storage project) and how this study helps to achieve the goal.

*The goal of this study is to implement the three phases of effluent reuse prescribed by the MWMC Facilities Plan (April 2004, CH2M Hill Consultants) 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. Further, the goal of this study is to identify potential*

*community users and technical challenges for piloting recycled water use and to investigate the merits of created wetland infiltration for river recharging. In so doing, MWMC will be positioned upon the implementation of the Facilities Plan reuse projects to provide recycled water quality and quantities to outside entities as community partnerships demand it.*

6. Describe the technical aspects of the planning study and why your approaches are appropriate for accomplishing the goal of the planning study.

*This study includes several technical evaluations:*

*Irrigation Strategy and Potential User Assessment. An irrigation strategy is needed to determine the appropriate volume and location for on-site irrigation system design and offset of groundwater use. Likewise an assessment of potential users adjacent to the MWMC Reuse Site will inform engineering decisions for upsizing the conveyance line, adding a separate line for Class A water, and feasibility of using an open water channel to deliver water to downstream irrigators.*

*Confluence Ecological Assessment: This study will identify the existing ecological assets at the Confluence Island site prior to gravel extraction and wetland design, and determine potential impacts and benefits to habitat and ecosystem resources that need to be accounted for in the design phase.*

*Confluence Hydrogeologic Investigation: This study will provide critical understanding of gravel zone permeability and hyporheic flow to evaluate ability to construct infiltration wetlands and to not adversely affect cool water habitats.*

*Industrial Aggregate Use Study: this study is necessary to determine the appropriate water quality, quantity, and pressures needed to make industrial aggregate use feasible and to design the appropriate conveyance lines.*

*Tertiary Filtration Pilot Study: This study evaluates different technologies to filter treatment plant effluent to consistently provide Class A quality recycled water.*

7. Describe the level of involvement, interest and/or commitment of different entities associated with the planning study (attach letters of support). Describe how these entities will benefit or be impacted by the planning study.

*Delta Sand & Gravel. Delta is a key partner in piloting recycled water projects. Delta uses 1 to 2 mgd of water drawn from riverbank wells for its industrial aggregate operations, and is interested in using recycled water if MWMC can supply the appropriate quality, volume, and pressure. Delta also owns and manages the portions of Confluence Island in the Willamette River where the created wetland infiltration project is being investigated. Pending outcomes of this study, Delta may be able to accommodate project design needs through its mining operations. Delta is interested in seeing multiple community benefits derived from the property upon completion of gravel mining operations.*

*Eugene Water & Electric Board. EWEB is interested in MWMC's capability to produce and deliver recycled water as an additional resource in their service area to substitute for potable water supply use and offset future growth.*

*Institute for Water & Watersheds. Associated members of the Institute have provided key guidance, research, and collaboration on the wetland infiltration project. This project fits into basin-wide goals for the Willamette Valley for river restoration and efficient water uses. Knowledge gained from this study will be applied to similar projects in the Willamette Valley.*

## Section B. Unique Criteria

**Instructions:** Answer the set of questions below that applies to the type of planning study that this grant will fund.

**Water Conservation** or  **Reuse**

1. Water Conservation or Reuse projects that may result from this planning study are requested to be included in the Water Resources Department's "Inventory of Potential Conservation Opportunities". Though you may have already submitted this information earlier in the year through a separate survey, we ask that all applicants complete the information on the form provided at the end of this application.  
 I have filled out the application or  I have not filled out the application.

2. Describe the water supply need(s) that the project associated with the planning study is intended to meet. Applicant should reference supporting documentation that would be available upon request.

*This study will directly address three primary water supply needs that are keyed into secondary needs for future development. The three primary needs are related to the following water resources: (1) groundwater irrigation; (2) river withdrawal; (3) municipal supply.*

*(1) Groundwater irrigation withdrawals - Biocycle Farm irrigation. The MWMC-managed Biocycle Farm poplar plantation is water limited and relies heavily on groundwater for irrigation. The proven ability to deliver high volumes of recycled water to the site will expand the opportunity to provide recycled water to other irrigators and industrial users to supplant groundwater withdrawals in the vicinity of the Biocycle Farm. Reference: Biocycle Poplar Farm Assessment (GreenWood Resources, Inc., June 2007, May 2008); MWMC Facilities Plan (CH2M Hill, April 2004).*

*(2a) River Withdrawals - industrial sand & gravel use. The sand & gravel operations adjacent to and immediately downstream of MWMC's treatment plant withdraw over one million gallons per day of water from river-side wells. Diverting recycled water for industrial sand & gravel use will supplant the need to withdraw water from the river. A proven supply of guaranteed flow of recycled water could supplant the practice of similar withdrawals in the vicinity.*

*(2b) Wetland and River Habitat - wetland infiltration site. The Willamette River is habitat limited due in part to loss of side channels/wetlands and to elevated water temperatures. A proven method of constructed wetlands to reclaim gravel pits and restore floodplain connectivity coupled with the temperature cooling benefits of wetlands and hyporheic flow using recycled water in lieu of direct discharge to the river will provide multiple habitat benefits. This strategy will retain more instream flow (as opposed to diverting recycled water uses completely out of the river) and complements potential substitution of recycled water for river water withdrawals elsewhere. References: Willamette River Basin Planning Atlas (Gregory, Hulse & Baker, 2002).*

*(3) Class A Recycled Water Use - tertiary filtration/disinfection. The capability to actively offset municipal water use with recycled water depends on the ability to reliably produce Class A recycled water. The tertiary filtration/disinfection project aims to produce 2.5 to 10 mgd of Class A water. MWMC will pilot Class A water use with developing partners and work with EWEB to strategize future distribution.*

3. Explain how the associated project will mitigate the need to develop new water supplies and/or use water more efficiently. Reference documentation and/or examples of the success of similar or comparable water conservation/reuse projects that would be available upon request.

*This project will develop and expand recycled water applications to reduce reliance on groundwater and riverbank well water for irrigation and industrial needs. Additionally, Class A recycled water production will be implemented for urban irrigation (and potentially other) needs. The availability of these recycled water uses in the community will reduce demand and stress on groundwater, river water, and municipal supplies.*

4. Explain how the project associated with the planning study will meet the water supply need(s), and indicate what percentage of that need will be met. (For example: If your water supply need is 20,000 acre-feet of additional water and the project will supply 10,000 additional acre-feet, 50% of your need will be met).

*100% of the first two identified water uses will be met with recycled water: (1) Biocycle Farm poplar irrigation(3.75 mgd) and (2) industrial sand & gravel use (up to 2 mgd). Class A irrigation use is limited to pilot testing through this study, but could potentially provide 10 mgd of water to offset municipal greenspace irrigation needs or other similar uses.*

5. Provide data and information on the associated project and the project's sources of water supply:
- a. The location of the associated project. (Include the basin, county, township, range and section.)

*MWMC Wastewater Treatment Plant (Class A production site), 410 River Avenue, Eugene; Willamette River Basin, Lane County, T17S, R4W, S13.*

*MWMC Biocycle Farm (Class C irrigation site), 29686 Awbrey Lane, Eugene; Willamette River Basin (Long Tom River watershed), Lane County, T16S, R4W, S33.*

*Confluence Island (aggregate use & infiltration site), 999 Division Ave, Eugene; Willamette River Basin, Lane County, T17S, R4W, S01*

- b. The name(s) and river mile(s) of the source water and what they are tributary to, if applicable.

*The MWMC Wastewater Treatment Plant is situated at river mile 178 of the Willamette River. Its source of water is from users of water provided by Eugene Water and Electric Board and Springfield Utility Board; both utilities draw water from surface sources and wells along the McKenzie and Willamette Rivers upstream. The sand & gravel operation downstream from the treatment plant withdraws water from wells adjacent to river mile 177 of the Willamette River. The Biocycle Farm relies on groundwater.*

- c. Environmental flow needs and water quality requirements of supply source water bodies and water bodies downstream of associated and/or affected return flows.

*The Willamette River confluence area is a priority area for restoration and is habitat limited by temperature and off channel flows.*

- d. Reliance on return flows by downstream water right holders.

*There is no known reliance on return flows by downstream users for the proportional volumes of water proposed for reuse in this study. Summer discharge from the wastewater plant to the river averages 49 mgd; up to 15 mgd (including 10 mgd of Class A use) could eventually be diverted for other uses, but includes uses that would return flows back to the river.*

## V. Match Funding Information

Applicants must demonstrate a minimum dollar-for-dollar match based on the total funding request. The match may include a) secured resources, b) previously expended resources, and/or c) pending resources. For secured funding, you must attach a letter of support from the match funding source that specially mentions the dollar amount shown in the "Amount/Dollar Value" column. For pending resources, documentation showing a request for the matching funds must accompany the application. For resources that have been previously expended, the expenditure must have occurred on or after July 1, 2005. Resources expended prior to July 1, 2005 are not eligible for match purposes.

The Type of matching funds may include:	The Status of matching funds may include:
<ul style="list-style-type: none"> <li>The value of in-kind labor, equipment rental and materials essential to the planning study provided by the applicant or partner*.</li> </ul>	<ul style="list-style-type: none"> <li>Secured funding commitments from other sources.</li> </ul>
<ul style="list-style-type: none"> <li>Cash is direct expenditures made in support of the planning study by the applicant.</li> </ul>	<ul style="list-style-type: none"> <li>Associated and documented expenditures for the planning study from non-program sources incurred on or after July 1, 2005.</li> </ul>
	<ul style="list-style-type: none"> <li>Pending commitments of funding from other sources. In such instances, Department funding will not be released prior to securing a commitment of the funds from other sources. Pending commitments of the funding must be secured within 12 months from the date of the award.</li> </ul>

\*"Partner" means a non-governmental or governmental person or entity that has committed funding, expertise, materials, labor, or other assistance to a proposed planning study. OAR 690-600-0010.

Match Funding Source (if in-kind, briefly describe the nature of the contribution)	Type (✓ One)	Status (✓ One)	Amount/ Dollar Value	Date Match Funds Available (Month/Year)
<i>MWMC - Reuse Projects capital budget</i>	<input checked="" type="checkbox"/> cash <input type="checkbox"/> in kind	<input type="checkbox"/> secured <input type="checkbox"/> expended <input checked="" type="checkbox"/> pending	\$15,000,000	July 09
<i>MWMC - Tertiary Filtration Project</i>	<input checked="" type="checkbox"/> cash <input type="checkbox"/> in kind	<input checked="" type="checkbox"/> secured <input type="checkbox"/> expended <input type="checkbox"/> pending	\$14,368,000	July 08
<i>MWMC - Ecological Assessment</i>	<input checked="" type="checkbox"/> cash <input type="checkbox"/> in kind	<input checked="" type="checkbox"/> secured <input type="checkbox"/> expended <input type="checkbox"/> pending	\$12,000	July 08
<i>USGS/IWW - Hydrogeological Assessment</i>	<input checked="" type="checkbox"/> cash <input type="checkbox"/> in kind	<input type="checkbox"/> secured <input type="checkbox"/> expended <input checked="" type="checkbox"/> pending	\$25,000	April 09
	<input type="checkbox"/> cash <input type="checkbox"/> in kind	<input type="checkbox"/> secured <input type="checkbox"/> expended <input type="checkbox"/> pending		
	<input type="checkbox"/> cash <input type="checkbox"/> in kind	<input type="checkbox"/> secured <input type="checkbox"/> expended <input type="checkbox"/> pending		
	<input type="checkbox"/> cash <input type="checkbox"/> in kind	<input type="checkbox"/> secured <input type="checkbox"/> expended <input type="checkbox"/> pending		
	<input type="checkbox"/> cash <input type="checkbox"/> in kind	<input type="checkbox"/> secured <input type="checkbox"/> expended <input type="checkbox"/> pending		
	<input type="checkbox"/> cash <input type="checkbox"/> in kind	<input type="checkbox"/> secured <input type="checkbox"/> expended <input type="checkbox"/> pending		
	<input type="checkbox"/> cash <input type="checkbox"/> in kind	<input type="checkbox"/> secured <input type="checkbox"/> expended <input type="checkbox"/> pending		

## VI. Project Planning Study Schedule

**Estimated Project Duration: January 1, 2009 to August 31, 2011**

Place an "X" in the appropriate column to indicate when each element (key task) of the project will take place.

Project Planning Study Element (Key Tasks)	2009				2010				2011 & Beyond
	1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	1 <sup>st</sup> Qtr	2 <sup>nd</sup> Qtr	3 <sup>rd</sup> Qtr	4 <sup>th</sup> Qtr	
<i>MWMCBMF Facilities irrigation strategy plan</i>	X	X							
<i>Evaluation of BMF-adjacent potential users/irrigators</i>		X	X						
<i>Conveyance system to BMF analysis and design</i>	X	X							
<i>Construction/implementation of BMF piping</i>			X				X		
<i>Implementation of pilot partner use near BMF</i>									X
<i>Confluence Wetland Infiltration Ecological study</i>			X						
<i>Confluence Wetland Infiltration Hydrogeological study</i>		X	X						
<i>Confluence Wetland Infiltration regional study evaluation and coordination</i>			X	X					
<i>Confluence Wetland Infiltration project design and gravel extraction coordination</i>				X	X				
<i>Industrial Aggregate use analysis (pressure, quality, quantity needs)</i>	X	X							
<i>Industrial Aggregate vicinity potential user analysis</i>		X	X						
<i>Industrial Aggregate conceptual design/end user coordination, and engineering</i>			X	X					
<i>Industrial Aggregate use construction/implementation</i>							X	X	
<i>Class A Filtration technical evaluation (including disinfection)</i>	X	X							
<i>Class A Filtration unit construction</i>			X			X	X		
<i>Class A user and pipeway analysis</i>				X	X	X			
<i>Class A pilot greenspace irrigation use</i>									X

## VII. Project Planning Study Budget

### Section A

Please provide an estimated line item budget for the project planning study. An example would include: labor, materials, equipment, contractual services and administrative costs.

Line Items <i>Note: Administrative costs may not exceed 10% of the total funding requested by the Department.</i>	Unit Number (e.g. # of hours)	Unit Cost (e.g. hourly rate)	In-Kind Match	Cash Match Funds	OWRD Grant Funds	Total Cost	
MWMC capital cost - tertiary filtration (est.)	project	\$14,368,000.00		\$14,368,000		\$14,368,000	
MWMC capital cost - reuse projects (est.)	project	\$15,000,000.00		\$15,000,000		\$15,000,000	
Consultant - potential user analysis	contract	\$160,000.00			\$160,000	\$160,000	
Consultant - ecologic/geologic studies	contract	167000		\$37,000	\$140,000	\$167,000	
Administrative Costs							
<b>Total for Section A</b>					\$29,405,000	\$300,000	
<b>Percentage for Section A</b>					<b>99%</b>	<b>1%</b>	<b>100%</b>

### Section B

If Grant amount requested is \$50,000 or greater, you **MUST** complete Section B. Elements (key tasks) in Section B should be the same as the elements (key tasks) in Section VI (Project Planning Study Schedule).

<b>Project Planning Study Element (Key Tasks)</b>	<b>In-Kind Match</b>	<b>Cash Match Funds</b>	<b>OWRD Grant Funds</b>	<b>Total Cost</b>
<i>MWMCBMF Facilities irrigation strategy plan</i>		\$500,000		\$500,000
<i>Evaluation of BMF-adjacent potential users/irrigators</i>			\$50,000	\$50,000
<i>Conveyance system to BMF analysis and design</i>		\$2,000,000		\$2,000,000
<i>3000000</i>		\$3,000,000		\$3,000,000
<i>Implementation of pilot partner use near BMF</i>		\$500,000		\$500,000
<i>Confluence Wetland Infiltration Ecological study</i>		\$12,000	\$20,000	\$32,000
<i>Confluence Wetland Infiltration Hydrogeological study</i>		\$50,000	\$100,000	\$150,000
<i>Confluence Wetland Infiltration regional study evaluation and coordination</i>		\$50,000	\$10,000	\$60,000
<i>Confluence Wetland Infiltration project design and gravel extraction coordination</i>		\$150,000	\$10,000	\$160,000
<i>Industrial Aggregate use analysis (pressure, quality, quantity needs)</i>		\$125,000	\$30,000	\$155,000
<i>Industrial Aggregate vicinity potential user analysis</i>			\$50,000	\$50,000
<i>Industrial Aggregate conceptual design/end user coordination, and engineering</i>		\$1,000,000		\$1,000,000
<i>Industrial Aggregate use construction/implementation</i>		\$2,000,000		\$2,000,000
<i>Class A Filtration technical evaluation (including disinfection)</i>		\$4,368,000		\$4,368,000
<i>Class A Filtration unit construction</i>		\$10,000,000		\$10,000,000
<i>Class A user and pipeway analysis</i>		\$2,650,000	\$30,000	\$2,680,000
<i>Class A pilot greenspace irrigation use</i>		\$3,000,000		\$3,000,000
<b>Total for Section B</b>		\$29,405,000	\$300,000	\$29,705,000

Totals in Section B must match the totals in Section A

To add a project to the inventory of potential conservation opportunities, please provide the following information for each conservation project.

This is a <input checked="" type="checkbox"/> Capital Conservation Project <input type="checkbox"/> Programmatic Conservation Project	
<b>Project #/Name</b>	<b>MWMC Biocycle Farm and Beneficial Reuse Site Irrigation</b>
Project Description	Expand conveyance lines and improve irrigation systems at 600 acre site
Estimated Future Savings	2.5 mgd
Seasonality	Summer only
Estimated Future Costs	not yet assessed
Implementation Schedule	2010 upon study & engineering
What are the barriers to implementation, e.g. funding?	Need to assess cost-benefit for stie irrigation and determine potential user partnerships
This is a <input checked="" type="checkbox"/> Capital Conservation Project <input type="checkbox"/> Programmatic Conservation Project	
<b>Project #/Name</b>	<b>Willamette-McKenzie Confluence Industrial Aggregate Use</b>
Project Description	Distribute pressurized recycled water through 1 mile pipeline to sand & gravel operator
Estimated Future Savings	pending assessment
Seasonality	year round
Estimated Future Costs	not calculated
Implementation Schedule	2010 pending study & engineering
What are the barriers to implementation, e.g. funding?	Continued partnership with aggregate operator and favorable outcomes of water use and conveyance studies

- Include this form with your application -

**INSTITUTE FOR WATER  
& WATERSHEDS**

DR. MICHAEL CAMPANA  
DIRECTOR



210 Strand Ag Hall  
Corvallis, Oregon  
97331

Telephone  
541 737-2413

FAX  
541 737-1887

Bob Rice  
Grant Program Specialist  
Water Conservation, Reuse and Storage Grant Program  
Administrative Services Division  
Water Resources Department  
725 Summer Street NE, Suite A  
Salem, Oregon 97301-1266

September 2, 2008

RE: Letter of Cooperation - Eugene/Springfield Regional Water Reclamation  
Recycled Water Implementation

Dear Mr. Rice:

The Metropolitan Wastewater Management Commission (MWWC) requested that the Institute for Water and Watersheds (IWW) write a letter of cooperation in support of their application for funding. As the Associate Director of the IWW I am happy to do so. For your purposes of assessing the MWWC's application, please be advised that the IWW has been working with the MWWC on the predesign of research activities regarding different facets of the proposed project since December, 2007.

The IWW stands ready to continue assisting MWWC's efforts in considering different environmental applications of recycled water through implementation of recycled water via four MWWC projects: (1) Biocycle Farm irrigation conveyance line, (2) industrial aggregate use, (3) wetland infiltration, and (4) Class A recycled water production. We feel that their efforts to provide recycled water in the community to offset demands on local groundwater, river withdrawal, and municipal supply and to achieve habitat and water quality benefits through gravel pit reclamation and discharge is cutting edge research on water reuse.

Please feel free to contact me if I can provide any additional information about the MWWC's application or the predesign work that IWW has completed to date.

Respectfully Submitted,

*Todd Jarvis*

Todd Jarvis, Ph.D.  
Associate Director



**Eugene Water & Electric Board**

500 East 4th Avenue/Post Office Box 10148  
Eugene, Oregon 97440-2148  
(541) 484-2411  
www.eweb.org

September 2, 2008

Oregon Water Resources Department  
725 Summer Street, NE, Suite A  
Salem, Oregon 97301-1271

Re: Oregon Water Resources Department (OWRD) Reuse Grant

Dear Esteemed State of Oregon Water Resources Department Representatives,

Our organization supports the Metropolitan Wastewater Management Commission (MWMC) application for grant funding.

Eugene Water and Electric Board (EWEB) actively plans to meet the growing needs of our community. Reuse water is one option that may be feasible for the future. It is our understanding that between 10 to 20 million gallons per day (MGD) of Class A water may be available if users can be identified and are within economic distance of the supply point. We look forward to collaboration with MWMC in actively exploring these possibilities.

EWEB would like to encourage the agencies to support work that utilizes innovative approaches and broader community solutions to water resource problems.

Sincerely,

Brad Taylor  
EWEB  
Water Resource & System Planner

*Rely on us.*



# DELTA SAND & GRAVEL CO.

999 DIVISION AVENUE | EUGENE, OREGON 97404 | PHONE (541) 688-2233 | FAX (541) 688-8610

September 2, 2008

City of Springfield  
Environmental Services Division  
225 Fifth Street  
Springfield, O 97477

Attn: Todd Miller

Hi Todd,

This letter is to tell you we have been happy to cooperate with your ongoing studies with the MWMC, and for your goals of recycling your discharge waters in a responsible, productive manner these last three years. We are happy to continue to work with you in the future.

Thank you,

Avon Lee Babb  
President, Manager  
ALB;tb

---

**REGIONAL WASTEWATER PROGRAM**  
**BUDGET**  
**and**  
**CAPITAL IMPROVEMENTS PROGRAM**  
**FY 08-09**

---

The Metropolitan Wastewater Management Commission adopted its Operating Budget and Capital Improvements Program (CIP) for FY 08-09 March 27, XXxx, 2008. The Budget and CIP were ratified by the Springfield City Council on June XX, 2008, the Lane County Board of Commissioners on May XX, 2008, and the Eugene City Council on May XX, 2008. The Commission gave final ratification to the budget and CIP on June XX, 2008.

**COMMISSION MEMBERS:**

Doug Keeler, President (Springfield)  
Faye Stewart, Vice-President (Lane County)

Anne Ballew, (Springfield)  
Bill Inge, (Lane County)  
Hilary Loud, (Eugene)  
Bonny Bettman, (Eugene)  
Terry Gould (Eugene)

**STAFF:**

Dan E. Brown, MWMC Executive Officer/Springfield Public Works Director  
Susie Smith, MWMC General Manager/Springfield Environmental Services Manager  
Peter Ruffier, Eugene Wastewater Division Director  
Robert Duey, MWMC Finance Officer/Springfield Finance Director

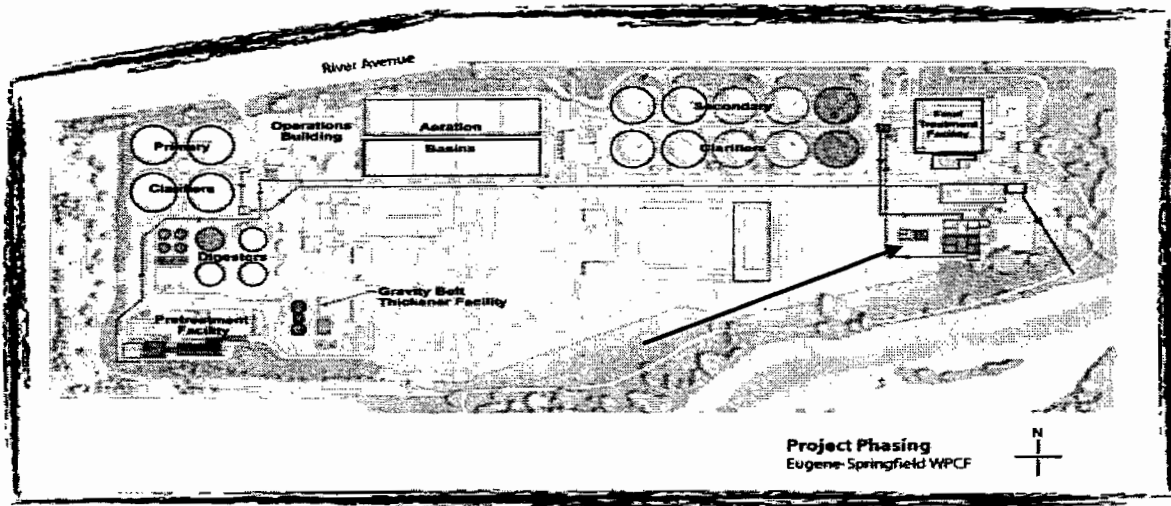
Revised: March 27, 2008 Review Draft
---

**EXHIBIT 13**  
**Regional Wastewater 5-Year Capital Programs**

	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	TOTAL
<b>CAPITAL PROJECTS</b>						
<b>Biosolids Management</b>						
Biocycle Farm - Poplar Plantation III	354,000					354,000
Line Biosolids Lagoon - Phase II	2,894,000					2,894,000
Line Biosolids Lagoon - Phase III		100,000	3,091,000			3,191,000
Line Biosolids Lagoon - Phase IV				100,000	3,250,000	3,350,000
Repair/Replace of Biosolids Force Main			100,000	1,400,000		1,500,000
<b>Non-Process Facilities and Facilities Planning</b>						
WWFMP Update	293,176					293,176
Facility Plan Engineering Services	57,881	60,775	63,814	67,005	70,355	319,830
2010 Facility Plan Update			221,000			221,000
<b>Conveyance Systems</b>						
Influent Pumping & Headworks	24,969,359					24,969,359
Glenwood Pump Station Upgrade			741,500			741,500
<b>Plant Performance Improvements</b>						
Aeration Basin Improvements Phase I	3,767,000					3,767,000
Sodium Hypochlorite Conversion	7,378,647					7,378,647
Peak Flow Management Improvements	21,579,087					21,579,087
Odorous Air Treatment I	10,253,254					10,253,254
Odorous Air Treatment II	1,704,000					1,704,000
Primary Sludge Thickening	4,308,000					4,308,000
Tertiary Filtration I	14,368,000					14,368,000
Effluent Reuse I	3,218,000					3,218,000
Effluent Reuse II		5,152,000				5,152,000
Effluent Reuse III				6,542,000		6,542,000
Waste Activated Sludge Thickening					3,901,000	3,901,000
Increased Digestion Capacity/Class A					25,777,000	25,777,000
<b>TOTAL CAPITAL PROJECTS</b>	<b>95,144,404</b>	<b>5,312,775</b>	<b>4,217,314</b>	<b>8,109,005</b>	<b>32,998,355</b>	<b>145,781,853</b>
<b>ASSET MANAGEMENT</b>						
Equipment Replacement	569,010	576,012	1,180,695	2,272,569	1,292,962	5,891,248
Major Rehab	900,000	425,000	930,000	318,764	332,425	2,906,189
Major Capital Outlay	289,000	258,931				547,931
<b>TOTAL ASSET MANAGEMENT</b>	<b>1,758,010</b>	<b>1,259,943</b>	<b>2,110,695</b>	<b>2,591,333</b>	<b>1,625,387</b>	<b>9,345,368</b>
<b>TOTAL CAPITAL IMPROVEMENTS</b>	<b>96,902,414</b>	<b>6,572,718</b>	<b>6,328,009</b>	<b>10,700,338</b>	<b>34,623,742</b>	<b>155,127,221</b>

The FY 08-13 five-year CIP for Regional Capital Projects amounts to \$145,781,853. When Asset Management Capital Program planned expenditures (administered by the City of Eugene) are added in, the total five-year CIP comes to \$155,127,221. Information regarding each capital project in the FY 08-13 CIP is included in the CIP summary sheets included in this document. This includes those projects in the first year of the CIP, which constitute the FY 08-09 Capital Budget. Each summary sheet provides a description of the project, the project purpose and what is driving the timing of the project, the funding schedule, and the expected final cost and cash flow

TERTIARY FILTRATION - PHASE 1



**Description:** This project installs infrastructure/support facilities for 30 mgd of filters for tertiary filtration of secondary treated effluent; however, this first phase only installs filter cells sufficient for 10 mgd of treatment. Future phases of the project will install the remaining filter cells. Includes funds for landscaping in vicinity of facilities.

**Justification:** Up to 10 mgd of filtration is required by 2010 to meet dry season mass limits, with the need for filtration increasing to up to 30 mgd by the end of the planning period (2025). The Facilities Plan proposes phasing filters on an as-needed basis, including as needed to facilitate development of Level 4 reuse. Filtration provides high quality secondary effluent and potential level 4 reuse water. Also, filtration is needed to assist with meeting wet season mass load requirements during peak flow events.

**Status:** Planning stage.

**Project Driver:** Performance reliability to meet the dry weather NPDES total suspended solids limits of less than 10 mg/L, reuse development, and compliance with effluent limits during peak flow conditions.

**Project Trigger:** NPDES permit compliance for TSS: Dry weather maximum month flow in excess of 49 mgd. Also, initially to provide higher quality effluent so that reuse can be developed.

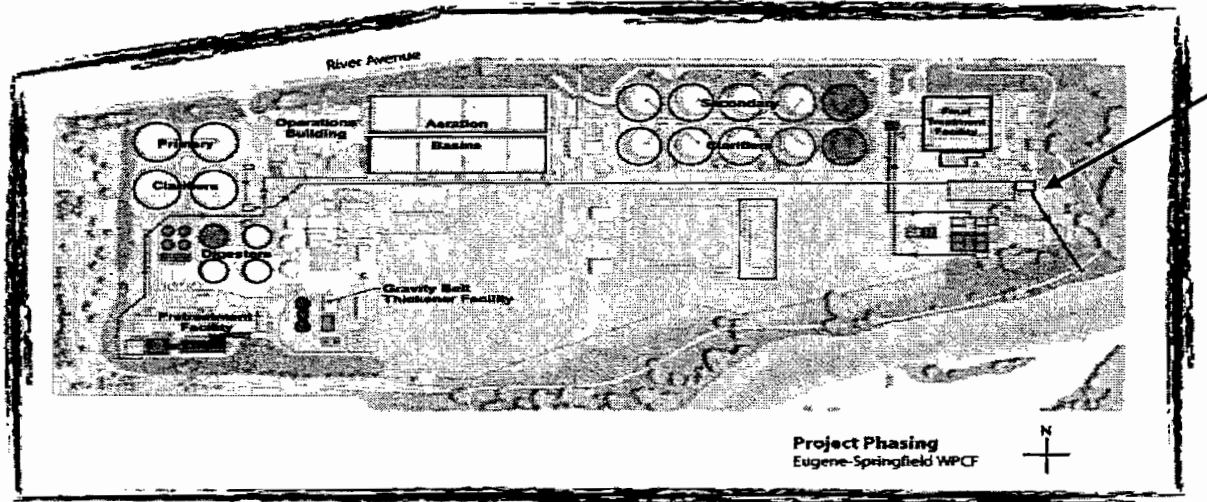
**Improvement SDC Eligibility:** 42%

**Estimated Project Cost:** \$14,685,000

**Expected Cash Flow:** FY 07-08 = \$317,000; FY 08-09 = \$2,600,000; FY 09-10 = \$8,000,000; FY 10-11 = \$3,768,000

<u>Expenditure/Category:</u>	<u>Prior Years</u>	<u>2007-08 Est. Act.</u>	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>Total</u>
Design/Construction	0	\$317,000	\$14,368,000	0	0	0	0	\$14,685,000
Other	0	0	0	0	0	0	0	0
<b>Total Cost</b>	<b>0</b>	<b>\$317,000</b>	<b>\$14,368,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>\$14,685,000</b>

EFFLUENT REUSE - PHASE 1



**Description:** This project is the first package of funding for wastewater effluent reuse to address thermal load issues and for multiple environmental benefits. This project combines two projects identified in the 2004 Facilities Plan; the Level II Reuse at Seasonal Industrial Waste and Level 4 Effluent Reuse Demonstration Projects. Project components may include additional treatment, disinfection, pumping, pipeline, and distribution/irrigation systems. The projects will be better defined as the planning for reuse continues and as markets for reuse are identified.

**Status:** Planning Stage

**Justification:** Implements reuse so that thermal load is removed from the Willamette River and for multiple environmental benefits.

**Project Driver:** Expansion of effluent reuse programs. Current NPDES thermal load compliance.

**Project Trigger:** Potential exceedance of NPDES thermal load limit. Identification of water needs for potential clients.

**Project Type:** 100% Performance

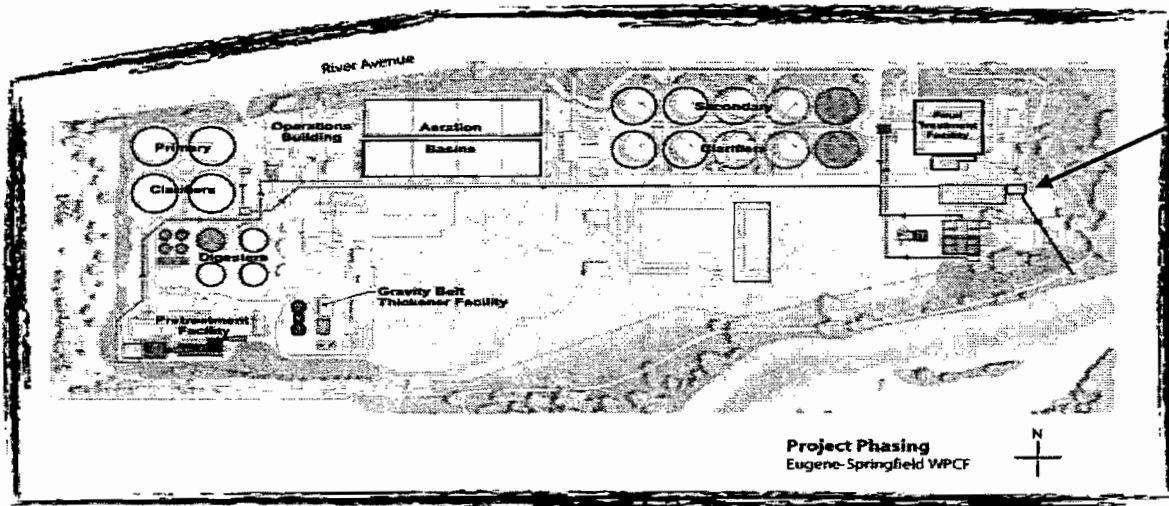
**Improvement SDC Eligibility:** 26%

**Estimated Project Cost:** \$3,325,000 (2006 cost inflated to FY08-09).

**Expected Cash Flow:** FY 08-09 = \$2,000,000; FY 09-10 = \$1,218,000

Expenditure/Category:	Prior Years	2007-08 Est. Act.	2008-09	2009-10	2010-11	2011-12	2012-13	Total
Design/Construction	\$7,000	\$100,000	\$3,218,000	0	0	0	0	\$3,325,000
Other	0	0	0	0	0	0	0	0
<b>Total Cost</b>	<b>\$7,000</b>	<b>\$100,000</b>	<b>\$3,218,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,325,000</b>

EFFLUENT REUSE - PHASE 2



**Description:** This project is identified as Level II Effluent Reuse at the Biocycle Farm in the 2004 Facilities Plan. Provide 1.5 mgd of Level 2 reuse water at the Biocycle Farm. Installation of dedicated reuse irrigation pipeline and microspray system. Total reuse of 3.75 mgd in July and August. The project may change as planning progresses and other opportunities for reuse emerge.

**Justification:** Implements Level 2 reuse so that thermal load is removed from the Willamette River.

**Project Driver:** Expansion of dry weather effluent reuse programs. Current NPDES thermal load compliance.

**Project Trigger:** Potential exceedance of NPDES thermal load limit.

**Project Type:** 100% Performance

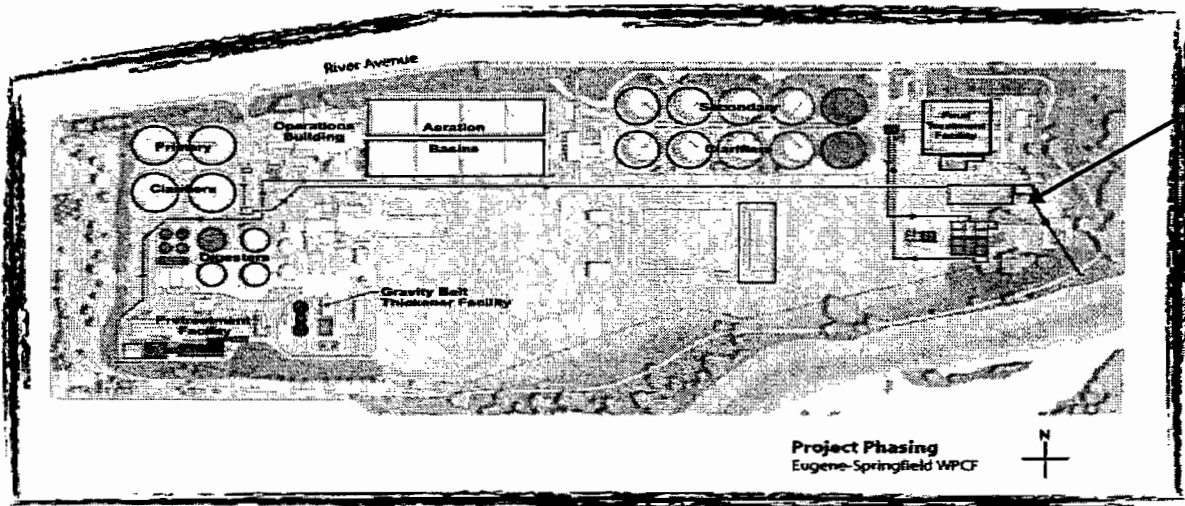
**Improvement SDC Eligibility:** 26%

**Estimated Project Cost:** \$5,152,000

**Expected Cash Flow:** FY 09-10 = \$2,500,000; FY 10-11 = \$2,652,000

<u>Expenditure/Category:</u>	<u>Prior Years</u>	<u>2007-08 Est. Act.</u>	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>Total</u>
Design/Construction	0	0	0	\$5,152,000	0	0	0	\$5,152,000
Other	0	0	0	0	0	0	0	0
<b>Total Cost</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$5,152,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$5,152,000</b>

EFFLUENT REUSE - PHASE 3



**Description:** This project is the Facilities Plan project known as Permanent Level IV Reuse. It is to provide 2.5 mgd of permanent Level IV reuse water to local greenspaces and community areas. Project components may include additional treatment, disinfection with UV system, pumping, pipeline, and distribution/irrigation systems. The project will be better defined as the planning for reuse continues and as markets for reuse are identified.

**Status:** Planning Stage

**Justification:** Implements reuse so that thermal load is removed from the Willamette River and for multiple environmental benefits.

**Project Driver:** Expansion of effluent reuse programs. Current NPDES thermal load compliance.

**Project Trigger:** Potential exceedance of NPDES thermal load limit. Identification of water needs for potential clients.

**Project Type:** 100% Performance

**Improvement SDC Eligibility:** 26%

**Estimated Project Cost:** \$6,542,000

**Expected Cash Flow:** FY 11-12 = \$1,699,000; FY 12-13 = \$4,843,000

<u>Expenditure/Category:</u>	<u>Prior</u> <u>Years</u>	<u>2007-08</u> <u>Est. Act.</u>	<u>2008-09</u>	<u>2009-10</u>	<u>2010-11</u>	<u>2011-12</u>	<u>2012-13</u>	<u>Total</u>
Design/Construction	0	0	0	0	0	\$6,542,000	0	\$6,542,000
Other	0	0	0	0	0	0	0	0
<b>Total Cost</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,542,000</b>	<b>\$0</b>	<b>\$6,542,000</b>