



September 30, 2015

REQUEST FOR PROPOSALS

**State of Irrigated Agricultural Water Reuse – Impediments and Incentives
(WRRF-15-08)**

Due: November 4, 2015, 5 PM Eastern Time

Project Sponsors

This project is sponsored by the WaterReuse Research Foundation (WRRF) as part of the Foundation's Principal (Solicited) Research Program.

Objectives

- Identify examples of existing irrigated agricultural uses of recycled water in the United States and other countries.
- Identify potential for irrigated agricultural uses of recycled water, including, but not limited to, hydroponics and aquaculture.
- Identify how to address and overcome impediments and provide incentives to achieve greater recycled water use for agriculture.

Introduction

Irrigated agriculture is one of the major sectors that relies on fresh water from both ground and surface supplies. There is substantial use of recycled water across the United States, however there is a high potential for increased water reuse. To increase the use of recycled water, incentives, funding, regulatory actions, and new policies may be used to promote recycled water use. This may also decrease reliance on scarce or over-drafted ground and surface water supplies. The purpose of this study is to gather information related to reuse of recycled water for agricultural irrigation purposes, identify impediments and incentives that may impact it, as well as explore opportunities related to onsite reuse in regards to irrigated agriculture. The findings from this research will provide valuable guidance to water suppliers, regulators, and the agricultural community regarding the potential for irrigated agricultural uses of recycled water. Portions of the study will investigate successful policies and practices across the United States and in other countries.

Research Approach

Task 1: Conduct a literature review. Review the available recycled water or agricultural reuse related scientific literature and trade group information (e.g. Farm Bureau reports, State and local agriculture commissions).

Task 2: Analyze current state of irrigated agriculture uses of recycled water.

- a. Develop a table summary of major agricultural uses of recycled water in the U.S. and worldwide, including California.
- b. Review legislative and regulatory framework for irrigated agricultural uses of recycled water in the U.S. and worldwide, including California.

Task 3: Interview major recycled water producers and agricultural producers to identify (1) whether they use recycled water and if not, why, (2) impediments to the use of recycled water for agricultural irrigation, and (3) incentives that would encourage recycled water use for agricultural irrigation.

Task 4: Identify and recommend ways to overcome impediments to irrigated agriculture uses of recycled water (e.g. infrastructure to transport recycled water, nutrient management and need for tailoring water quality for specific crop use, standardization and streamlining of regulatory practices, salinity management, impact on water rights, public acceptance, etc.)

Task 5: Conduct a review of wastewater treatment technologies appropriate for treating wastewater before use for irrigation.

Task 6: Explore the possibilities, impediments, and incentives of on-site reuse in regards to irrigated agriculture.

Task 7: Identify and recommend ways to incentivize increased recycled water use for irrigated agriculture (diversification of water supply in the face of drought and climate change, reduction in a reliance on groundwater, alleviation of water rights issues, etc.).

Task 8: Draft a final report/guidance document for the WRRF for the tasks identified above, including the literature review, analysis, interviews, recommendations, and final analysis of the results. The final report should provide the final outcomes and recommendations for regulator review in addition to the WRRF Project Advisory Committee (PAC).

Proposal Instructions

When planning preparation of a proposal, a respondent should review the Foundation's *Guidelines for Solicited Proposals* (<http://www.watereuse.org/foundation/research/research-templates>). These guidelines outline the requirements for submitting proposals under the Foundation's Solicited Research Program and contain the required attachments referred to below. The guidelines also provide information on the process used by the Foundation to review, rank, and fund research projects.

Proposals should be structured as follows:

1. Attachment A: WateReuse Research Foundation's Proposal Cover Sheet
2. Understanding of the Problem
3. Technical Approach and Task Breakdown

4. Management, Communication, and Quality Assurance Plans
5. Schedule and Deliverables
6. Attachment B and Budget Narrative
7. Attachment C and Letters of Support
8. Attachment D and Résumés or other Personnel Information
9. Qualifications, Organizational Charts, Technical Resources, and other Supplemental Information

Please note sections 2 through 5 are limited to no more than **15 Pages** in combined length, not including the required attachments. Résumés and other personnel information are limited to two pages per person in Section 8. Section 9 is limited to 35 pages. The only other items that may be included in a proposal are: a proposal cover and back page; a table of contents; and blank section dividers.

The electronic copy of the proposal should be delivered as one file, preferably in PDF format.

A respondent should determine, prior to proposal submission, whether the Foundation's standard contract conditions (<http://www.watereuse.org/foundation/research/research-templates>) are acceptable to the respondent, its subcontractors, and other participants. If the funding agreement is not negotiated and executed within 90 days of contract award, the Foundation reserves the right to withdraw the award.

Budget

The maximum amount of funding available from the Foundation for this project is **\$150,000**. This project will require matching funds of **at least 25%** (\$50,000) of the total project costs. Therefore, the total project cost is at least \$200,000 - that is, **\$150,000 (75%)** and **\$50,000 (25%)**. Respondents may elect to contribute more than 25% to the project; however the Foundation's maximum contribution remains fixed at \$150,000. Proposals that request less than the \$150,000 from the Foundation need only contribute 25% of the total project cost.

Respondents are encouraged to identify other co-funding sources and in-kind services that would contribute to the funding of the project. One of the evaluation criteria will be the percentage match that the applicant will provide. Support for all funding identified by the project team must be included in the proposal. Utility participation is highly recommended and can be integrated into the project through participation or contribution.

Respondents should provide a budget showing separate cost estimates for salaries, fringe benefits, supplies, services, travel, subcontracts, and other direct costs. **All personnel costs must be presented on an hourly basis.** Each applicant must provide a textual justification for all personnel, rates, and costs (Budget Narrative). All line items must be fully explained. Lump sum categories (e.g., "consumables") are not acceptable without explanation. WateReuse Research Foundation managed funds may not be used to pay individual tuition costs. The cost of quarterly progress reports and responding to Foundation comments should also be included in the respondent's budget. Furthermore, the budget must clearly identify who will work on each task and must clearly identify a budget breakdown by task.

Schedule

The estimated period of investigation for this project is **12-15 Months**. The respondent should include a detailed timeline of the project, including start and end dates for each task. Quarterly progress reports will be due every three months throughout the investigation. At the end of the period of investigation, the Contractor will submit a final report to the Foundation. The contractual period of performance will include additional time for required revisions.

Project Advisory Committee

A Project Advisory Committee (PAC) has been organized by the Foundation to provide guidance, review all reports and significant materials, and generally monitor project performance on behalf of the Foundation and other sponsoring organizations. The PAC includes technical experts and representatives from the Foundation's funding partners. The technical experts will include academics specializing in agriculture and irrigation, representatives from water agencies, and industry experts.

Utility Participation

The Foundation encourages respondents to include both participation and contribution of resources from water and wastewater utilities in the research effort.

Application Procedure and Deadline

Questions to clarify the intent of this RFP may be addressed to Kristan Cwalina at (571) 445-5512 or kcwalina@watereuse.org.

One electronic copy of the proposal must be submitted by **Wednesday, November 4, 2015** at 5:00 PM Eastern Time to kcwalina@watereuse.org. Late proposals will not be considered.