



This project is being funded through the Solicited/Focus Area Program, which enables WRF to solve broadly relevant subscriber issues and challenges with a targeted, sustained research effort. The program is developed around research topics that are of high interest and priority to WRF subscribers because of a challenge or opportunity that is present, emerging, or anticipated, and for which research will help subscribers manage and address the challenge or optimize the opportunity.

This project is funded under the Issue Area “Sustainable Integrated Water Management (SIWM)” and is intended to support the Issue Area objective(s):

The objective of the Sustainable Integrated Water Management program is to engage partners to advance sustainable integrated water management for communities by:

- ***Transitioning an “integrated water management” approach into practice by taking a holistic view of wastewater, stormwater, drinking water, and reclaimed/reused water;***
- ***Optimizing stormwater programs through lifecycle analysis and green infrastructure implementation to create adaptable and resilient water infrastructure;***
- ***Transforming comprehensive planning and watershed management by engaging partners in the agriculture, forestry, and planning communities at the national, state, regional, and local levels.***

Solicited Research Request for Proposals (RFP)

Assessing the State of Knowledge and Research Needs for Stormwater Harvesting (RFP #4841)

Project Objective

- *To evaluate the state of the knowledge and research needs of stormwater harvesting through a combination of literature review, web search, phone interviews, and a workshop;*
- *To better understand the variation of stormwater harvesting at regional and state levels;*
- *To prepare a synthesis document, including recommendations on preliminary project concepts based on workshop discussion outcomes;*
- *To communicate the results through a webcast.*

Budget

Proposals may request WRF funds for \$12,000. WRF funds requested and total project value will be criteria considered in the proposal selection process.

Background

The Water Research Foundation (WRF), through its legacy Water Environment & Reuse Foundation, completed the project, *Drivers, Hindrances, Planning, and Benefits Quantification – Economic Pathways and Partners for Water Reuse and Stormwater Harvesting* (project SIWM8R14), which provides a framework for utilities considering wastewater and stormwater reuse elements in their water management portfolios.

This project will build on the previous project and will specifically focus on the area of stormwater reuse/harvesting. Given the variety of stormwater regulations among states and their impacts on stormwater harvesting (e.g., eastern versus western states), the objectives of this project are to evaluate the state of the knowledge and research needs of stormwater harvesting and to prepare a

synthesis document including recommendations on preliminary project concepts. Specific regional issues including, but not limited to, the unique limitations of water rights in the western U.S. and how these limitations might impact stormwater harvesting will also be considered.

The project will help determine the research needs for stormwater harvesting at a more in-depth level. Many utilities and municipalities have great interest in stormwater harvesting but are facing both economic and regulatory challenges. For example, for impaired surface waters with nutrient and sediment TMDLs, stormwater harvesting could help municipalities reduce their stormwater discharges. This exploratory effort will help facilitate the use of stormwater harvesting at both national and regional levels.

The expected outputs of this project are threefold:

- A synthesis document for knowledge gaps, research needs, and recommendations on preliminary project concepts on stormwater harvesting. Literature and supporting documents used for the evaluation of the state of the knowledge and research needs of stormwater harvesting, based on the combination of literature review, web search, and phone interviews with selected state regulatory agencies;
- A one-day workshop for the Principal Investigator (PI) to discuss summary findings with the Project Advisory Committee (PAC);
- Communication of the results through a broader network, such as a WRF and WaterReuse Association webcast that is open to general public.

Research Approach

Task 1: Evaluation of the state of the knowledge and research needs through literature review

The research team will evaluate the state of the knowledge and research needs through a combination of literature review, web search, and phone conversations/interviews with selected state regulatory agencies (e.g., eastern versus western states) in order to better understand the variation of stormwater harvesting at regional and state levels. The research team's literature review will build upon the preliminary literature review that was already conducted by some PAC members.

Deliverables:

- A summary white paper of the literature review and concise notes from interviews of selected state regulatory agencies.

Task 2: Discussion of the findings with PAC through an in-person workshop

The research team will discuss the draft findings from Task 1 with the PAC through an in-person workshop. The workshop may be hosted at a national conference or at a participating utility for a single day or two half days during the spring or summer of 2019.

The PI and research team will prepare the workshop agenda, facilitate the workshop discussion, and prepare a synthesis document containing a summary of the workshop, recommendations on preliminary

project concepts, and workshop discussion outcomes. The project budget (\$12,000) includes costs for the PI and one support person from the research team to travel to the selected workshop location.

WRF may invite other people to join this workshop at the participants' own expense. The total number of workshop participants could be more than the number of PAC members, but no more than 10 persons (excluding the PI and one support person from the research team). The travel cost for PAC members will be covered by WRF.

WRF will coordinate with the research team on logistics issues. WRF will also coordinate PAC review of the draft synthesis document.

Deliverables:

- Workshop agenda;
- Draft synthesis document that identifies knowledge gaps and research needs, and provides recommendations on preliminary project concepts on stormwater harvesting;
- Final synthesis document, after one round of consolidated comments from the PAC are addressed;
- Literature and supporting documents for the evaluation of the state of the knowledge and research needs of stormwater harvesting, based on a combination of literature review, web search, and phone interviews with selected state regulatory agencies.

Task 3: Community outreach

For broader community outreach, the research team will conduct a webcast hosted by WRF and collaborating organizations on the overall findings of this project. The brief summary of the final synthesis document will also be available on the WRF website as part of the outreach efforts.

Deliverables:

- Webcast, presentation materials, and brief summary of the synthesis document.

Selection Process and Criteria

Proposals will be reviewed by WRF and a review team consisting of the PAC and/or Advisory Committee for the Research Area. This review team may be complemented as needed by subject matter experts. As part of the evaluation process, WRF reserves the right to request interviews, either via conference call or in person, with qualified applicants if necessary.

Applicants are encouraged to develop and submit research plans that meet the project objectives of this RFP, provide sufficient details of their budget, and outline schedules and milestones that can successfully deliver on the stated project objectives and tasks.

WRF will evaluate proposals on the following components:

- **Understanding the Problem and Responsiveness to RFP (20%)**
Does the proposal adequately explain the problem? Does it reflect knowledge of the issue and how solving the problem will benefit the water industry? Have the RFP objectives been adequately

addressed? If proposed objectives differ from the RFP, do stated objectives address current or future needs of the water industry? Are data quality objectives specified?

- **Technical Approach and Scientific Merit (40%)**

Was the proposal prepared with supportive information and is it self-explanatory and clearly understandable? Is the proposed effort technically defensible? Is the approach practical? Can the project objectives be achieved in the stated time period with the allotted personnel and budget?

- **Management and Communication Plans (10%)**

Are the roles, responsibilities, and assignments clear? Do the supporting organizations on the team have complementary skills? Does the lead organization have adequate resources to provide the appropriate level of management, oversight, and project implementation? Is the Quality Assurance/Quality Plan acceptable? Are schedules and deliverables clearly defined?

- **Budget and Schedule (10%)**

Is the budget within the advertised budget for the project? Has the applicant provided an appropriate (at least 25%) and significant in-kind contribution to the project? Is the level of effort allocated to each task logical? Is the indirect cost rate reasonable (35% or less is competitive), and has it been detailed in the proposal? Is the schedule realistic? Do the proposed budget and schedule match funding needs to milestones and demonstrate the value of the research relative to the proposed cost?

- **Qualifications of Organization and Key Personnel (10%)**

Does the lead organization have demonstrated experience and expertise in the issues and objectives discussed in the RFP? Do the key project personnel have experience in the proposed area of research? Have key personnel committed an appropriate amount of time to the project? Are water supply and wastewater agencies involved?

- **Staff Evaluation and Input Based on Past Performance (10%)**

Proposal Preparation Instructions

Proposals submitted in response to this RFP must be prepared in accordance with The Water Research Foundation's document *Guidelines for Focus Area Program Proposals*. The most current version of these guidelines is available at:

<http://www.waterrf.org/funding/ProposalDocuments/GuidelinesForFocusAreaProgramProposals.pdf>.

The guidelines contain instructions for the technical aspects, financial statements, and administrative requirements that the applicant must follow when preparing a proposal.

Please note that the selection criteria listed here are different from those listed in the Guidelines for Focus Area Program Proposals document. The selection criteria in this RFP will be used to evaluate the proposal.

Eligibility to Submit Proposals

This RFP solicits proposals from all technically qualified applicants, including educational institutions, research organizations, federal or state agencies, municipalities, and consultants or other for-profit entities.

WRF's Board of Directors has established a Timeliness Policy that addresses researcher adherence to the project schedule. The policy can be reviewed at <http://www.waterrf.org/funding/Pages/policies.aspx>.

Researchers who are late on any ongoing WRF-sponsored studies without approved no-cost extensions

are not eligible to be named participants in any proposals. If you have any questions about your eligibility for WRF projects, please contact the WRF research staff listed at the bottom of this RFP.

Administrative, Cost, and Audit Standards

WRF's Solicited Research Program standards for administrative, cost, and audit compliance are based upon, and comply with, Office of Management and Budget Uniform Grants Guidance, 2 CFR Part 200 Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, and 48 CFR 31.2 Contracts with Commercial Organizations. These standards are referenced in the WRF's *Guidelines for Focus Area Program Proposals*, and include specific guidelines outlining the requirements for indirect cost negotiation agreements; financial statements; and the Statement of Direct Labor, Fringe Benefits and General Overhead. Inclusion of indirect costs must be substantiated by a negotiated agreement or appropriate Statement of Direct Labor, Fringe Benefits and General Overhead. Well in advance of preparing the proposal, your financial staff should review the detailed instructions included in WRF's annually released *Guidelines for Focus Area Program Proposals*.

Budget and Funding Information

The funding available from WRF for this project is \$12,000. A minimum 25 percent of the total project value must be contributed by the applicant (i.e., the applicant's minimum contribution must equal one-third of WRF funds requested). Acceptable forms of applicant contribution include cost-share, applicant in-kind or third-party in-kind that comply with 2 CFR Part 200.306 Cost sharing or matching. The applicant may elect to contribute more than 25 percent to the project but the maximum WRF funding available remains fixed at \$12,000. **Proposals that do not meet the minimum 25 percent of the total project value will not be accepted.**

Period of Performance

The proposed project schedule should be realistic, allowing ample time for the preparation of final reports and for review of project results. It is WRF's policy to negotiate a reasonable schedule for each research project. Once this schedule is established, WRF and its sub-recipients have a contractual obligation to adhere to the agreed-upon schedule. Under WRF's No-Cost Extension Policy, a project schedule cannot be extended more than nine months beyond the original contracted schedule, regardless of the number of extensions granted. The policy can be reviewed at <http://www.waterrf.org/funding/Pages/policies.aspx>.

Utility and Organization Participation

WRF is especially interested in receiving proposals that include both participation and contribution of resources from water utilities and organizations in the research effort. Information on utilities and/or organizations that have indicated an interest in participating in this research project are listed on the last page of this RFP. While WRF makes utility and organization participation volunteers known to applicants, it is the applicant's responsibility to negotiate utility and organization participation in their particular proposal, and the utilities and/or organizations are under no obligation to participate.

Application Procedure and Deadline

Proposals are now being accepted exclusively online in PDF format and must be fully submitted before 2:00 PM Mountain Time, Wednesday, February 27, 2019. All of the forms and components of the proposal are available online in the “Proposal Component Packet” zip file. A login is required to download this packet and use the proposal website. This information is available at <https://proposals.waterrf.org/Pages/RFPs.aspx>

The online proposal system allows submission of your documents until the date and time stated in the RFP. To avoid the risk of the system closing before you press the submit button, do not wait until the last minute to complete your submission.

Questions to clarify the intent of this Request for Proposals and WRF’s administrative, cost, and financial requirements may be addressed to the Program Director, Dr. Harry Zhang, at (571) 384-2098 or by e-mail at hzhang@waterrf.org.

UTILITY AND ORGANIZATION PARTICIPANTS

To date, no utilities have indicated an interest in participating in this research. As utilities express interest, their information will be added below within 24 business hours of receipt of a volunteer form, and this RFP will be re-posted with the new information. **(Depending upon your settings, you may need to click refresh on your browser to load the latest file.)**

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References and Useful Web Links

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USEPA (2013). Rainwater Harvesting: Conservation, Credit, Codes, and Cost Literature Review and Case Studies. <https://www.epa.gov/sites/production/files/2015-11/documents/rainharvesting.pdf>