THE Water Research FOUNDATION

Date Posted: Thursday, February 9, 2023

REQUEST FOR PROPOSALS (RFP)

Establishing a Framework for Integrating Stormwater Capture and Use into Water Supply Planning (WRF 5207)

Due Date: Proposals must be received by **3:00 pm Mountain Time on Monday, April 10, 2023**
WRF Project Contact: Julie Minton, jminton@waterrf.org

Project Sponsors
This project is funded by The Water Research Foundation (WRF) as part of WRF's Emerging Opportunities Program.

Project Objectives
1. Identify the primary drivers for stormwater capture for water supply, through augmentation or off-setting of existing supplies, and factors that influence the drivers.
2. Identify approaches and opportunities for developing new stormwater capture and use projects or retrofitting existing stormwater infrastructure to augment water supplies, as well as proven methods for the quantification of the new supply.
3. Assess key factors for integrating stormwater into water supplies and water supply planning, and identify barriers that will need to be addressed in the planning process.
    a. Key factors and challenges related to stormwater capture and use should extend beyond technical considerations (e.g., meeting the needs of multiple agencies and partners, providing multiple benefits, making a successful business case, water quality concerns, regulatory context, water rights, challenges in management of the supply, etc.).
4. Develop a framework for evaluating the use of stormwater as a water supply.
    a. Provide guidance for establishing a common language and understanding across different agencies and parties meeting varying regulatory obligations, considering the differences in drivers, approaches, key factors, and challenges identified above.
    b. Identify pathways to bridge knowledge gaps and facilitate data sharing and technical collaboration, utilizing the established common understanding, to enhance implementation of stormwater capture projects.
    c. Showcase successful instances of multi-agency participation and partnership for stormwater capture and use as a new supply, highlighting how collaboration was achieved and how a successful business case was made for each project.

Budget
Applicants may request up to $150,000 in WRF funds for this project.

Background and Project Rationale

Factors such as climate change, growing populations, and a push towards One Water approaches are leading utilities to view stormwater as a resource to be captured and used rather than conveyed elsewhere. Utilities are considering different approaches to supply planning to meet their current and future water needs without compromising environment protection. Stormwater is an increasingly important water resource and potential new water supply source for large and small communities across the globe. Stormwater capture approaches can include centralized and decentralized systems implemented at the building, municipal, and regional scales. They can be designed to meet multiple objectives with various end uses and to achieve multiple benefits (e.g., ensuring flood control operations, achieving water quality goals, enhancing habitat, providing water supply augmentation, etc.). Stormwater capture and use (or stormwater harvesting) in the context of this project will focus on projects where the primary objectives include contributing to water supplies by augmenting or off-setting use of existing supplies through different potable and non-potable applications.

Municipal water utilities need guidance on integrating stormwater into water supply planning in a way that meets the needs of multiple parties (e.g., stormwater utilities, public works, wastewater utilities, drinking water utilities, flood control districts, and private developers) while also meeting regulatory obligations and planning within available funding resources. Standardized language and collaborative frameworks are needed to bridge the gap between different stakeholders, facilitate cooperation across water enterprises, and better define the complete suite of stormwater capture and use options beyond water supply augmentation. To develop these frameworks, a greater understanding is needed regarding stormwater capture and use within the supply planning perspective, including varying project drivers, approaches, and the key factors that could present barriers to successful project implementation.

Research Approach

This RFP is intentionally flexible in the research approach to encourage creativity and originality from proposers. Proposers should describe how they will conduct the research to meet the objectives listed above. The proposed research approach should include consideration of the following:

- The full range of stormwater capture and use project types and end uses.
- The influence of location, agency or entity type, project end use and end goal, and regulatory context on project drivers and barriers.

The following items should be considered in the research approach as a starting point:

- Complete a review of recent studies and practices on stormwater capture in water supply planning.
- Evaluate local efforts to enhance interagency collaboration for stormwater capture and use, and derive lessons learned to help others build institutional capacity.
- Identify case study examples where stormwater was incorporated into water supply planning.

Expected Deliverables

- Develop a guiding framework for integrating stormwater capture and use into water supply planning.
- Develop case studies of communities that have successfully integrated stormwater capture into their water supplies.
- Showcase successful water agency participation and partnerships in stormwater capture to generate new supplies.

Proposers are expected to articulate and outline what a successful deliverable(s) will look like. The expected deliverables from this project may include, but are not limited to, the following:

- Final project report
- Case studies
- Peer-reviewed journal article
- Webcast, conference presentation, etc.
- Workshop(s) (consider plan to document workshop)

Communication Plan

Please review WRF's *Project Deliverable Guidelines* for information on preparing a communication plan. The guidelines are available at https://www.waterrf.org/project-report-guidelines#project-deliverable-guidelines. Conference presentations, webcasts, peer review publication submissions, and other forms of project information dissemination are typically encouraged.

Project Duration

The anticipated period of performance for this project is 18 months from the contract start date.

References and Resources

The following list includes examples of research reports, tools, and other resources that may be helpful to proposers. It is not intended to be comprehensive, nor is it a required list for consideration.

- Clements, J., J. Henderson, and A. Flemming. 2021. *Economic Framework and Tools for Quantifying and Monetizing the Triple Bottom Line Benefits of Green Stormwater Infrastructure*. Project 4852. Denver, CO: The Water Research Foundation.
- Fedak, R., S. Sommer, D. Hannon, R. Sands, D. Beckwith, A. Nudling, and L. Stitzer. 2018. *Coordinated Planning Guide: A How-To Resource for Integrating Alternative Water Supply and Land Use Planning*. Project 4623B. Denver, CO: The Water Research Foundation.
- Garvey, E., J. Rasmus, S. Brown, E. Fassman-Beck, and E. Stein. Forthcoming. *Assessing the State of Knowledge and Research Needs for Stormwater Harvesting*. Project 4841. Denver, CO: The Water Research Foundation
- Hayek, C., U. Lall, W. Becker, P. Knowles, and L. Faber. Forthcoming. *Successful Implementation of Decentralized Reuse and Treatment Systems*. Project 5040. Denver, CO: The Water Research Foundation.
- National Academies of Sciences, Engineering, and Medicine. 2016. *Report in Brief: Using Graywater and Stormwater to Enhance Local Water Supplies: An Assessment of Risks, Costs, and Benefits*. Washington, DC: The National Academies Press.
- Rosenblum, E., F. Marcus, R. Raucher, B. Sheikh, and S. Spurlock. 2022. *Multi-agency Water Reuse Programs: Lessons for Successful Collaboration*. Prepared for the EPA Water Reuse Action Plan; https://www.epa.gov/system/files/documents/2022-03/multi-agency_water_reuse_programs-lessons_for_successful_collaboration_march_2022.pdf.
- U.S. EPA. EPA Water Reuse Action Plan, Action 3.3 Convene Experts on Urban Stormwater Capture and Use.
- U.S. EPA. 2021. *Enhanced Aquifer Recharge of Stormwater in the United States: State of the Science Review*. U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-21/037F

Proposal Evaluation Criteria

The following criteria will be used to evaluate proposals:

- Understanding the Problem and Responsiveness to RFP (maximum 20 points)
- Technical and Scientific Merit (maximum 30 points)
- Qualifications, Capabilities, and Management (maximum 15 points)
- Communication Plan, Deliverables, and Applicability (maximum 20 points)
- Budget and Schedule (maximum 15 points)

Proposal Preparation Instructions

The Emerging Opportunities Program has unique proposal requirements. Please follow the submission instructions below. Proposals not adhering to the restrictions below will not be accepted.

The entire proposal, ***excluding*** the proposal cover worksheet, resumes, budget form, budget narrative, co-funding support form (when applicable), schedule, and references, should **not exceed ten pages in length**. Proposals must include the following components.

- **Proposal Cover Worksheet:** The *Proposal Cover Worksheet* is available at https://www.waterrf.org/proposal-guidelines#RPP-proposal-coversheet.
- **Background and Statement of Need:** Provide a brief summary of the current state of knowledge for the issue that the proposed research will help address, and the drivers for the proposed research.
- **Objectives:** The proposed research objectives should be clearly identified in one or two sentences.
- **Technical Approach**: Describe how the proposed research will be conducted and the tasks necessary to accomplish the objectives.
- **Benefit to WRF Subscribers:** Identify the practical benefits of the proposed research to water utilities and the water community.
- **Research Team and Other Participants:** Identify the key members of the research team and provide brief statements of their qualifications to conduct the proposed research. Identify any other organizations that have committed to collaborate on the proposed research. Curriculum vitae or resumes for research team members are required.
- **Budget:** A detailed budget is required. The researcher should identify the amount of WRF funds requested and any other cost-share, in-kind, or cash support for the proposed research. Cost-share, in-kind, and cash support is not required for submission, however, is encouraged. The following items will need to be included with the budget. *Instructions for Budget Preparation* are available at https://www.waterrf.org/proposal-guidelines#RPP-instr-budget-prep.
    - Proposal Budget Form: The *Proposal Budget Form* can be found at https://www.waterrf.org/proposal-guidelines#RPP-proposal-budget-form.
    - Budget Narrative (see instructions for budget preparations)
    - Emerging Opportunities Co-Funding Support Form (when applicable): Each co-funding organization providing cash to the project payable directly to WRF must complete a separate Emerging Opportunities Co-Funding Support Form and include it with the proposal package. The form is available at https://www.waterrf.org/proposal-guidelines#RPP-co-fund-support-form.
- **Schedule** - A detailed schedule is required.
- **References** (optional) – detailed citations are not required in the proposal, but may be provided at the discretion of the researcher.

Proposals that include the production of web- or software-based tools, such as websites, Excel spreadsheets, Access databases, etc., must follow the criteria outlined for web tools presented in the Web Tool Criteria and Feasibility Study for The Water Research Foundation Project Deliverables at https://www.waterrf.org/project-report-guidelines#webtool-criteria.

Eligibility to Submit Proposals
Proposals will be accepted from domestic or international entities, including educational institutions, research organizations, governmental agencies, 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 https://www.waterrf.org/policies. 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. Direct any questions about eligibility to the WRF project contact listed at the top of this RFP.

Period of Performance
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 https://www.waterrf.org/policies.

Utility and Organization Participation
WRF encourages participation from water utilities and other organizations in WRF research. Participation can occur in a variety of ways, including direct participation, in-kind contributions, or in-kind services. To facilitate their participation, WRF has provided contact information, on the last page of this RFP, of utilities and other organizations that have indicated an interest in this research. Proposers are responsible for negotiating utility and organization participation in their particular proposals. The listed utilities and organizations are under no obligation to participate, and the proposer is not obligated to include them in their particular proposal.

Application Procedure and Deadline
Proposals are accepted exclusively online in PDF format, and they must be fully submitted before 3:00 pm Mountain Time on Monday, April 10, 2023.

The online proposal system allows submission of your documents until the date and time stated in this RFP. Submit your proposal in 1 PDF file at https://forms.waterrf.org/230184477361861 .

Questions to clarify the intent of this RFP and WRF's administrative requirements may be addressed to the WRF project contact, Julie Minton at (571) 699-0023 or jminton@waterrf.org. Questions related to proposal submittal through the online system may be addressed to Caroline Bruck at (303) 347-6118 or cbruck@waterrf.org**.**

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The following utilities have indicated an interest in possible participation in this research. This information is updated within 24 business hours after a utility or an interested organization submits 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.)**

N/A