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2018 TAILORED COLLABORATION PROGRAM PROPOSAL GUIDELINES

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Key Dates for the 2018 Tailored Collaboration Guidelines:

- Pre-Proposals will be accepted starting November 1, 2017
- Full Proposals will be accepted starting January 8, 2018

I. PROGRAM OVERVIEW

The Water Research Foundation (WRF)

WRF is an internationally recognized leader in water research that is dedicated to advancing the science of water by sponsoring cutting-edge research and promoting collaboration. Our research provides industry insights and practical solutions to the most complex challenges facing the water community today and into the future. WRF is governed by a 23-member Board of Directors (BOD) and is funded primarily by a voluntary subscription program through which water utilities invest in research based on population and volume of water distribution. WRF has approximately 1,000 subscribers including utilities, consulting firms, and manufacturers who support WRF's mission. In addition to the financial support WRF receives from its subscribers, more than 500 volunteers contribute valuable hours each year in support of WRF's research efforts.

The Tailored Collaboration Program

The mission of the Tailored Collaboration (TC) program is to provide an opportunity for subscribing utilities to partner with WRF in regional research projects or projects that address an issue of interest to a significant subgroup of WRF subscribers. The program provides WRF support for projects that a utility or group of utilities may have otherwise independently funded to address local or regional concerns. Through this program, WRF and participating utilities are able to mutually leverage research funding for a project and more broadly share the research outcomes with other utilities through a published final report or other final deliverables. Projects often address innovative ideas that have not been the focus of other WRF programs or expand upon existing research to determine application potential at a utility.

The unique benefit of the program to subscribers is not only that utilities' research funds are leveraged, but that projects are further enhanced by WRF's independent review process (via Project Advisory Committee), professional project management, and technology transfer. The program also expands the research benefits available to subscribers without increasing subscription fees and at the same time helps to support utilities' research programs.

A well-developed proposal or Request for Proposal (RFP) that includes background, research approach, and information about how the research idea is unique as compared to other WRF projects is required to apply for matching funding. Pre-proposals and draft RFPs are required and can be submitted after a designated date (November 1, 2017) on a first-come, first-serve basis. Full proposals or RFPs will be accepted for approved pre-proposals and draft RFPs beginning January 8, 2018, on a first-come, first-serve basis. Maximum WRF 1:1 cash match for a project is \$100,000.

Utilities interested in sponsoring a proposal should contact WRF to determine the funding available for the year and to discuss the research concept. WRF staff are available to guide subscribing utilities through the TC process. A Sponsoring Utility wishing to obtain more information should contact John Albert, Chief Research Officer, at 303.734.3413 or by email at JAlbert@WaterRF.org.

II. PROPOSAL REQUIREMENTS OVERVIEW

1. Proposal Sponsor Requirements

Tailored Collaboration (TC) proposals must be sponsored by a utility that has paid its WRF subscription as calculated on the most current year's Utility Subscription Worksheet. The sponsoring utility may partner with one or more organizations in a proposal. Non-subscribing utilities may participate and contribute funding to a project, however WRF will not match these funds.

2. Sponsoring Utility-Proposal Submittal Frequency

The Sponsoring Utility is defined as a WRF subscribing utility that initiates a proposed project. There can only be one Sponsoring Utility per proposal, however multiple utility subscribers can contribute funds to a project these funds will be matched up to \$100,000. In the interest of broadening Program participation, the guidelines require a 12-month waiting period after a TC project starts (i.e., after full execution of the contract by all parties) before the sponsoring utility is eligible to submit an additional proposal.

3. Project Funding and WRF Fund Matching Guidelines

Only utilities that have paid their subscription are eligible to have their project funding matched by WRF. Organizations that are not eligible to be WRF subscribers (e.g., non-profit organizations or government agencies) may participate in a TC proposal as a co-funder, provided the proposal is submitted by a subscribing utility. Funding contributed by these organizations may qualify for WRF matching; however, determination regarding the funding match is dependent upon approval by the Chief Research Officer.

WRF will provide matching funds for cash contributed by qualifying organizations (e.g., subscribers and some organizations not eligible to be subscribers) to fund the research with a maximum WRF contribution of \$100,000 per project. WRF will provide a 1:1 match up to \$100,000 for every \$1 in cash a subscribing utility or group of subscribing utilities provides towards the project. **All money invested by the sponsor or other co-funder(s) is due to WRF upon execution of the funding agreement in order to be eligible for WRF cash match.** WRF's disbursement of the Project Funds shall be subject to WRF first having received full corresponding payment from the sponsoring utility and all the Co-funders.

4. Additional In-Kind Match Not Required

In other WRF funding programs, a 25% in-kind match is typically required. No such contribution is required for Tailored Collaboration projects that are sole sourced. If a Tailored Collaboration project has been identified as RFP, the in-kind match is required. In any event, in-kind contributions are welcome and should be documented in the proposal and in the budget submittal. In-kind contributions often include such items as personnel costs, support services, facilities, and consulting services. All in-kind commitments should be in the form of a letter from each participating organization in the proposal.

5. Research Organization Selection and Proposal Review

The sponsoring utility may designate the research organization, or may request that WRF issue a Request for Proposals (RFP) to select a research organization. The sponsoring utility must submit either a proposal or an RFP. Each proposal or RFP receives a two-tier review. The initial technical evaluation is completed by a project-specific, WRF-invited, independent

Project Advisory Committee (PAC). PACs are organized by WRF to provide project review, oversight, and monitor project performance on behalf of WRF. PAC members are experts in the area of research and cannot be affiliated with the research team or co-funding organizations. The Board-appointed Tailored Collaboration Review Committee (TCRC) will then evaluate the PAC's recommendations and make the final funding decision. Both committees can request clarification on technical and/or financial issues they identify in the proposal or RFP before making a decision regarding suitability for funding.

6. Contract Requirements

Once a proposal or RFP is selected for funding, a Multi Funded Research Agreement (MFRA) must be established between WRF, sponsoring utility, and co-funding organization(s). The research organization (a.k.a. Sub-recipient) will also enter in to the MFRA. It is encouraged that the submitting utility, all co-funders and Principal Investigator review the Tailored Collaboration Multi Funded Research Agreement (MFRA) found on the WRF website in advance <https://www.waterrf.org/funding/Pages/contract-materials.aspx>

Prior to submitting a proposal or RFP, the sponsoring utility should verify with each co-funder and the Principal Investigator (if pre-designated) that the MFRA is acceptable to their respective organizations. It must be signed by all parties within 45 days of receipt of the draft agreement. Co-funding organizations must complete internal reviews of the MFRA to identify potential concerns (e.g., intellectual property, legal, risk management, indemnification) that will require negotiation and resolution. Items requiring negotiation must be identified in the proposal on the Co-funding Support Form. **The MFRA must be signed by the sponsoring utility, all Co-funders, the Sub-recipient (researcher), and the Principal Investigator before WRF can move forward with the project.**

A coordination call will be scheduled by WRF with all participants once the project is awarded to discuss the MFRA regarding contractual concerns, funding approvals, IP ownership/copyright, and any other issues. Project participants are encouraged to arrange that all key staff be available for this call.

7. Project Management

WRF will provide overall management of the project including contract administration and technical oversight of the project through the Research Manager (RM) and Project Coordinator (PC). The RM manages the PAC to review and assess the technical progress of a project. This process is meant to provide for a continuous, independent review that ensures the scientific validity of the research. The PC ensures that contractual obligations are met (i.e., deliverable schedule).

Co-funding organizations are encouraged to provide input to the project through the research team. It is the responsibility of the researcher and the co-funders to implement a communications plan that will provide for communications between the co-funders and the research team.

Technology Transfer

WRF's mission is not complete until research results are put to work in the water community. To this end, the research team is expected to produce a final report or other final deliverable that can be published by WRF. In addition to the final report, WRF often communicates research findings

to water professionals worldwide via periodicals, conferences, and webcasts. Utilities providing data for TC projects must be willing to have the data published and distributed to the water community although actual data can be anonymous.

III. STEP-BY-STEP GUIDE FOR THE PREPARATION AND SUBMITTAL OF TAILORED COLLABORATION RESEARCH PROPOSALS

Step 1 - Contact WRF

Sponsoring utilities are encouraged to contact WRF as early in the proposal development process as possible. Assistance is also available from staff as the proposal is developed. For questions regarding the TC program, please contact John Albert, Chief Research Officer, at 303.734.3413, or by e-mail at JAlbert@WaterRF.org

Additional WRF subscribers and qualifying organizations may partner with the **sponsoring utility** to help fund the research as a **co-funding organization**. The **research organization** is the awarded organization that will be responsible for conducting the research and may or may not be the **sponsoring utility** or a **co-funding organization**.

Step 2 – Submit Pre-proposal or Draft RFP

Pre-proposals: A pre-proposal must be sent to WRF prior to the submission of a full proposal. WRF staff will provide feedback to the submitting research team and the sponsoring utility about the following information to the best of their knowledge:

- Strengths and weaknesses of the project concepts and components described in the draft abstract
- Redundancy or uniqueness when compared to past and on-going research
- Identification of potential fatal flaws
- Suggestions for improvement

After the pre-proposal or draft RFP review, WRF staff will provide feedback to the sponsoring utility and research team.

Below are required **components of the pre-proposal**, which should not exceed **four** pages:

1. Tailored Collaboration Pre-Proposal/Draft RFP Cover Sheet (Attachment 1)
2. Pre-proposal Checklist (Attachment 2)
3. Problem identification – Why does the sponsoring utility support this research effort? What is the problem and/or circumstances that this utility, or group of utilities, identified that led them to this research effort?
4. Statement of Research Need – Briefly describe how this research will add to the advancement of science. How is the proposed work different from other related research? How does this work benefit other utilities?
5. Draft project abstract:
 - a. Hypothesis – Clearly state what the research is trying to demonstrate
 - b. Research objective(s) – Briefly state what the researcher will do to prove the above stated hypothesis.

- c. Technical approach – Describe the main tasks to be accomplished. This should serve as the basis for the Scope of Work that will be more fully described in the full proposal.
Include the following information:
 - i. What are the primary tasks that will be accomplished?
 - ii. What will be measured or evaluated?
 - iii. How will measurements or information be gathered and analyzed?
 - iv. Who will do the work and acquire measurements, provide information, and do the evaluation?
 - v. Where will the work be done?
 - vi. When will the work be done? What is the duration of the research effort? Indicate key dates and/or milestones for samples or information to be gathered or developed. Are there any time restrictions?
6. Statement of Qualifications from the research team related to this research effort (if project is to be sole-sourced). Have members of the research team done this type of work previously? Does the team have appropriate equipment?

Pre-proposals are considered the intellectual property of the submitter and are handled confidentially. Once complete, pre-proposals should be e-mailed to Caroline Bruck (cbruck@waterrf.org)

The pre-proposal checklist (Attachment 2) contains a short list of key points for research sponsors to be aware of to avoid confusion or questions. We encourage research sponsors to involve their legal counsel in review of the MFRA contractual agreement. If there are any major revisions, expected funding arrangements, timelines, or legal discussions, we would like to work with submitters early to avoid contract delays. Please check off the items on the checklist showing that you are aware of these issues. Although we ask that you review this list **before the pre-proposal is submitted**, all of these items do not need to be completed until the **final proposal is submitted**. We want to ensure these issues have been discussed and are understood during the preparation of the final proposal.

Draft RFPs: If the sponsoring utility would like to have an RFP issued to select a research organization, WRF can help support this effort using specific information from the draft RFP. Below are required **components of the draft**, which should not exceed **four** pages.

1. Tailored Collaboration Pre-Proposal/Draft RFP Cover Sheet (Attachment 1)
2. Pre-proposal Checklist (Attachment 2)
3. Problem identification – Why does the sponsoring utility support this research effort? What is the problem and/or circumstances that this utility, or group of utilities, identified that led them to this research effort?
4. Statement of Research Need – Briefly describe how this research will add to the advancement of science. How is the proposed work different from other related research? How does this work benefit other utilities?

WRF staff, a PAC, and sponsoring utility will review the draft RFP and develop a competitive full RFP. The full RFP will be provided to the TCRC. The TCRC must approve the funding for the project before WRF will issue an RFP. Upon receipt of the proposals to WRF, an RM will manage the review with the PAC and the Sponsoring Utility to select a research organization for the project.

Step 3 - Research Organization Selection

Sole Source – The sponsoring utility may pre-select a research organization.

RFP – As noted above, the sponsoring utility may utilize the RFP process to select a research organization.

Step 4 – Full Proposal or RFP Submittal Requirements

If the sponsoring utility already has a pre-designated research organization a full proposal will need to be submitted. Below are the instructions for submitting a full proposal.

If the sponsoring utility would like to use WRF's RFP process, a full RFP will need to be developed (as noted above). A full RFP template (Attachment 4) is provided for informational purposes.

Step 5 –PAC and TCRC Proposal Evaluation

WRF will form a PAC with volunteer experts knowledgeable about the technical aspects of each proposal. The PAC will review the proposal for technical merit, adequacy of budget and schedule, and fit with the TC Program. The committee may determine after an initial review that some corrections or additions need to be made in order to ensure that the project will be successful and provide information that will be useful to a relatively broad cross section of utilities. The PAC review period may last anywhere from two to six weeks, depending on volunteer schedules and whether proposal revisions are requested. The review will conclude with the PAC either recommending either funding or denial of funding for the project to the TCRC.

During scheduled monthly meetings, the TCRC will evaluate full proposals and RFPs submittals along with the associated TRC recommendations for funding. The TCRC may elect to fund or deny funding of a TC project upon the initial review or may suspend the funding decision contingent on the submittal of additional requested information. In any case, the TCRC will not meet more frequently than once per month to assess the funding submitted TC projects.

Step 6 - Award Administration

Multi Funded Research Agreement

Full proposals that are approved for funding by the TCRC will move into the contracting period. WRF will enter into a Multi Funded Research Agreement (MFRA) with the selected researcher and project co-funders. The selected researchers and their sub-contractors will be expected to comply with the terms and conditions of the Multi Funded Research Agreement. Projects that are solicited through the RFP process will start the contracting process using the MFRA after the researcher is selected.

The terms of WRF's MFRA should be reviewed **prior to submitting a proposal** as acceptance of these contract conditions is a requirement for WRF funding. The sponsoring utility should work with the research organization to determine, **before submission of a proposal**, that contract provisions are likely to be acceptable to the research organization (research organization research organization) and its subcontractors.

In addition, the sponsoring utility should determine whether the conditions of the MFRA are acceptable to each co-funding organization prior to submission of a proposal. **Items requiring negotiation must be identified in the proposal on the Co-funding Support Form.**

If the MFRA is not signed by all co-funders within 45 days, WRF reserves the right to cancel funding and may elect in favor of another project for which signed co-funding agreements can be put in place.

1. INSTRUCTIONS FOR PREPARING PROPOSALS WITH PRE-SELECTED RESEARCHERS

WRF now accepts full proposals using an online proposal submittal system. Following a successful pre-proposal, a link to WRF's Online Proposal Submission Site will be issued to the researcher.

The following section outlines the general instructions for preparing a Tailored Collaboration proposal. All the forms and components of the full 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>.

The Tailored Collaboration Proposal Component Packet zip file contains Word templates and forms that you will complete, convert or scan to PDF, and individually upload to submit a complete proposal. Ensure that all your PDF files appear as your originals (formulas, equations, graphs, etc.). Once all required documents have been uploaded and you press "Submit," your documents will be compiled into two PDF files for WRF use. The WRF Research Project Budget Form, Budget Narrative, Financial Grant Management Capabilities Form, Certifications and Assurances Forms, Draft Communication Plan, and the Co-funding Support Form are compiled into a separate PDF from your project proposal. Only the Budget Summary Page and Co-funding Support Form will be shared with WRF volunteers involved with reviewing the proposal.

The online proposal templates are styled to assist you with the paper size and font size requirements. Those requirements are: proposals must fit on standard U.S. letter-sized paper (8 ½ × 11 inches), with minimum margins of one inch on each side of the paper. Text font size must be a minimum of 12 point (12 characters per inch). WRF's logo is copyrighted and should not be displayed on proposals.

Proposals must include the components listed below. **Proposals that are missing any of these required components will be considered incomplete and not entered into the funding queue.** Please note the enforceable page limits for certain components of the proposal as identified below. **Proposals exceeding these page limits will not be considered.** Again, the online proposal templates are styled to assist you with meeting all the proposal submittal requirements. If you are not a U.S. entity, some required forms, such as a W-9, may not apply to you. Simply upload the packet document stating "N/A" in those instances.

- 1. Proposal Cover Letter and Worksheet:** Complete the form fields on the document.
- 2. Sponsoring Utility Letter:** This letter should highlight the utilities interest in the project as well as the reasoning for sole-sourcing it to the researcher(s).
- 3. Co-Funding Support Form:** The Sponsoring Utility and all co-funders must complete and sign the co-funding support form.
- 4. Project Abstract (one page)**

The abstract should be a concise summary of the research objectives, technical approach and anticipated results and benefits. It must include the names of the Principal Investigator (PI) and any co-PIs, the applicant (submitting organization), and participating water utilities, as well as the funding amount requested from WRF and the total of cost share and third-party in-kind contributions.

5. Project Description (22 pages)

Include the following sections:

- a. **Background:** Provide a summary of the topic background including the current state of knowledge, regulatory perspective where applicable, and significance to water utilities.
- b. **Research Approach:** Provide a clear and concise detailed scope of work which includes the objectives of the research, the methods that will be followed, and the nature and extent of the anticipated results.
- c. **Evaluation Criteria:** Provide specific criteria that can be used to evaluate the development and success of each project objective.

6. Applications Potential (one page)

Define the practical benefits of the proposed project to the drinking water community. What will be the products of the research (e.g., knowledge, protocol, instrument, software package, etc.)? How can they be used, who will use them, and what level of sophistication will be required? Define the steps to be taken in the project to ensure practical application (e.g., utility involvement). Where possible, identify additional efforts following project completion that will be needed prior to application of the research results.

7. Quality Assurance/Quality Control

Provide a detailed description of the procedures that will be used to ensure the quality of project data (e.g., statistical basis for number of analyses, statistical methods to be used in data evaluations, sample duplicates, blanks, and blind samples). If the project involves laboratory analyses, this description should indicate whether the laboratory performing the analyses is accredited or state certified for the analytes of concern. If the laboratory is not certified, and/or if nonstandard methods are used, detailed quality assurance/quality control procedures must be submitted with the proposal.

8. Management Plan (two pages)

Identify the individuals and organizations participating in the project, their specific roles and responsibilities and their time commitment to the project. Describe how the PI will maintain accountability for the individuals and organizations involved in the project. Include a concise organization chart showing the relationships and the lines of communication among the research team and all project participants.

9. References (as required)

Include an alphabetical list of references for works cited. References should conform to journal format.

10. Licenses and Inventions (as required)

If the research is likely to produce inventions, new products or processes (or improvements thereof), include a statement defining the relationship between the proposed research and any pre-existing patents or patent applications owned or controlled by the applicant, subcontractor or any participants. Identify the patents or patent applications and attach copies. WRF does not exercise any claims on patent rights for new inventions, products, or processes developed through our research; however, if a patent application could result from the proposed project, include a statement as to the proposed ownership of any resultant patent. **NOTE: WRF does not endorse or product-test commercial products or processes.**

If a patented product or process is being used in the research and is not owned by the applicant, then a license to use the patent must be submitted with the proposal.

11. Schedule

Identify the proposed start date and estimate the duration of the project's research phases. In general, the project start date should be at least three months after submission of the proposal. The RFP may also set forth project-specific schedule requirements.

12. Third-Party Contribution Letters of Commitment (as required)

If the applicant's budget includes third-party contributions, these contributions must be confirmed by letters of commitment. The letter of commitment must identify the type (e.g., cash, labor, materials, services, etc.) and estimated dollar value of the contribution, and must be signed by an authorized representative of the organization. E-mail communications will be accepted as a letter of commitment so long as the e-mail originates from an authorized representative and adheres to the requirements set forth above. **Third-Party contributions will not be considered in the proposal selection process unless a letter of commitment is included with the proposal.**

13. Curriculum Vitae or Resumes for Key Team Members

Upload Curriculum Vitae or abbreviated resumes as a single file for the PI, co-PI and any other key members of the research team. **The following items will be compiled into a separate PDF**

by our system once you submit all of your components. These items will not be provided to the Technical Advisory Committee (see Section III — Proposal Review and Selection).

14. Budget Form

Use WRF Research Project Budget Form to provide a realistic, cumulative budget for the project. Consult the “Instructions for Budget Preparation” in the Proposal Component Packet Guidance folder for details on preparing the budget. Costs will be evaluated for allowability under the applicant’s relevant U.S. Federal cost principles and any project-specific guidelines identified in the RFP. The budget should include sufficient funding to prepare the project deliverables described in Section IV – Award Administration.

The Budget Form must be accompanied by a detailed Budget Narrative (see below).

15. Budget Narrative

Itemize, explain and justify each cost included in the project budget, and identify when during the period of performance the cost is expected to be incurred. Ongoing project costs (e.g., labor, analytical services) should be broken down by year so that the planned rate of expenditure can be reasonably estimated. The Budget Narrative must provide sufficient detail to enable each itemized cost to be evaluated for allow ability and appropriateness for the project under the applicant’s applicable federal cost principles. Refer to the “Instructions for Budget Preparation” in the Proposal Component Packet Guidance folder, for additional information on specific items that must be addressed in the Budget Narrative. The Budget Narrative must accompany the completed WRF Research Project Budget Form. An example Budget Narrative is included in the Proposal Component Packet Guidance folder.

16. Communication Plan (one page)

Provide a draft plan for how the project results and key outcomes will be communicated effectively and in a timely manner to WRF subscribers and other end users who will apply the results for the benefit of the drinking water community. WRF will work with the selected researcher to refine the draft Communication Plan prior to the start of the project. The draft Communication Plan should address the following questions:

- Who are the target audiences? Who are the end users of the project results, and what other WRF stakeholders might benefit from knowing the results?
- What deliverables and communication activities are necessary to effectively reach the target audiences? What format, content, focus and level of detail are appropriate?
- When during the project should communication occur? Should there be interim deliverables and communication activities prior to project completion?
- Are there opportunities for joint or combined communication activities with those of other ongoing, related projects?
- Are there opportunities for collaborating on project communication with other trade or professional organizations that can help us more effectively reach target audiences?

The proposed budget should include the costs and resources associated with implementing the draft Communication Plan. Applicants are encouraged to review “Communications Strategies

and Deliverables for Water Research Foundation Projects” document here:

<https://www.waterrf.org/funding/ProjectReportGuidelines/CommunicationStrategiesProducts.pdf>

Proposals that include the production of software such as Excel spreadsheets, Access databases, etc., whether included on a CD-ROM and/or the WRF Website, must follow the criteria outlined for electronic media at:

<https://www.waterrf.org/funding/ProjectReportGuidelines/SoftwareCriteria.pdf>

Proposals that include the production of an external Website must follow the guidelines and submit the feasibility study presented in the document, “Website Criteria Feasibility Study,” located on this page: <https://www.waterrf.org/funding/Pages/project-report-guidelines.aspx>

Note that WRF requires that the Principal Investigator commit to provide a webcast detailing the project findings following completion of the project (see “Webcasts” Under Award Administration).

- **Equipment Purchase**

In general, WRF will not pay for the purchase of major equipment for research tasks. Lease or rental of equipment needed solely for use on the project is considered on a case-by-case basis. The research team should have access to the appropriate equipment and instruments needed to complete the proposed research.

- **Scope of Work**

The project’s scope of work must be based solely upon funds available from WRF, co-funders, and in-kind contributions and for which the dollar value is confirmed.

Important:

The Water Research Foundation expects projects to be completed within the timeframe specified in the proposal. Sponsoring utilities should be aware that the timeliness of the research organization's past performance on WRF projects will be considered by the TCRC committee. Details on WRF's timeliness policy can be found on the Water Research WRF’s Web site at: <https://www.waterrf.org/funding/Pages/policies.aspx>

PAC Meeting

Typically, a one-day meeting is held during each project with the PAC, WRF Research Manager and the research team. The meeting will sometimes include participating utilities, project co-funders, and other stakeholders. This meeting may be held at any time during the course of the project, as agreed between the PAC, Research Manager, and PI. The PAC meeting is an opportunity for face-to-face interaction among the key project stakeholders. Depending on the timing of the meeting, it may help refine the project scope and approach, review research results to date, resolve problems or concerns with the project, or define the final research products and deliverables. Most PAC meetings are held earlier in the course of the project and are located at the PI’s facility. In some instances a second PAC meeting will be held during the project; however, this is not typical. The key members of the research team are expected to help plan and participate in this meeting.

WRF covers staff and PAC member travel costs for the PAC meeting using non-project funds. The research team should be prepared to pay their travel costs associated with the meeting.

Project Deliverables

The following deliverables are required for most WRF projects. Applicants should allocate adequate resources for developing these deliverables. Once a proposal is selected, the project reporting schedule and specific reporting requirements will be negotiated in Exhibit B in the project funding agreement. All project deliverables must be submitted in Microsoft Word® or Adobe InDesign software with figures, tables and graphics embedded in the text. All deliverables must be submitted electronically (via email, or if the files are too large, via DropBox or other electronic method).

Scope of Work

The Scope of Work is typically due one (1) month after the project start date. The Scope of Work is comprised of the Project Abstract, Project Description, and Applications Potential sections of the project proposal, with revisions as necessary to reflect any changes negotiated prior to the start date. The Scope of Work is provided by WRF to outside audiences for informational purposes, including posting on the WRF website. Therefore, reasonable effort should be made to exclude information that may be considered sensitive to organizations participating in the project.

Periodic Reporting

Periodic reporting is a requirement for all WRF research projects, as it allows WRF to evaluate the researcher organization's progress and performance on a project. Periodic reporting also provides a mechanism for ongoing review of technical findings by WRF and the PAC. Finally, it provides information that enables WRF to review and approve the sub-recipient's invoices.

Some projects will require submittal of Periodic Reports, which are described below. Some projects will have specialized periodic reporting requirements; consult Exhibit B of the MFRA for the reporting schedule and reporting requirements for a particular project.

The Periodic Report format is outlined in Attachment 3, below. Note that the Title Page and Status Summary are due every three (3) months, while the more extensive Technical Summary and the Web Site Update are due every six (6) months (i.e., with every other Periodic Report). As stipulated in Exhibit B of the MFRA, an invoice detailing expenses incurred during the reporting period must be submitted with each periodic report. Research organization's invoices will not be paid unless and until the associated Periodic Report is received and accepted by WRF and the PAC.

WRF generally posts Periodic Reports on the WRF website as information for subscribers on research in progress. In some instances, WRF may edit the Periodic Report for clarity and readability. WRF may also choose not to post the Periodic Report at its discretion.

Researchers sometimes wish to use the Technical Summary to present sections of the Project Report as a work in progress, thereby reducing the level of effort required to compile the Project Report at the end of the research phase. This approach is acceptable if approved by the WRF Research Manager and the PAC.

Final Deliverable

WRF generally plans to publish a report for each project, but a number of other outreach options are available. See the “Communications Strategies and Deliverables for Water Research Foundation Projects” document here:

<https://www.waterrf.org/funding/ProjectReportGuidelines/CommunicationStrategiesProducts.pdf>

It is the researcher’s responsibility to prepare the final deliverable in accordance with WRF’s guidelines and requirements, whether the deliverable is a standard final report, white paper, video, external website, etc. Project-specific requirements for the final deliverable may be set forth in MFRA.

The target audience for the final deliverable is the water community (i.e., water utilities, consultants, manufacturers, regulators, and other water professionals); accordingly, the deliverable must clearly provide practical benefits to the drinking water community. If the standard final report is chosen as the final deliverable, the following are requirements for submission:

1. WRF prefers that the content, form and format of the Project Report follow WRF’s *Format-Style Guide for Preparing Research Reports*, available at <https://www.waterrf.org/funding/ProjectReportGuidelines/FormatStyleGuide.pdf>
2. A completed Copyright Permission Form (Exhibit E in the MFRA) as described in these guidelines is required.
3. A Draft Report shall be submitted for review at the completion of the research phase of the project. The report should be submitted electronically (via email, or if the files are too large, via Dropbox or similar file transfer method). WRF will review the Draft Report as set forth in the “Review and Alteration of Project Deliverables” section below, and WRF may require additional drafts of the Draft Report.

In order to be considered acceptable, the Draft Report must be clearly written and responsive to the project goals and objectives. It must include complete versions of the report chapters and components described in Chapter 2 of the *Format-Style Guide for Preparing Research Reports*. It must also include the Checklist for Submitting Draft Report and the Copyright Permission Form as set forth in the *Format-Style Guide*.

4. The Final Report shall be the acceptable revised Draft Report. The report should be submitted electronically (via email, or if the files are too large, via Dropbox or similar file transfer method).
5. WRF reserves the right to determine which of several processes shall be used to publish the Final Report. If the Final Report is clearly organized and understandable, and has a neat and uniform appearance, then the quickest publishing process, the True-Camera Ready (TCR) process, shall be used. Adherence to the *Format-Style Guide for Preparing Research Reports* will improve chances that the Final Report will be published through the TCR process.

WRF may forward the Final Report, as prepared for publication by WRF, to the researcher for review.

Review and Alteration of Deliverables

All deliverables will be reviewed by WRF, and WRF retains the right to require response to comments, questions and suggested revisions. This response may include explanation and clarification of technical information or revisions to the deliverables. WRF will also have the right to make grammatical, stylistic, or syntax revisions to any deliverables submitted to WRF, or to request such revisions from the researcher. Unless otherwise specified, the researcher is to provide revisions in response to technical comments within 45 days of receipt of the comments, and is to respond to formatting or editorial comments within 14 days of receipt of the comments. The need for revised drafts of deliverables shall be determined at the sole reasonable discretion of WRF.

Webcast

WRF requires that the PI for each project commit to one webcast following completion of the project. The webcast is intended to communicate project-specific findings to WRF subscribers and other stakeholders. The webcast may be scheduled prior to, or up to six months following, submittal of the final deliverable. The decision on whether to hold a webcast will be made at the sole discretion of WRF. The webcast will be hosted by WRF in coordination with the PI. WRF will cover the costs of hosting the webcast outside of the project budget, but cannot compensate the PI for his/her time in preparing or providing the webcast.

Important: Intellectual Property provisions for Tailored Collaboration projects are set forth in the [Multi Funded Research Agreement](#). Each co-funding organization, the research organization research and subcontractor are required to review these requirements prior to the sponsoring utility submitting a Tailored Collaboration proposal.

Attachment 1: Tailored Collaboration Pre-Proposal / Draft RFP Cover Sheet

(Contact your Regional Liaison (RL) if you would like the MS Word version of this coversheet)

TAILORED COLLABORATION PRE-PROPOSAL/Draft RFP COVER SHEET

Project Title:

Sponsoring utility:

Contact at Sponsoring Utility:

Name:

Title:

Location:

Phone:

Email:

For Pre-Proposals

Coordinating Project Investigator:

Name:

Title:

Location:

Phone:

Email:

FUNDING SUMMARY (both pre-proposals and draft-RFPs):

<u>Organization Name</u>	<u>Cash Co-funding (funds to WRF)</u>	<u>Cost Share (Cash to Researcher or included in Researcher funding)</u>	<u>In-kind (Goods & Services by 3rd Parties, not cash)</u>	<u>Expected Final Approval Date</u>	<u>WRF will match cash funding?</u>	<u>Expiration date of funds?</u>
1						
2						
3						
TOTAL FUNDING						
Total funds eligible for 1:1 WRF match						
Total funds not eligible for match						

BUDGET TOTALS:

Total Cash Budget (WRF Funding + All Co-Funding Cash): _____

Total In-kind Budget (Cost share + In-kind): _____

Total Project Budget (Cash + In-kind): _____

Will all cash funding be received by the WRF? Yes / No

If not, please describe who will disburse funding and who will receive funding:

Attachment 2: Pre-Proposal / Draft RFP Checklist

Please check-mark the points below to acknowledge you, as the proposer, are aware of each point. If you have any questions, the Sr. Account Manager for your area will help you with the answer, or will put you in contact with the correct person who can help you.

- Guidelines. The person submitting this pre-proposal, called the proposer below, read the guidelines for the Water Research Foundation Tailored Collaboration program posted on the WRF website
<https://www.waterrf.org/funding/Pages/proposal-guidelines.aspx>

Financial -

- All co-funding organizations are identified on the Pre-proposal Cover Sheet.
- WRF funding. WRF will provide 1:1 matching funds up to \$100,000 cash for all funds provided by fully subscribing utilities if the full proposal is accepted for funding.
- Purchase orders. Each cash co-funder has been asked if they need a purchase order to pay WRF the initial co-funding amount.
- Timing of payment from co-funders. All co-funding is due to be paid to WRF at the beginning of the project to assure that WRF can meet the contractual obligation to distribute funds for the entire project as work is completed by the research organization.
- Initial payment to researcher. All co-funding needs to be received by WRF before the 10% project advance will be paid to the Sub-recipient (the researcher organization who is contracted and paid to do the work). No invoice will be required from the researcher organization to obtain the 10% project advance. The advance will be issued upon WRF's receipt of all parties' signatures on the MFRA.

Contractual -

- A W-9 form to assist in drafting the contract will be provided; this has the legal entity name, legal address.
- Signature authority –Proposer will provide the name(s) of the individual with signature authority for each organization providing cash to WRF. This person needs to be identified and listed in the proposal paperwork. Please note - technical participants may not necessarily have signature authority to commit funding or sign legal documents on the organization's behalf.
- Agreement signed by all cash contributors. All utilities and other organizations providing cash to WRF that will be used toward the project are aware that they will need to sign the same mutually agreed to Multi Funded Research Agreement (MFRA).

- Draft WRF Contract is on website. A draft template version of the contract that will be used for all parties, should the project be funded, is available on the WRF website. This contract is called the Tailored Collaboration Multi-Funding Agreement (MFRA), please see link provided below.
<https://www.waterrf.org/funding/ContractMaterials/MultiFundedResearchAgreement.pdf>
- Legal review. The MFRA template has been provided to the sponsoring subscriber utility, who encourage this information be shared with their legal and contract staff's attention to review prior to project award. WRF highly recommends legal review of this document to avoid any contractual roadblocks or project delays.
- Intellectual property is jointly owned by WRF, the co-funders of the research, and the researcher organization.
- Copyright for the report is owned by WRF and a license to use the information will be granted to other parties including the researcher.
- Timeframe – Proposer understands the timeline expectations below. Please inform the cash co-funders of this information so that delays can be avoided.
 - Draft contract with all participating cash co-funder's information will be emailed to all participants after the project award has been approved and upon receipt of all required proposal documents. Note – all parties sign the same agreement (MFRA) to ensure contractual consistency with all participants.
 - Contracting pre-call scheduled by WRF Regional Liaison with all project participants: research organization key personnel (including contract or legal counsel), co-funders, sponsoring subscriber utility, and WRF key personnel involved in the project.
 - Proposers will have ten (10) calendar days to review and respond back to WRF's Contract Manager with requested revisions.
 - Review of requested revisions by WRF Contract Manager. Negotiation period begins in good faith and typically all reasonable requests can be approved. WRF's Contract Manager will keep all participants apprised if negotiation period delays project.
 - Final contract emailed to all parties for final execution upon completion of negotiations with all participants. This final agreement will include all contract exhibits including but not limited to proposal, budget, proposal cover sheet, and contract deliverable schedule. All parties will have ten (10) calendar days to sign and return signature page of the final agreement back to WRF's Contract Manager.
 - The total contracting process from draft contract to final contract execution should take no longer than 45 calendar days
 - Draft and Final contracts are sent with a specific due date (10) calendar days. In the event a due date is not met, the Contract Manager will send

out a final request. If no reply is sent to WRF, the contracting period will proceed. Communication with the Contract Manager is important. Delays or lack of response may result in the funding being withdrawn. WRF retains the right to allocate funding to other organizations and projects if the contract cannot be mutually agreed upon by all parties.

Attachment 3: Periodic Report Format and Content

Periodic reporting is a requirement for all WRF research projects. Some projects will require submittal of Periodic Reports, the format for which is shown below. Some projects have specialized periodic reporting requirements; consult Exhibit B of the MFRA project funding agreement for the reporting schedule and reporting requirements for a particular project.

PERIODIC REPORT

I. Title Page – 1 page (every 3 months)

- Project title and number
- Periodic report number and period covered
- Principal Investigator and organization
- Project start date and end date
- Research organization, participating utilities and other participants
- Project funding
- Project objective

II. Status Summary (basic Periodic Report) – 2 to 5 pages (every 3 months)

- Statement of goals for the reporting period
- Summary of work tasks completed and accomplishments in reporting period, including significant findings, major observations, statement of how goals were met, and applicability of findings to the water community.
- Assessment of actual versus planned progress for each work task (recommend using a table to show actual versus percent completed for each task)
- Tasks proposed to be completed in the upcoming period
- Problems encountered
- Rationale for proposed changes (if any) to the scope of work
- Brief explanation of abstracts, presentations, papers, reports submitted for publication or presentation during reporting period
 - List of submitted/published reports (title, author, journal/conference, date)
 - Copy of submitted/published reports and presentations
- Response to questions and comments on previous report

III. Technical Summary – 5 to 20 pages (every 6 months, include with Status Summary)

- Methods and materials
- Data and analysis
- Significant findings
- Applicability of findings to water utilities
- Response to questions and comments on previous report

IV. Project Update - 1 to 2 pages (every 6 months, include as separate section after Technical Summary)

- Project title and number
- Principal Investigator and organization
- Reporting period (i.e., period covered by update)
- Activities and progress since previous Website Update; work to be performed next period
- Findings of significance to WRF subscribers and other stakeholders; how/why are they significant?
- Statement of how overall project results will ultimately benefit WRF subscribers and the drinking water community
- Brief statement on communications and outreach (presentations, papers, etc.)

Attachment 4: Full RFP Template (for informational purposes only)

REQUEST FOR PROPOSALS

Title:

Objective:

The project objective should clearly and succinctly outline what the project hopes to accomplish.

Background

Provide a detailed description of the relevant topic background including the problem, the current state of knowledge, regulatory perspective where applicable, and significance to water utilities.

Research Approach

Provide a clear expectations for the work plan which includes the objectives of the research, the tasks to achieve the objectives, the methods that will be followed, and the nature and extent of the anticipated results.

Eligibility to Submit Proposals (for proposers to an RFP)

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

Any proposer considering submitting a proposal for a posted RFP, should be aware that

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

Researchers who are late on any ongoing WRF sponsored studies without an approved no-cost extension are not eligible to be a named participant in any proposal. If you have any questions about your eligibility for WRF projects, please contact your current WRF research manager directly.

The proposer's ability to maintain timely performance on past or current projects is important to the success of future projects being undertaken.

Period of Performance (for proposers to an RFP)

The proposed project schedule should be realistic, allowing ample time for the preparation of final reports and for review of project results. It is the WRF's policy to negotiate a reasonable schedule for each research project. Once this schedule is established, WRF and its research

organizations have a responsibility to adhere to the agreed-upon schedule. Under the WRF's No-Cost Extension Policy, a project schedule cannot be extended more than nine (9) months beyond the original contracted schedule, regardless of the number of extensions granted. The policy can be reviewed at <https://www.waterrf.org/funding/Pages/policies.aspx>.

Utility Participation

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