

SAFE CLEAN WATER PROGRAM SCIENTIFIC STUDY PROPOSAL QUESTIONNAIRE

1. Proposal identification information and summary of the project goals.

Title: **Regional Pathogen Reduction Study**

Proposing Organization: **Gateway Water Management Authority**

Your summary of the Project Goals and Objectives:

The three reviewers are in agreement that the study's overall goal is to help the SCWP focus its resources on eliminating fecal contamination sources that pose the greatest risks to human health. Specifically, the study's goals are to conduct monitoring across the County to assess health risks from exposure, determine where hotspots are, and identify effective control measures for addressing these hotspots.

2. Are the objectives clearly stated? What portion of the objectives need more clarification?

The reviewers do not agree on how clear the study objectives are. One reviewer found the objectives to be clear and succinct, while another reviewer felt there was a disconnect between the study objectives presented in the objectives section and the tasks section, and furthermore, that the scientific terminology used was imprecise. The third reviewer felt the study objectives were generally clear, with the exception of one task (Task 4) that the reviewer found was vague.

3. How do the project goals directly support a nexus to increasing stormwater or urban runoff capture and/or reducing stormwater or urban runoff pollution?

The reviewers agree that the project goals directly support the SCWP's goals of more effectively reducing stormwater or urban runoff pollution. One reviewer noted that this work addresses bacterial TMDLs in the region by helping managers prioritize remediating fecal sources that pose the greatest human health risks.

4. What is (are) the overarching technical approach element(s) of the proposed project as you understand them (not necessarily the same as the elements described in the proposal)?

The reviewers agree that the study consists of a large-scale monitoring effort paired with multiple state-of-the-art methods for identifying and measuring human fecal contamination, with a goal to synthesize actionable insights that can inform management decision-making.

5. Has the proposal provided sufficient information to describe the technical approach for each element? If not, what information is missing?

The reviewers agree that the proposal does NOT contain sufficient information to understand how all of the technical elements would be implemented. One reviewer suggested that many details don't appear to have been decided yet by the proposing organization. Specifically, the reviewers noted that one of the proposal's biggest weaknesses is a lack of clarity about how the proposing organization plans to develop a risk management framework/model from the study's findings to guide management actions. One reviewer suggested that some steps that

the proposal refers to as “risk management” don’t involve risk management at all, but rather are “water quality management steps.” Among the missing details pointed out by the reviewers: Number of study locations, specific pathogens and environmental parameters to be measured, time of year for sampling, data analysis methods, and methods for reliably attributing a detected signal to an upstream source.

6. Is the technical approach sound? If not, what do you recommend should be done to improve the technical approach of the proposed project?

The reviewers did not provide a simple “yes” or “no” response to whether the technical approach is sound. Two reviewers said there was too little information provided to properly assess technical soundness. The other reviewer was more encouraging, calling the study’s approach “logical” and “laudable,” although they also noted that the proposal is lacking in details. The third reviewer, meanwhile, suggested that the study could be improved by examining some non-human fecal sources, including birds and possibly ruminant animals.

7. How achievable are the study’s stated technical objectives, especially within the proposed timeframe and budget?

The reviewers expressed a lack of confidence in the proposing organization’s ability to achieve all of the study’s objectives in the stated timeframe. One reviewer stated that there is not enough information to make such a determination at all. The other two reviewers each pointed to specific areas (especially Task 3 and 4) that they aren’t confident the proposing organization will achieve as proposed.

8. What are the greatest technical risks that you foresee the proposing agency facing when implementing the project?

The reviewers agreed this project faces multiple major technical risks. The areas that reviewers highlighted include: parsing out the relative contributions of different sources of risk (the technology to do this is still being developed), determining which management strategies are most effective at reducing human risks (the study design is not suited to make this determination), ongoing monitoring once managers address specific sources (the study design is unclear how this will be done), measuring only norovirus (this pathogen is insufficient as the basis for cumulative risk assessments), and developing recommended stormwater BMPs from the study’s findings (the study may not be able to identify BMPs that are effective at reducing human pathogens).

9. Are there clear linkages between the project’s technical objectives and the types of decisions that stormwater managers will make based on the project’s outcomes? Will the technical achievements provide stormwater managers useful linkages that extend beyond this study?

The reviewers agreed that the project has at least some linkages to management and that the findings have the potential to be applicable beyond the project. But they disagreed in the amount of confidence they put behind these assertions. One reviewer said that the project fails to establish clear, specific connections to management decision-making. The other reviewers were more optimistic, saying they hoped the study could prove particularly insightful and valuable to managers.

10. Please provide any additional technical perspectives you would like to share.

Two of the reviewers said they had no additional perspectives to share. The third reviewer said the proposal, as a whole, “missed the mark” because it reads more like a pre-proposal than a proposal.

11. Please answer each of the following questions by selecting one of the following five answer choices: Excellent, Very good, Adequate, Inadequate or Not applicable because of insufficient information. Feel free to add an explanation to accompany your answer choice:

- a. How well do the proposal objectives address the SCWP’s goals of increasing stormwater or urban runoff capture and/or reducing stormwater or urban runoff pollution?

Two of the reviewers rated the proposal’s objectives as being “excellent” at addressing SCWP goals. The third reviewer provided no response.

- b. How well do you think the technical approaches will achieve the study objectives and stated outcomes?

The reviewers disagreed in their rating of how well the study will achieve its objectives. Two reviewers provided an “adequate” rating. The third reviewer specified a range of “very good to inadequate,” explaining that “many” of the tasks are “very good” (albeit not “excellent” because no technical team has been assembled) and that the remainder of the tasks are “inadequate.”

- c. Technical experience and qualifications of the study team?

The reviewers disagreed in their assessment of the qualifications of the study team. One reviewer rated the study team as “adequate,” although they pointed out that insufficient information was provided about who specifically would be part of the study team. The other two reviewers rated the study team as “inadequate” – not only calling out the lack of specific information on the study team, but also expressing reservations about the proposing organization’s ability to pull together a team with the necessary expertise.