SAFE CLEAN WATER PROGRAM SCIENTIFIC STUDY PROPOSAL QUESTIONNAIRE

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

   Title: Stormwater BMP O&M Needs Assessment, Guidance Document, and Implementation Materials

   Proposing Organization: Herrera Environmental Consultants (with SCCWRP)

   Your summary of the Project Goals and Objectives:

   Across the reviews, reviewers agreed that the primary goal of the study is to identify and prioritize barriers to effective operation and maintenance (O&M) of stormwater BMPs across multiple Watershed Areas in Los Angeles County and to develop regionally relevant guidance, tools, and training materials to address those barriers. Reviewers noted that the study also proposes targeted monitoring to quantify how improved O&M practices affect BMP hydrologic performance and long-term functionality. Collectively, the proposed effort is intended to improve stormwater capture reliability, pollutant removal effectiveness, and the longevity of existing and future stormwater infrastructure.

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

   Reviewers generally agreed that the study objectives are clearly stated and logically sequenced from needs assessment through guidance development and performance evaluation. However, some reviewers questioned the relevance of the objective focused on identifying drivers for BMP selection, noting that its connection to improving O&M practices was not fully articulated. Several reviewers also suggested that Objective 4 would benefit from additional clarification regarding performance metrics, representativeness of selected BMPs, and how monitoring results would be generalized across BMP types and Watershed Areas.

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?

   Reviewers generally agreed that the study supports the SCWP nexus by addressing O&M as a critical determinant of long-term BMP performance. Reviewers noted that effective O&M helps sustain stormwater capture capacity, prevent loss of hydraulic function, and maintain water quality treatment effectiveness. Some reviewers emphasized that while the conceptual nexus is clear, the magnitude of benefit relative to cost and effort remains uncertain and will depend on the strength of monitoring results and their applicability to broader stormwater programs.

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)?

   Reviewers agreed that the technical approach combines stakeholder engagement through a Technical Advisory Group, surveys and interviews with O&M practitioners, review of existing practices and literature, prioritization of O&M barriers, development of BMP-specific guidance and training materials, and a field monitoring component intended to quantify performance improvements resulting from enhanced O&M. The study proposes that all phases of work be informed by practitioner input and overseen by the TAG.

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

   Reviewers expressed mixed views regarding the adequacy of technical detail. Some reviewers found the proposal provided sufficient information to understand the overall approach. Others identified areas where additional detail would improve confidence, including clarification of monitoring design, criteria for BMP selection, distinction between visual inspections and sensor-based monitoring, and

how baseline and post-maintenance conditions would be compared. Questions were also raised regarding the duration and representativeness of the monitoring period.

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

   Reviewers expressed divergent views on the technical soundness of the approach. Some reviewers considered the overall framework sound and consistent with applied stormwater monitoring practices, particularly the use of before-and-after monitoring to evaluate O&M effectiveness. **Other reviewers raised concerns that heavy reliance on qualitative input from practitioners and the TAG could introduce bias and limit scientific rigor**. Additional **concerns were raised regarding the limited number of BMPs monitored, the short monitoring duration relative to environmental variability, and the emphasis on hydrologic performance metrics as proxies for water quality outcomes**.

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

   Reviewers generally agreed that objectives related to needs assessment, guidance development, and training materials are achievable within the proposed timeframe and budget. However, there was less agreement regarding the achievability of the monitoring-related objectives. **Some reviewers questioned whether the proposed schedule, number of monitored BMPs, and available resources would be sufficient to generate statistically meaningful results or support broad conclusions about O&M effectiveness**.

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

   Reviewers identified several technical risks, including variability in BMP condition and design that may complicate performance comparisons, challenges in isolating O&M effects from external hydrologic drivers, potential limitations in obtaining representative monitoring data, and the risk that TAG-driven prioritization could reinforce existing practices rather than identify innovative or independent solutions. Some reviewers also noted the risk that monitoring results may be site-specific and difficult to extrapolate.

9. Please describe the linkages between the project's technical objectives and the types of decisions that stormwater managers will make based on the project's outcome(s)? Will the technical achievements provide stormwater managers useful linkages that extend beyond this study?

   All reviewers agreed that the study has potential to inform stormwater management decisions. Reviewers noted that outputs could support development of standardized O&M practices, maintenance prioritization, asset management planning, workforce training, budgeting decisions, and MS4 permit compliance. Several reviewers emphasized that the usefulness of these linkages will depend on the clarity, usability, and scientific robustness of the final guidance and performance findings.

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

    No additional technical perspectives were noted.

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*. Please add an explanation to accompany your answer choice (or refer to the question number above for appropriate context and rationale):

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

   Ratings ranged from Adequate to Very Good. Lower ratings reflected uncertainty regarding the magnitude of benefits relative to cost, while higher ratings emphasized the importance of O&M in sustaining stormwater capture and water quality performance.

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

   Ratings ranged from Inadequate to Very Good. Reviewers who rated the approach **lower cited concerns regarding scientific rigor, monitoring design, and reliance on qualitative inputs, while higher ratings reflected confidence in the applied, management-oriented nature of the study**.

c. Technical experience and qualifications of the study team?

   Ratings ranged from Unknown/Inadequate to Excellent. Some reviewers **noted limited information on team qualifications**, while others cited strong experience in stormwater BMP design, monitoring, and O&M guidance development.