SAFE CLEAN WATER PROGRAM SCIENTIFIC STUDY PROPOSAL QUESTIONNAIRE

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

   Title: Characterizing and Optimizing the Water Quality Benefits of In-Channel Vegetation

   Proposing Organization: University of Southern California Dornsife Public Exchange

   Your summary of the Project Goals and Objectives:

   Across the four reviews, reviewers agreed that the primary goal of the study is to quantify and optimize the water quality benefits provided by in-channel vegetation in soft-bottom sections of the Los Angeles River, with a primary focus on the Glendale Narrows and selected reaches of the Upper and Lower Los Angeles River. Reviewers consistently noted that the study seeks to address key data gaps related to the role of in-channel vegetation in reducing microbial indicators, nutrients, metals, and other pollutants under both dry- and wet-weather conditions. The proposed integration of high-frequency in-situ monitoring, drone-based vegetation mapping, and predictive modeling was viewed as a comprehensive approach to isolating biofiltration processes and evaluating vegetation management scenarios. Reviewers also noted that results are intended to inform regional nature-based solution strategies, support regulatory compliance efforts (including TMDLs and MS4 requirements), and guide future vegetation management and river revitalization decisions.

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 well aligned with the overall study goals. Several reviewers noted that, given the breadth and ambition of the objectives, additional clarification regarding prioritization, sequencing, and the relationship among objectives, tasks, and outcomes would strengthen the proposal. In particular, reviewers suggested that further explanation of how vegetation mapping, sensor deployment, and modeling components will be integrated over time would improve clarity. Some reviewers also noted that certain objectives—such as those related to vegetation management modeling or community engagement—could benefit from additional detail regarding scope and implementation.

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 evaluating in-channel vegetation as a nature-based solution that can reduce pollutant loads in stormwater and urban runoff through biofiltration, sediment stabilization, and associated ecological processes. While reviewers characterized the study as primarily focused on pollution reduction rather than direct stormwater capture, most agreed that the findings could indirectly inform stormwater management strategies by supporting vegetation-based BMPs and guiding future implementation decisions within major urban runoff systems.

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 study's technical approach combines multiple complementary elements, including high-frequency in-situ monitoring of microbial and chemical water quality parameters, drone-based vegetation and sediment mapping, and integration of these datasets into hydraulic, data-driven, and scenario-based modeling frameworks. The use of side-by-side validation of innovative monitoring technologies against EPA-approved methods was viewed as an important component of the approach. Reviewers also noted that the study includes both observational and modeling components designed to evaluate how different vegetation configurations and management strategies influence water quality,

habitat, and flood-related dynamics.

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

   Most reviewers agreed that the proposal provides substantial technical detail, particularly with respect to instrumentation and monitoring methodologies. However, multiple reviewers identified areas where additional detail would strengthen confidence in the study. These included clearer definition of monitoring design (e.g., site selection criteria, treatment and control locations, event definitions), explanation of how vegetation mapping will inform sensor deployment, and more explicit discussion of data management, quality assurance, and uncertainty treatment in modeling outputs. Some reviewers also suggested clarifying the specific vegetation conditions being evaluated (e.g., invasive versus native species, maintenance regimes).

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 generally agreed that the technical approach is sound and well suited to addressing the study objectives. The combination of high-frequency monitoring, remote sensing, and modeling was viewed as appropriate for evaluating complex in-channel processes. Several reviewers emphasized that transparency regarding assumptions, validation procedures, and limitations—particularly related to new sensing technologies—will be important to ensure that results are interpretable and useful for practitioners and regulators.

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

   Reviewers generally agreed that the study is ambitious but achievable within the proposed timeframe and budget. The phased, multi-year structure was viewed as appropriate for the scope of work. However, several reviewers noted that successful implementation will depend on the ability to capture representative storm and first-flush events, maintain reliable in-channel instrumentation over time, and effectively coordinate field activities and data integration across partners.

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

   Reviewers identified several technical risks associated with the study. Commonly cited risks included challenges related to in-channel sensor deployment and maintenance under high-flow conditions, data gaps or confounding influences from upstream sources, and difficulties isolating vegetation effects from other watershed processes. Some reviewers also noted potential risks associated with regulatory acceptance of alternative monitoring technologies, although these risks are partially mitigated through proposed side-by-side validation efforts and alignment with EPA protocols.

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 strong potential to inform stormwater and river management decisions. Reviewers noted that results could support decisions related to vegetation management, maintenance practices, and the design of nature-based solutions within channelized river systems. Several reviewers also indicated that the monitoring and modeling frameworks developed through this study are likely to be transferable to other watersheds and could inform broader regional stormwater and water quality planning efforts.

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

    No additional technical perspectives 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?

       Reviewers rated this criterion from Very Good to Excellent, reflecting strong alignment with pollution reduction objectives and indirect relevance to stormwater capture through vegetation-based BMPs

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

       Ratings ranged from Very Good to Excellent, with some reviewers noting that overall confidence depends on the robustness of monitoring design, data quality, and long-term instrument performance.

    c. Technical experience and qualifications of the study team?

       Most reviewers rated this criterion as Excellent, citing strong expertise in hydrology, water quality monitoring, modeling, and stakeholder engagement. A few reviewers noted that clearer identification of roles related to in-channel instrumentation and QA/QC would further strengthen confidence.