SAFE CLEAN WATER PROGRAM SCIENTIFIC STUDY PROPOSAL QUESTIONNAIRE

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

   Title: Regional CECs and Pollutant EMCs in Stormwater Assessment

   Proposing Organization: University of California, Los Angeles (Collaborators: Herrera Environmental Consultants; AtkinsRéalis)

   Your summary of the Project Goals and Objectives:

   Across the reviews, reviewers generally agreed that the primary goal of the study is to generate a regionally consistent dataset linking concentrations of Contaminants of Emerging Concern (CECs) and traditional stormwater pollutants to land use and traffic characteristics across Los Angeles County. Reviewers noted that the study proposes multi-year, flow-weighted composite stormwater monitoring to characterize event mean concentrations (EMCs) for pollutants such as PFAS, 6PPD-quinone, microplastics, and tire wear particles. Reviewers consistently identified intended outcomes including improved BMP siting and selection, refinement of pollutant loading models, support for stormwater reuse and regulatory readiness, and development of a publicly accessible dashboard and digital spectral archive to enable long-term adaptive management.

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

   Most reviewers agreed that the study objectives are clearly stated and logically organized. Reviewers generally found objectives related to monitoring, data dissemination, comparative analysis, and long-term archiving to be well articulated. However, some reviewers noted that additional clarification would strengthen the proposal, particularly regarding study design logic, representativeness of monitored sites and storm events, and how final monitoring locations will be selected to adequately capture key land uses and conditions (e.g., wildfire-impacted versus background sites). Several reviewers suggested that a site selection matrix or early monitoring study plan would improve clarity and confidence.

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 directly addressing stormwater pollution reduction through improved characterization of CEC occurrence in runoff. Reviewers noted that the nexus to stormwater capture is indirect, but that the study has strong relevance to water quality management, as results are intended to inform pollutant-specific BMP selection, stormwater reuse decisions, and protection of groundwater basins from persistent contaminants such as PFAS. Several reviewers emphasized that the value of the nexus depends on effective translation of data into planning, regulatory, and management applications.

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 centers on GIS-based site screening, installation of automated samplers and flow monitoring equipment, collection of flow-weighted composite stormwater samples across multiple storm events and years, laboratory analysis using established and emerging analytical methods, and implementation of rigorous QA/QC procedures. Reviewers also noted that the study includes development of a public-facing data dashboard and a high-resolution mass spectrometry (HRMS) spectral archive to support retrospective analysis as new CECs are identified.

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 monitoring and analytical approach. Others identified areas where additional detail would improve confidence, including clearer definition of site selection criteria, confirmation of drainage delineations, explicit expectations for rainfall measurement coverage, and clearer articulation of how representativeness across land uses and storm conditions will be ensured. Several reviewers suggested that an upfront study plan, prior to finalizing the QAPP, would be beneficial.

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 differed in their assessment of technical soundness. Some reviewers considered the monitoring framework and analytical methods to be sound and consistent with best practices for stormwater quality characterization. **Other reviewers raised concerns that the proposed number of monitoring locations, storm events, and sampling duration may be insufficient to achieve statistically robust EMC estimates suitable for informing large-scale infrastructure investments**. Additional concerns were raised regarding representativeness, wildfire comparison baselines, site anonymity, and the ability to isolate land-use-specific signals given inherent stormwater variability.

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

   Reviewers expressed varied views on achievability. Some reviewers considered the objectives achievable within the proposed timeframe and budget if the study maintains its proposed scope and strong QA/QC framework. **Others questioned whether the current scope is sufficient to generate defensible conclusions, suggesting that either additional monitoring locations and storm events would be needed (with associated cost increases) or that the scope of land uses and watersheds should be narrowed to align with available resources**.

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

   Reviewers identified several technical risks, including storm-to-storm variability in CEC concentrations, logistical challenges associated with multi-site storm sampling, contamination risks associated with PFAS and microplastics monitoring, and potential limitations in statistical power due to sample size. Additional risks cited included reduced transparency and follow-up utility if monitoring locations remain anonymous, as well as challenges in establishing appropriate wildfire control and background comparisons.

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 management decisions. Reviewers noted that results could support pollutant-specific BMP selection, identification of land-use "hotspots," refinement of pollutant loading models, stormwater reuse planning, and preparation for future regulatory requirements. Reviewers also emphasized that the long-term value of the study depends on maintaining the data platform, ensuring transparency, and providing sufficient contextual information for agencies to confidently apply the results.

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?

       Reviewers generally rated this criterion as Excellent, reflecting the study's strong relevance to runoff pollution reduction and emerging regulatory needs, with indirect support for stormwater capture and reuse planning.

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

       Ratings ranged from Very Good to Adequate/Inadequate, reflecting differing views on whether the proposed monitoring scope is sufficient to support statistically defensible, broadly applicable EMC estimates. Lower ratings reflected concerns regarding statistical robustness, representativeness, and sample size, while higher ratings reflected confidence in the monitoring framework and analytical methods if study design refinements are implemented.

    c. Technical experience and qualifications of the study team?

       Reviewers consistently rated this criterion as Excellent, citing extensive experience in stormwater monitoring, CEC analysis, QA/QC, and data management.