SAFE CLEAN WATER PROGRAM SCIENTIFIC STUDY PROPOSAL QUESTIONNAIRE

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

   Title: A Holistic Assessment of Trash in Watersheds

   Proposing Organization: Moore Institute for Plastic Pollution Research

   Your summary of the Project Goals and Objectives:

   Across the reviews, reviewers generally agreed that the primary goal of the study is to conduct a multi-year, watershed-scale assessment of trash generation, transport, storage, and management across multiple Los Angeles County watersheds. Reviewers noted that the study seeks to harmonize disparate existing trash datasets, collect new roadside trash accumulation data, and develop watershed-level trash transport models grounded in a mass-balance framework. Reviewers consistently identified anticipated outcomes including identification of priority trash types and sources, evaluation of prevention and mitigation interventions, and development of management-ready tools, such as open-source models and a web-based decision support platform, to inform trash-related BMP placement and compliance with the California Trash Amendments

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 articulated, particularly with respect to the three core research themes: watershed trash transport modeling, identification of priority trash types and sources, and assessment of intervention effectiveness. However, several reviewers noted that additional clarification would strengthen the proposal, including clearer description of how observational field data will inform model development, calibration, and validation, and how intervention effectiveness (e.g., cleanups, education, product bans) will be isolated from confounding factors. Some reviewers also suggested that clarification of how objectives will be prioritized or phased across participating Watershed Areas would improve understanding of scope management.

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 agreed that the study supports the SCWP nexus by addressing trash, a priority pollutant regulated under MS4 permits and the California Trash Amendments. **Most reviewers characterized the nexus as indirect, noting that the study focuses on roadside trash accumulation and modeling rather than direct measurement of trash in stormwater or receiving waters**. Nonetheless, reviewers generally agreed that the data and tools produced could inform trash BMP placement, prevention strategies, and program planning, thereby supporting stormwater and urban runoff pollution reduction objectives.

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 harmonization of existing trash datasets, systematic roadside trash accumulation surveys across multiple watersheds, and development of watershed-scale mass-balance trash transport models. These models are intended to quantify trash inputs, storage, and exports, and to evaluate management scenarios and intervention effectiveness. Reviewers also noted the inclusion of stakeholder engagement through a Technical Advisory Committee and development of decision-support tools to translate results into actionable guidance.

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 technical approach sufficiently described, particularly in the attached detailed proposal. Others identified areas where additional detail would improve confidence in the study, including clearer explanation of model calibration and verification procedures, criteria for site selection (including how randomized sampling will inform BMP-related objectives), treatment of inter-watershed variability, and methods for quantifying and communicating uncertainty in model outputs.

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 data collection components of the study are sound and based on established methods. However, there was less consensus regarding the modeling approach for evaluating intervention effectiveness and closing watershed-scale mass balances. **Several reviewers noted that clearer articulation of how observational data will inform model development, validation, and attribution of changes to specific interventions would strengthen confidence in the technical soundness of the approach**.

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

   Reviewers generally agreed that the study's objectives related to trash data harmonization and characterization are achievable within the proposed multi-year timeframe. However, some reviewers expressed uncertainty regarding the achievability of objectives related to model validation, intervention effectiveness assessment, and cost efficiency across multiple Watershed Areas. Questions were raised about scaling of costs by watershed, potential redundancies in project management and overhead, and how partial participation by Watershed Area Steering Committees might affect implementation.

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 the quality and completeness of existing trash datasets, logistical challenges associated with large-scale field data collection, difficulty isolating the effects of specific interventions from seasonal or external drivers, and uncertainty in representing all relevant trash fluxes within a mass-balance framework. Some reviewers also noted the risk that model outputs may be more directly applicable to waste management planning than to stormwater management if linkages to stormwater pathways are not clearly established.

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?

   Reviewers agreed that the study has potential to inform stormwater management decisions, particularly related to prioritization of trash BMP locations, evaluation of cleanup and prevention strategies, and compliance planning under the Trash Amendments. However, several reviewers emphasized that the strength of these linkages depends on how directly roadside trash accumulation and modeled outputs can be connected to stormwater conveyance systems, BMP performance, and timing of runoff-driven trash transport.

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/Inadequate to Excellent, reflecting differing views on the study's indirect nexus to stormwater processes and the robustness of the proposed modeling and validation framework. Reviewers who rated the study lower emphasized the indirect connection to stormwater processes, while higher ratings reflected the importance of trash as a regulated pollutant and the study's potential to inform pollution reduction strategies.

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

Ratings ranged from Adequate to Excellent. Reviewers expressed high confidence in the data collection and characterization components, with more varied views regarding the robustness of the modeling approach and validation of intervention effectiveness

c) Technical experience and qualifications of the study team?

Reviewers consistently rated this criterion as Excellent, citing strong expertise and prior experience in trash research, data harmonization, and watershed-scale analysis.