

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

Title: Benefits of Restoration and Land Preservation as Nature-Based Solutions to Water Quality and Water Supply

Proposing Organization: Council for Watershed Health (Herrera Environmental Consultants; Fernandefio Tataviam Band of Mission Indians; Melina Sempill Watts Consulting LLC)

Your summary of the Project Goals and Objectives:

Across the reviews, reviewers described the primary goal of the study as evaluating and quantifying the water quality and water supply benefits of creek restoration, protection, and land preservation as nature-based solutions in Southern California, with a focus on the Santa Clara River watershed.

Reviewers noted that the study proposes to synthesize existing scientific literature, conduct a desktop spatial analysis to identify restoration, protection, and acquisition opportunities, and perform paired-basin field monitoring comparing concrete-lined and earthen creek reaches. Reviewers also identified a stated objective to translate scientific findings into recommendations for potential updates to Safe, Clean Water Program (SCWP) project eligibility criteria.

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

Reviewers expressed differing views regarding the clarity and completeness of the study objectives. Some reviewers found the objectives to be clearly stated and logically organized. Other reviewers raised concerns that the objectives lack sufficient specificity or completeness to support decision-making at the SCWP program level. Specific concerns included limited description of how desktop analyses will inform site selection, absence of explicit hypotheses, and lack of clarity regarding how feasibility constraints, costs, and benefit–cost considerations would be incorporated into the study design and final recommendations.

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 differed in their assessment of the study’s nexus to stormwater capture and runoff pollution reduction. Some reviewers identified a strong nexus, emphasizing that restoration of earthen channels, floodplain reconnection, and land preservation can directly enhance hyporheic exchange, infiltration, nutrient uptake, and pollutant processing. Other reviewers characterized the nexus as more conceptual or indirect, noting that while the study addresses ecological and hydrologic benefits, the connection to SCWP-typical stormwater capture or pollution control implementation pathways would depend on clearer translation to feasible project typologies and constraints within flood control 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 generally agreed that the proposed technical approach includes four main elements: a literature-based white paper on restoration benefits and policy frameworks; a GIS-based spatial analysis to identify restoration, protection, and acquisition opportunities; paired-basin monitoring comparing earthen and concrete-lined creek reaches using tracer studies, continuous water quality monitoring, and habitat assessments; and development of recommendations for incorporating findings into SCWP eligibility criteria. However, reviewers varied in their confidence that these elements are sufficiently integrated to yield actionable, program-ready conclusions.

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 on the adequacy of technical detail. Some reviewers found that the proposal provides sufficient information to understand the monitoring methods and analytical tools. Others identified substantial gaps, including lack of explicit statistical power targets, insufficient discussion of sampling frequency and replication, limited consideration of hybrid or partially armored channel typologies, and absence of a cost or benefit–cost framework. Several reviewers indicated that these gaps limit the ability to assess whether the study can produce results suitable for informing multi-million-dollar funding or policy decisions.

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

Assessments of technical soundness varied widely. Some reviewers considered the paired-basin experimental design, tracer methodologies, and habitat assessments to be well-established and technically appropriate for comparing functional differences between earthen and concrete-lined channels. **Other reviewers raised significant concerns regarding statistical robustness, sample size, and study design limitations, noting that monitoring only a small number of sites over a limited period may not yield results with sufficient confidence or transferability to support SCWP programmatic changes.**

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

Reviewers also diverged in their views on achievability. Some reviewers considered the objectives achievable within the proposed schedule and budget, particularly for producing qualitative insights and comparative findings. **Others expressed concern that, as proposed, the study may only generate low-confidence or highly site-specific results, limiting its usefulness for informing regional policy or funding decisions without substantial refinement to scope, replication, or analytical rigor.**

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

Reviewers identified several technical risks, including hydrologic and ecological variability in intermittent systems, challenges in selecting truly comparable paired sites, limited statistical power due to small sample sizes, and difficulty attributing observed differences solely to channel type. Additional risks included potential lack of applicability to hybrid or partially restored channels, challenges translating ecological benefits into stormwater program metrics, and the absence of economic analysis to contextualize benefits relative to costs.

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 acknowledged that, if successfully implemented and appropriately refined, the study could inform stormwater management decisions related to creek restoration prioritization, land acquisition strategies, and potential expansion of nature-based solutions within SCWP. Reviewers noted that the study could help identify where restoration or protection may yield measurable water quality or water supply benefits. However, several reviewers emphasized that the ultimate decision value depends on the study’s ability to produce statistically robust, transferable results and clearly translate findings into SCWP-feasible project types and eligibility criteria.

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 Inadequate to Excellent. Lower ratings **reflected concerns about indirect nexus and limited applicability to SCWP implementation pathways, while higher ratings reflected the importance of quantifying restoration and land preservation benefits as nature-based solutions.**

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

Ratings ranged from Inadequate to Excellent. Reviewers who rated the study lower **emphasized concerns regarding statistical power, replication, and study design sufficiency, while higher ratings reflected confidence in the experimental methods and conceptual framework.**

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

Ratings ranged from Inadequate/Adequate to Excellent. Some reviewers cited strong technical credentials and experience, while others questioned whether the proposed study design reflects sufficient rigor to support the stated objectives.