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Submitted via email: cmonde@cityofpasadena.net

Re: Comments on the Draft Environmental Impact Report for the Arroyo Seco Water Reuse Project (SCH No. 2023110605)

Dear Ms. Monde,

I am submitting the following comments on the Draft Environmental Impact Report (DEIR) for the Arroyo Seco Water Reuse Project. I am a graduate student in landscape architecture and environmental planning at UC Berkeley and have spent considerable time studying this project's planning and regulatory history alongside its supporting technical documents, including the Arroyo Seco Load Reduction Strategy (LRS), geotechnical reports, watershed planning documents, and the DEIR itself.

In reviewing these materials together, I identified several areas where project scope, site selection decisions, and alternatives analysis would benefit from additional explanation. My comments focus on four issues: an unexplained divergence between the project now proposed and the compliance measure originally identified for San Rafael Creek, the inclusion of San Pascual despite the absence of an independent compliance requirement, an apparent inconsistency between the project's groundwater recharge claims and its own geotechnical findings, and an alternatives analysis that does not appear to evaluate restoration opportunities at the scale of the project itself.

Taken together, these issues suggest a progression from a narrowly scoped compliance intervention at San Rafael Creek to a substantially larger multi-site infrastructure project, without a clear explanation for several key transitions in that process.

1. The proposed San Rafael facility diverges substantially from the compliance measure identified in the City's own Load Reduction Strategy

The Load Reduction Strategy (LRS) submitted to the Los Angeles Regional Water Quality Control Board in March 2016 by the City of Pasadena and the ULAR EWMP Group identified the implementation action for Outfall AS-41 (San Rafael Creek) as a diversion of dry-weather flow to a dry well system located upslope near Laguna Road and San Rafael Avenue. This measure was designed to eliminate 100 percent of dry-weather bacteria loading from the outfall (LRS, Section 7.1.3, Table 7-1, Figure 7.3) and was appropriately scaled to the modest dry-weather flows the outfall carries.

The facility now proposed is substantially different in both location and design. According to the project's Hydrology and Hydraulics Report (Appendix E-1), the San Rafael facility consists of a 6.3 cfs diversion structure, a rock-lined channel, and an engineered infiltration and filtration basin with a proprietary cartridge filter, all sized around the 85th percentile 24-hour design storm. This is a wet-weather engineering standard rather than a dry-weather compliance measure. The facility is also located within the San Rafael confluence itself rather than at the upslope location identified in the LRS.

The DEIR does not clearly explain why the project's scope, design standard, and siting diverge so substantially from the approach the City's own LRS identified as sufficient to achieve compliance. The Final EIR should explain this transition and evaluate whether a more targeted intervention, consistent with the original dry-weather compliance objective and general siting approach identified in the LRS, remains viable.

2. The role of San Pascual within the project requires additional justification

The project's expansion beyond its original compliance trigger is not limited to the San Rafael site. The DEIR confirms that, unlike San Rafael Creek, San Pascual does not carry an independent bacteria TMDL compliance requirement. Instead, its inclusion appears to be tied to the joint project structure and broader water supply priorities established between Pasadena and South Pasadena.

Despite this, San Pascual bears the majority of the project's physical impacts, including 130 of the 136 tree removals identified in the DEIR.

Given that this site is not directly tied to the project's original regulatory driver, it is unclear why alternatives that reduce or eliminate the San Pascual component were not more fully considered. The Final EIR should evaluate a version of the project limited to the San Rafael site and clarify whether the project objectives have been framed in a way that unintentionally precludes such an alternative from consideration.

3. The project's groundwater recharge claims appear inconsistent with its own geotechnical findings

San Pascual's inclusion is largely justified through its projected water supply benefits. The DEIR attributes approximately 258 acre-feet per year of groundwater recharge to the Raymond Basin as a major project outcome, and this figure appears central to the project's Measure W funding rationale and its characterization as a regional water supply investment.

According to Appendix E-1, this entire recharge benefit is attributed to the San Pascual basin. In contrast, infiltration at the San Rafael site is explicitly excluded from groundwater recharge accounting, yet no explanation for this distinction is provided.

More significantly, the San Pascual Geotechnical Evaluation (Appendix F-2; Ninyo & Moore, June 17, 2022, prepared for Craftwater Engineering) identified perched groundwater conditions at the contact between younger alluvium and underlying bedrock. The report concluded that bedrock at the site would significantly reduce the effectiveness of on-site infiltration and that stormwater would be expected to migrate laterally along the bedrock-alluvial interface rather than percolate downward toward deeper groundwater resources.

The report's related design recommendation, a 15-foot setback from infiltration areas, is a structural measure intended to protect nearby foundations rather than an assessment of where this laterally migrating water ultimately travels.

The DEIR does not appear to reconcile these findings with the 258 acre-foot groundwater recharge estimate that depends on substantial vertical infiltration occurring at the same location. Given the importance of groundwater recharge to the project's justification, the Final EIR should clearly explain how this estimate was derived and how it accounts for the findings of the project's own geotechnical analysis.

4. The alternatives analysis does not evaluate a restoration alternative at the scale of the San Rafael site

Each of the preceding comments raises the same underlying question: could a more targeted intervention at San Rafael have achieved the original compliance objective without requiring the larger project now proposed?

Section 4.4.5 of the DEIR ("Arroyo Seco Channel Naturalization") dismisses naturalization as infeasible, but the alternative evaluated is removal of the entire Arroyo Seco concrete channel. This is framed in relation to regional planning efforts and prior U.S. Army Corps of Engineers studies.

However, this is not the same as evaluating restoration opportunities at the San Rafael confluence itself.

The City's own adopted planning documents point in a different direction. Both the 2003 Lower Arroyo Master Plan and the 2006 Arroyo Seco Watershed Management and Restoration Plan call for restoring the natural character of the Lower Arroyo and specifically discuss removal of the concrete lining at the San Rafael Creek confluence, contingent upon reductions in upstream flows. In addition, a 2019 site reconnaissance conducted by Stillwater Sciences for the Cities of Pasadena and South Pasadena concluded that restoring this reach was achievable.

The DEIR also frames flood control constraints as a principal barrier to naturalization. These concerns are legitimate and have long been recognized in planning efforts for this reach. However, contemporary stream restoration practice routinely addresses high-energy urban flows through grade control structures, step-pool sequences, and other geomorphic stabilization techniques designed to dissipate hydraulic energy while maintaining channel stability. Flood

control constraints should therefore be treated as a design problem to be evaluated rather than a categorical basis for dismissing restoration alternatives.

Section 4.4.5 does not cite the Stillwater Sciences work, does not address the restoration goals contained in the City's own planning documents, and does not distinguish between a bounded restoration project at San Rafael and channel-wide naturalization of the Arroyo Seco.

Given that the original compliance measure identified for this outfall was a modest dry-weather intervention located away from the confluence, the Final EIR should evaluate a restoration alternative at the San Rafael reach that is both consistent with the City's adopted restoration plans and capable of meeting the original compliance objective.

Thank you for considering these comments. I appreciate the significant effort that has gone into preparing the DEIR and hope these observations contribute constructively to the ongoing review process.

Sincerely,

Max Frieda

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University of California, Berkeley