Exhibit C: Los Angeles River Upper Reach 2 (LAR UR2)

I. Draft Watershed Management Program

In reviewing the Los Angeles River Upper Reach 2 Draft Watershed Management Program, we identified several issues of concern or noncompliance with permit requirements. We discuss a number of those concerns below, although this discussion is not intended as an exhaustive analysis of the WMP's deficiencies.

A. Water Quality Characterization and Source Assessment

The Los Angeles River Upper Reach 2 ("LAR UR2") draft WMP's source assessment is insufficient. Almost all data used in the assessment and planning come from outside the LAR UR2 Watershed Management Area ("WMA"), yet permittees fail to acknowledge the differences between the project area and the area from which the data were collected. The LAR UR2 WMA is one of the most heavily developed and industrialized areas in the watershed and greater Southern California and would be expected to generate higher runoff volumes and pollutant concentrations than the county as a whole. The draft WMP contains no acknowledgement or adjustment, quantitative or qualitative, for this consideration.

The 2012 Permit specifically requires that pollutant sources be identified using information from findings of illicit connections, illicit discharge elimination programs, industrial/commercial facilities programs, and development construction programs. (2012 Permit, at section VI.C.5.a.iii.1.a). However, the draft WMP fails to include this information.

Further, in addition to the TMDL source investigations, compliance monitoring and special studies discussed in the draft WMP, permittees should include the number of facilities covered under the Industrial General Permit and the annual average number of construction permits within each city jurisdiction. In addition, acknowledgement of the aging condition of the sanitary sewer system ("SSO") and the number of SSOs recorded in the watershed area, as well as their volume over at least the last 10 years should be included in the sources assessment. Review of other potential pollutant sources such as homeless encampments and illegal dumping should be evaluated and discussed.

The pollutant source assessment included in the WMP, as required by the permit and RAA guidance, is rudimentary and not at all specific to the LAR UR2 watershed. The WMP quotes various literature references relative to bacteria, metals, nitrogen, phosphorus, and pH but does not apply the findings to the watershed and includes no conclusions that could guide formulation of strategies and selection of BMPs. For oil, the analysis fails to rise to even that basic level. At a minimum, the assessment should have reached all corners of the watershed to see if particular hot spots should receive greater attention.

The LAR UR2 WMP states that according to the Los Angeles River Trash TMDL, "The amount and type of trash that is washed into the storm drain system appears to be a function of the

surrounding land use"[1]. The draft WMP should go on to describe the land use within the LAR UR2 WMA and associated trash generation rates. No modeling or discussion of hotspots or further investigation is provided in the draft WMP. The source assessment lacks specificity and does not meet the 2012 Permit requirements "to include known and suspected sources of pollutants" (2012 Permit, at section VI.C.5.a.iii.1.c.).

B. Water Body-Pollutant Classification/Prioritization

The LAR UR2 WMP is deficient and inconsistent in that it fails to discuss Category 3 classifications on the basis that "all available water quality data was obtained downstream of LAR UR2 WMA, therefore its applicability is unknown"[2]. However, the LAR UR2 WMP later lists various pollutants as Category 3 in Table 2-7.[3] Furthermore, the WMP lists a number of pollutants applicable to the LAR UR2 WMA but that are not 303(d) listed or associated with a TMDL.[4] All of these documented exceedances not regulated under a TMDL or 303(d) should, by the permittees' own admission, be classified as Category 3 pollutants. Following a complete and accurate classification of Category 1-3 pollutants, there must be accurate and complete prioritization thereof.

C. Watershed Control Measures

LAR UR2 WMP states that enhanced, non-modeled non-structural BMPs (such as enhanced street sweeping, enhanced catch basin and storm drain cleaning, enhanced commercial and food outlet inspections, enhanced pet waste controls, enhanced homeless waste controls, and enhanced illicit discharge detection elimination efforts) can be "assumed" to lead to a five percent reduction from baseline loads for all pollutants, based on input from the Regional Board.[5] The WMP, however, must justify how the five percent reduction figure was determined. It is also not clear what cities in the watershed management area will implement which enhanced BMPs and when. It is possible that many of these control measures may have already been implemented during the last MS4 permit cycle, but the WMP does not clarify which measures have been carried out. The WMP should also discuss how enhanced non-modeled non-structural BMPs differ from already implemented control measures, to ensure that modifications to the current MCM program will be implemented in a timely fashion, and during the permit cycle.

1. Structural Controls

Permittees identify six potential regional structural projects in the LAR UR2 draft WMP, but actual project designs have not been developed. Only conceptual design attributes (with potential timelines far in the future) were used for RAA modeling, and[6] the load reductions attributed to

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[1] California Watershed Engineering (June 26, 2014) Los Angeles River Upper Reach 2 Watershed Management Program (WMP) Plan, at 33 ("LAR UR2 WMP").
[2] LAR UR2 WMP, at 30.
[3] *Id.*at 34.
[4] *Id.* at 26.
[5] *See,* LAR UR2 WMP, at 67 and 82.
[6] LAR UR2 WMP, at 82.

these six structural BMPS are therefore speculative. It cannot be relied on that the conceptual BMPs will or can be implemented to achieve the design attributes necessary to meet target load reductions.

Given that the six regional structural BMPs proposed are infiltration systems (two infiltration trenches and four subsurface infiltration systems), the soil class and depth to ground water are important considerations.

II. Reasonable Assurance Analysis

A. Reliance on Other Processes for Pollution Reduction

The draft WMP emphasizes that the nutrient TMDL was primarily directed at wastewater recovery plants and has been implemented. However, the permittees are responsible parties under the TMDL, yet provide no further detail on this point or any actions they have undertaken or plan to undertake.

LAR UR2 permittees rely too heavily on a Site Specific Objective study to address metals TMDL listings for copper and lead, which has yet to be adopted by the Regional Board.[7] RAA model iterations should include scenarios without Site-Specific Objective study inclusion to identify necessary control measures in the event that the study is not adopted by the Regional Board.

B. Selection of Regional BMPs

In the draft WMP, the main criteria for identifying regional BMPs sites were: (1) at least 0.5 acres available, (2) a maximum distance to a storm drain of 100 feet and (3) public ownership.[8] In identifying regional BMP sites, there was no consideration of new public land acquisition or public-private partnerships to increase siting opportunities. Thus, this is an incomplete analysis.

C. Model Calibration

The LAR UR2 draft WMP and RAA report fails to demonstrate model calibration. The RAA guidelines specifically highlight "model calibration and validation [as] necessary and critical steps in model application."[9] The RAA merely makes two statements regarding model calibration, stating that:

"…the LAR UR2 WMA Reasonable Assurance Analysis (RAA) demonstrates, through a calibrated model, that Water Quality Objectives (WQOs) will be met through implementation of

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[7] *Id.* at 20 and 78.
[8] *Id.* at 56.
[9] Tetra Tech and Paradigm Environmental (June 6, 2014) Reasonable Assurance Analysis for Lower Los Angeles River, Los Cerritos Creek, and Lower San Gabriel River, at 12 ("Lower Rivers/Channel RAA").

the action in this Plan"[10] and, "target load reductions were established using the calibrated LSPC watershed model for the TMDL pollutants total nitrogen, total copper, total lead, total zinc, and fecal coliform."[11]

The brief discussion leaves many details unexplained, such as how RAA models were calibrated and what data was used to calibrate the model. The final WMP must include a more robust discussion of model calibration.

II. Draft Coordinated Integrated Monitoring Plan

A. Receiving Water Monitoring

No receiving water sampling location was selected for the Rio Hondo watershed. At least one receiving water monitoring location for the Rio Hondo Reach 1 within the WMA should be included and should be located downstream of the Ford Park outfall monitoring location. Instead, permittees selected a major outfall to be monitored that drains 70 percent of the WMA of the Rio Hondo Reach 1. However, during wet weather monitoring, a receiving water sample of the Rio Hondo will be necessary in order to determine compliance with Rio Hondo specific wet TMDLs and receiving water limitations in wet weather. The 2012 MS4 Permit requires that receiving water be monitored a minimum of three times per year during wet weather conditions and at minimum two times per year during dry weather conditions[12]. If the Rio Hondo Reach 1 happens to run dry during the driest months, then the monitoring reports and data may reflect that, but establishing a receiving water monitoring site is required and necessary to assess whether water quality objectives are being achieved.

B. Outfall Monitoring – Stormwater

Figure 1-5 of the WMP identifies only the MS4 drainage system and LCFCD outfalls. The map does not include the catchment areas of each outfall as required[13]. Outfall catchment area is used to evaluate: (1) CIMP effectiveness to identify pollutant loading sources; (2) whether outfall locations are representative of land use; and (3) whether the appropriate number of outfall locations are included in monitoring program. The exclusion of outfall catchment area delineations hinders essential monitoring review and assessment.

Seven wet-weather outfall monitoring sites are selected: one Rio Hondo location, to be monitored three events a year, and six sites in the Los Angeles River watershed area, to be monitored on a rotating basis so that only two sites will be monitored during any given wet

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[10] *See*, LAR UR2 WMP, at 1.
[11] *Id.* at 72.
[12] 2012 Permit, Attachment E-MRP, at E-15, E-16.
[13] California Watershed Engineering (June 26, 2014) Los Angeles River Upper Reach 2 Watershed Management Area Coordinated Integrated Monitoring Program (CIMP), at 7 ("LAR UR2 CIMP").

weather event. While the MS4 Permit allows for an alternative approach to increase the cost efficiency and effectiveness of the monitoring program, the proposed monitoring scheme does not meet the minimum requirements. The monitoring scheme description fails to discuss the justification for rotating monitoring sites, as well as whether all sites are representative of the same land uses. Each Permittee is required to monitor at least one major outfall per subwatershed (HUC12) drainage area at minimum three times per year, including the first rain event of the year. Therefore each of the seven monitoring sites should be monitored three times per year, as the permit specifies.[14]

The most prevalent land use in LAR UR2 WMA is industrial (42.41% industrial, with the next most prevalent land use being multi-family residential at 16.98%[15]), however no monitoring location representative of primarily industrial land use was selected in the CIMP. As noted in the permit, outfall monitoring must be representative of land uses.[16] LAR U2 is one of the most heavily developed and industrialized areas in the watershed. Therefore, monitoring outfall location(s) representative of industrial land use need to be included in the CIMP.

Table 4-7 of the WMP must include suspended-sediment concentration as it is required to be monitored if receiving water is listed on the CWA section 303(d) list for sedimentation/siltation/turbidity, hardness, pH, dissolved oxygen, temperature and specific conductivity.[17]

C. Maps and Database

Drainage patterns and catchment areas of major outfalls are absent from Figure 1-5 of the WMP.[18] This information is used for assessment of the outfall locations in the CIMP. The land use map Figure 1-3 is not legible and thus makes it difficult to interpret the watershed spatially.[19]

The CIMP is also missing several required documents: the Effective Impervious Area (EIA) overlay, the notation of outfalls with significant NSW discharges (to be updated annually), and linking each mapped MS4 outfall to a database containing descriptive and monitoring data associated with the outfall."[20]

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[14] *See*, 2012 Permit, Attachment E-MRP at E-21.
[15] LAR UR2 CIMP, table 1-1 at 1.
[16] 2012 Permit, Attachment E-MRP, at E-21.
[17] *Id.* at 42.
[18] *Id.* at 7.
[19] *Id.* at 4.
[20] *Id.* at 26.