



GAIL FARBER, Director

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

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January 24, 2012

IN REPLY PLEASE
REFER TO FILE: FMD-0

Mr. Samuel Unger, Executive Officer
California Regional Water Quality Control Board
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Attention Ms. L.B. Nye, Chief
Section 401 Water Quality Certification

Dear Mr. Unger:

RESPONSE TO THE REGIONAL BOARD'S ADDITIONAL CONDITIONS FEASIBILITY STUDY WORK PLAN FOR LOS ANGELES RIVER WATERSHED SOFT-BOTTOM CHANNELS MAINTENANCE ACTIVITIES

We received your response comment letter dated September 10, 2011, on the Feasibility Study Work Plan (SWP) for the Los Angeles River Watershed that we submitted on July 1, 2010. We understand the Board approved our proposed SWP, however, with additional conditions on the hydraulic analysis.

The Los Angeles County Flood Control District (LACFCD) has major concerns on these additional conditions. We first arranged a meeting with your Section 401 and Hydrology staff to discuss these concerns. However, due to staffing schedule conflicts, it was decided that a written comment letter, then arranging for a meeting to discuss these issues, would be beneficial at this time.

For reference, we are including your Board's additional condition (in italics) followed by our comment on that particular condition:

1. *"Because the plan is to use the design flow for the hydraulic analysis of each project reach, prior to performing the hydraulic analysis, the adequacy of design flow should be evaluated. Modeling should include the evaluation of the design flow based on the historical data (at least the past 10 years of data)."*

LACFCD: The design flows were established by the U.S. Army Corp of Engineers. The LACFCD is required by the U.S. Army Corps of Engineers to maintain the level of flood protection provided by the flood control channels in the Los Angeles County Drainage Area (LACDA). Any reduction to the design flows will reduce the level of flood protection. Therefore, the existing design flows will be used for this analysis.

- 2. The sediment carried by the annual storm events should be considered in the hydraulic analysis. The channel cross-section and channel roughness will be included in the evaluation of the adequacy of the flood capacity. For channel cross-section, the sediment carried by the annual flood significantly affects the flow conveyance capacity. In other words, the deposition and scouring caused by sedimentation will affect flow conveyance capacity and the sedimentation will affect the vegetation growth rate and consequently channel roughness as well."*

LACFCD: The design flow includes sediment load when no upstream debris control is provided. The LACFCD's hydrology method allows bulking the design flow to account for sediment load.

- 3. "The Regional Board recommends that the unsteady flow module and sediment transport module should be considered in the HEC-RAS model. One design storm event may be insufficient to evaluate the sediment transport and vegetation effect on channel roughness. In addition, annual based storm events should be simulated in the hydraulic analysis instead of using one design flow event."*

LACFCD: The design flows are computed from hydrologic routing of design hydrographs. Therefore, the unsteady flow condition is fulfilled. Since these channels were designed as engineered soft-bottom channels, no sediment transport modeling is necessary.

- 4. "The calibration of the model used for hydraulic analysis should be performed using historical data prior to the evaluation of flood control capacity. A sensitivity study of channel roughness should be performed if the reach is heavily populated with native plants."*

LACFCD: As stated above, the design flows cannot be changed. We will perform a sensitivity analysis on the effects of channel roughness on the capacity of channels.

5. *"The output of the hydraulic analysis should include the annual variation of water depth, flow rate and sediment depth at each computational cross-section along the channel with calibrated channel roughness for selected simulation time period."*

LACFCD: The flow depth at each computational cross-section along the channel, in terms of the design flow and a range of roughness coefficients, will be provided.

6. *"These evaluations shall consider whether the vegetation in the channels is native or an exotic and/or invasive species. This will be useful when determining the value or priority of leaving the vegetation in the channel. In addition to the description of the 'type, density, and size of vegetation per Section 4.1.3 (Hydraulic Analysis – Office and Field Investigations) the full spatial extent (total acreage or square footage) of the vegetation will be documented on the plans of the channel reaches. The documentation shall also distinguish between sections of invasive/exotic species."*

LACFCD: We will provide the requested information. Our biologists have conducted multiple vegetation transects at all channel reaches within the Los Angeles River Watershed in order to identify and quantify the amounts and extent of native versus non-native vegetation. Included with this is the identification of individual plant species from which those species considered to be invasive can be further assessed. This information will be provided in the technical assessment report for the channel reaches of the Los Angeles River Watershed.

7. *"The Work Plan, per Section 4.1.4K, indicates, 'Identification and location of these potential areas shall be discussed.' The areas of 'potential' for vegetation to remain shall be documented and provided to the Regional Board and stakeholders for comment."*

LACFCD: We will provide the requested information, when they are identified, in the Recommendations Section of the Technical Study. This section was not initiated due to delays in the approval of the Work Plan. This section is to be done in concert with LACFCD hydrologists. If there are areas where vegetation can be allowed to remain hydrologically, then our biologists will analyze the existing biological resources to determine those with highest value for protection.

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We would appreciate a meeting with your Section 401 and Hydrology Section staff to discuss and clarify the comments we have provided. To schedule this meeting, you may contact Ms. Jemellee Cruz of my staff at (626) 458-4170 or e-mail her at jcruz@dpw.lacounty.gov.

Very truly yours,

GAIL FARBER
Director of Public Works



RUDY LEE
Assistant Deputy Director
Flood Maintenance Division

JC:sg
H/DANIELL/MEMOS/RWQCB - CHANNEL MAINT.