

RESPONSE TO COMMENTS
TECHNICAL ASSESSMENT REPORT
AND RECOMMENDATIONS
FOR THE
LOS ANGELES RIVER WATERSHED
FEASIBILITY STUDY

IN COMPLIANCE WITH THE
WASTE DISCHARGE REQUIREMENTS
FILE NUMBER 99-011-2010WDR

PREPARED FOR:

Section 401 Certification Unit
California Regional Water Quality Control Board
320 W. 4th Street, Suite 200
Los Angeles, CA 90013



PREPARED BY:

Los Angeles County Flood Control District
County of Los Angeles Department of Public Works
900 S. Fremont Avenue, Alhambra, CA 91803



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SECTION 1.0 INTRODUCTION

In February 2010, the Los Angeles Regional Water Quality Control Board (RWQCB) issued Order No. R4-2010-0021 Waste Discharge Requirements (WDR) for Los Angeles County Flood Control District (Discharger), Proposed Maintenance Clearing of Engineered Earth-Bottom Flood Control Channels, Los Angeles County (File No. 99-011, CI 9580). The watersheds included in the WDR are the Los Angeles River, San Gabriel River, Santa Clara River, Malibu Creek, and Dominguez Channel Watersheds. The WDR required the Flood Control District (LACFCD) to conduct a Feasibility Study for each of the earth-bottom channel included in the WDR to determine (1) whether or not the reaches have adequate flood control capacity and (2) the extent to which vegetation can be allowed within the earth-bottom channel. In May 2013, the LACFCD released for public comment the *Feasibility Studies, Draft Technical Assessment Report and Recommendations for Engineered Earthen-Bottom Flood Control Channels Located within the Los Angeles River Watershed Maintained and Operated by the Los Angeles County Flood Control District* (LA River Feasibility Study) in compliance with the WDR.

Condition 45 of the WDR required that LACFCD shall solicit stakeholder input during the Feasibility Study Work Plan development and prior to the finalization of the Technical Assessment Report and Recommendations.” Stakeholders were identified by the LACFCD in conjunction with the RWQCB, and included affected and interested parties, municipalities, environmental groups, and other organizations. On June 5, 2013, the LACFCD notified identified stakeholders via e-mail of the availability of the LA River Feasibility Study online (<http://dpw.lacounty.gov/LACFCD/WDR/fs.aspx>) for review and comment as well as a July 5, 2013 deadline for receipt of comments. On June 24, 2013, the LACFCD held a Stakeholder’s Technical Workshop on the LA River Feasibility Study at the County of Los Angeles Department of Public Works Headquarters in Alhambra. A total of 20 stakeholders participated in the workshop. LACFCD staff and representatives from BonTerra Consulting provided a 60-minute technical presentation that summarized the findings of the Feasibility Study, followed by an approximately 60-minute question and answer period. Comments and questions at the workshop were noted.

This document sets forth the responses of the LACFCD to both the written and Workshop comments made on the LA River Feasibility Study. Responses to the Workshop comments are contained in Section 2.0, while responses to written comments are contained in Section 3.0.

SECTION 2.0 RESPONSES TO WORKSHOP COMMENTS

As noted above, the Stakeholder's Technical Workshop held on June 24, 2013 included a question and answer period. The question and answer period was facilitated by LACFCD and BonTerra Consulting staff and questions and comments were recorded by staff on large notepads. Each comment or question noted during the Workshop is provided below, along with LACFCD's response.

1. How many acres of vegetation will remain within the soft-bottom channels (SBCs) and how many acres will be removed?

Response: Under the current Maintenance Plan for the LA River (approved in 2005), of the 25 SBC reaches in the LA River, 11 are cleared each year. Six of these 11 reaches have 1.55 acres of native riparian vegetation that is allowed to remain under the existing permits. The Feasibility Study recommended no change in the maintenance of these reaches.

The Maintenance Plan also allows an additional 14 reaches to retain some native vegetation areas after maintenance. Of these 14 reaches, the LA River Feasibility Study determined that 7 reaches (with a total of approximately 1.62 acres of native vegetation remaining after maintenance) can be enhanced by an approximate additional 0.13 acres of post-maintenance native vegetation. This enhancement includes both additional native vegetation and the replacement of non-native with native riparian species.

The Feasibility Study also determined that in 6 reaches, where a total of 1.26 acres of native vegetation is currently allowed to remain post-maintenance, all vegetation will have to be removed during maintenance to address flood control requirements. In one additional reach, Reach 7, the LACFCD still is working to determine the amount of vegetation that can be allowed to remain post-maintenance.

Therefore, under the recommendations of the LA River Feasibility Study, a total of 3.3 acres of native vegetation will be allowed to remain/or be enhanced (i.e., 1.55 acres, 1.62 acres and 0.13 acres described above) and a total of 1.26 acres must be removed for flood control purposes. The latter total will change after the LACFCD completes its analysis of Reach 7.

2. Will additional vegetation be achieved by planting new vegetation or just allowing existing vegetation to expand?

Response: LACFCD plans to use both of these techniques, along with the specific removal of exotic non-native vegetation, to facilitate replacement/growth of native vegetation in the seven SBC reaches. Planting of new vegetation will occur at Project No 106 in the Sepulveda Flood Control Basin (Reach 9). At this channel reach, additional native vegetation will be achieved by planting native trees (western sycamore [*Plantanus racemosa*]) after removal of non-native ash trees (*Fraxinus* sp.).

Natural growth and/or regrowth of native vegetation will be protected and allowed to mature at four channel reaches: Los Angeles River (Reach 25), Bell Creek (Reach 1), and Webber Channel (Reaches 20 and 21).

For Halls Canyon Channel (Reach 22) and Pickens Canyon (Reach 19), additional native vegetation will be achieved through annual removal of non-native vegetation (i.e. Spanish broom [*Spartium junceum*]). Removal of the Spanish broom is expected to promote growth of native species in these areas.

3. Did the Study consider the Sepulveda Basin or Dominguez Channel?

Response: The Study considered LACFCD-operated SBCs in the Sepulveda Basin (Reaches 7, 9, and 10). The remainder of the Sepulveda Basin is operated and maintained by the United States Army Corps of Engineers (USACE), and was therefore not included in the Feasibility Study. SBCs in the Dominguez Channel, which is a different watershed from the LA River, will be the subject of a future feasibility study.

4. How can there be additional capacity within the 7 channels reaches? Were the channels incorrectly designed (i.e. oversized) when originally constructed or are there other factors that have resulted in the available capacity for additional vegetation?

Response: The channels in question were not incorrectly designed. The Feasibility Study provided the LACFCD with an opportunity to assess the capacity of the channels in their current condition. In the case of the 7 channels, the analysis results indicated that additional native vegetation could be allowed to grow and/or replace non-native vegetation.

5. What was the source of the Engineering Model's flow rates? Would additional flow rate data help the analysis?

Response: The flow rates used in the hydraulic analysis were obtained from various sources, including channel design plans, hydraulic reports, and hydrologic studies. For information on specific sources, please see the discussion of "Hydrology" with respect to each reach in the Feasibility Study Appendix A, Hydraulic Analysis Technical Assessment Report (HATAR). These data were sufficient to perform the analysis in the HATAR.

6. Have the design capacities of the various channels changed over time?

Response: No. The design capacities of the channels analyzed in the Feasibility Study represent the maximum amount of flow the respective channels were originally designed to convey, and therefore would not change over time.

7. The Study should consider that land uses in the region have become denser and more vertical, and that Low Impact Development (LID) may not be a meaningful solution due to the soils/geology of developed areas.

Response: As required by the WDR, the Feasibility Study examined the current capacities of the SBCs. LID is not intended to be a solution to flood control issues, but is rather a resource management concept and technology intended to reduce pollutants discharged in stormwater. The Feasibility Study examined the role of LID as it might affect storm water runoff to the LACFCD's flood control channels. That analysis demonstrated that even deploying LID on the entire surface of a watershed would not measurably reduce flows during the major storms for which the SBC channels were designed. Please see Section I.5 of the HATAR.

While LID is a valuable technology to address polluted runoff from smaller storm events, even LID deployment on 100% of the surface of a watershed will not materially reduce the need for existing flood control channel capacity.

8. The Study should consider issues related to migratory birds.

Response: The Study considered issues relating to migratory birds. Impacts on migratory birds from the maintenance of SBCs have been considered during biological surveys done for the LACFCD since 1997/1998. The Study included the results of migratory bird surveys performed at selected channel reaches (e.g., Compton Creek). Surveys were conducted before and after LACFCD clearing activities in order to evaluate potential differences in pre- and post-clearing habitats. The results of these migratory bird surveys showed higher numbers (species and overall abundance of birds) at Compton Creek during the post-clearing survey. Please see Section 3.0 of the Biological Technical Assessment Report (Appendix B of the Feasibility Study) for further details of these surveys.

9. In the Engineering Model's analysis of LID, did it consider the current existing conditions of LID or the planned future circumstances of LID, including LID for single family homes?

Response: Yes. In analyzing the impacts of LID in the hydraulic analysis, County Public Works engineers assumed that 100% of a given watershed was covered completely by LID technology capable of collecting runoff generated by the 85th percentile storm (water quality design storm). (The 85th percentile storm means that the rainfall from this 24-hour storm is equal or greater than the rainfall from 85 percent of all 24-hour storms in the County.) This assumption covered both existing and planned future LID, including LID for single family homes. As noted above, the analysis showed that the effect of LID on major storm flows into the flood control channels was insignificant. Please refer to the response to Question 7.

10. The Study should consider "world-wide flooding" and flood control in the context of climate change.

Response: The scope of the Feasibility Study, as set by the WDR, was to look at the current functioning of the SBCs as part of the flood control system in the County and did not include the effects of climate change. However, the County, in conjunction with other agencies, is separately examining the potential impacts of climate change, especially with regard to the potential for more high-rainfall storms. An example of the County's examination of climate change effects is its participation in the *Los Angeles Basin Stormwater Conservation Study* being jointly conducted by the U.S. Department of Interior, Bureau of Reclamation, the Los Angeles County Flood Control District, and several local agencies. The purpose of the Study is to examine long-term flood control and water conservation impacts from projected population and climate conditions in the Los Angeles Basin. More information about the Study is available at: <http://www.usbr.gov/lc/socal/basinstudies/LABasin.html>.

11. What was the timeframe considered in the Study?

Response: The Feasibility Study workplan was approved by the RWQCB on March 27, 2012 and the Feasibility Study was released for public comment on June 5, 2013. Primary field work was conducted in 2010-2012. The Study also utilized information collected in biological monitoring conducted annually since 1997-98.

12. How would the Study be affected if the County were to implement a floodplain "buy-back" program?

Response: The WDR required that the LACFCD examine current conditions of the LA River. Thus, there was no consideration of the impacts of a floodplain buy-back program.

13. Has the Study taken into consideration “lessons learned” from previous vegetation removal programs that resulted in limited vegetation regrowth?

Response: The Feasibility Study took into consideration information collected by LACFCD and BonTerra Consulting personnel over more than 15 years of annual SBC maintenance activities. Annual vegetation re-growth in the SBCs is anticipated and accepted.

14. Does the Study consider data on native versus non-native vegetation removal?

Response: Yes. The purpose of the vegetation transect data collection in the Feasibility Study was to determine the relative amounts of non-native vegetation vs. native vegetation in the channel reaches before and after annual clearing activities. The results for the vegetation transect data are summarized in Table 11 of the Biological Technical Assessment Report.

15. How will new vegetation growth be monitored to prevent invasive propagation (e.g. arundo donax)?

Response: As part of the LACFCD’s annual fall SBC maintenance program, biological monitoring is conducted before, during, and after the clearing activities. Biologists identify invasive species for removal and communicate the locations of such species directly to LACFCD staff. Depending on the location, the invasive species are sometimes flagged prior to removal. Removal of invasive species such as arundo and castor bean follow regulatory permits’ prescribed methods to limit their spread in the channel reaches. This effort has been successful. For example, arundo was abundant in San Gabriel River Reach 40 at the beginning of monitoring efforts in 1997/98, but is now essentially eradicated from that long channel reach.

16. Does the Study consider the USACE methodology for vegetation removal?

Response: The Feasibility Study involved maintenance in SBCs owned and operated by the LACFCD. USACE requirements are considered in that maintenance.

17. How large are the 6 channels that will require additional vegetation removal?

Response: Please see Table 1 in the Biological Technical Assessment Report (Appendix B to the Feasibility Study) which provides information concerning all 25 channel reaches addressed in the Feasibility Study.

18. In the lower Los Angeles River Reach 25, will there be more than just willow regrowth?

Response: No. The recommendation for additional vegetation in Reach 25 is limited to four additional willows, as this is consistent with the findings of the HATAR. .

19. Will the propagation of new vegetation consider the USACE requirements related to trees on levees?

Response: Yes. All regulatory agency requirements will be considered.

20. Does the presence of vegetation improve water quality, as required by the Waste Discharge Requirement (WDR)?

Response: Studies have indicated that vegetation can remove constituents in urban runoff through uptake into plant material. Additionally, vegetation can also facilitate groundwater recharge and related filtering as water percolates into local aquifers.

21. Has the County worked with the USACE on this Study, and are there areas excluded from the Study because they are under USACE jurisdiction?

Response: The USACE is a stakeholder for the Feasibility Study, and has been given full opportunity to comment on both the Feasibility Study Work Plan and the draft Study. The LACFCD utilized USACE models in the development of the HATAR. The Feasibility Study was limited to SBC reaches operated and maintained by the LACFCD, since the WDR applied only to the LACFCD. The USACE is responsible for maintenance of certain SBCs, but these reaches were not included in the Study.

22. Will the USACE have to do the same sort of analysis for channels under its jurisdiction?

Response: The LACFCD has no information on what requirements may apply to the USACE channels.

23. How will the numerous channels that are not included under the WDR going to be studied?

Response: Channels operated and maintained by other entities, including the USACE, were not subject to the WDR. The LACFCD has no information as to how the RWQCB might address these other channels.

24. What are the next steps for the approval of the Study by the RWQCB? Will there be additional meetings?

Response: The WDR requires that the Feasibility Study recommendations be reviewed by the RWQCB's Executive Officer. Any recommendations approved by the Executive Officer must be included as changes to the Annual Work Plan for channel maintenance activities for the LA River watershed, and such changes are required to be submitted to the Executive Officer 21 days prior to clearing activities. Please see WDR Condition 51. The LACFCD is not aware of any further meetings that might be needed.

25. Since the Study did not include monitoring data for all channels, and the existing data are incomplete, how can year-to-year comparisons of these activities be made regarding water quality changes over time?

Response: The WDR did not require the Feasibility Study to assess year-to-year comparisons of clearance activities over time, but rather a one-time assessment focusing on BMP effectiveness as well as water quality. Please see WDR Condition 49. Please also note that 14 reaches were not sampled during the Feasibility Study because they were either dry or no water left the maintenance area that could be monitored. The LACFCD believes that the monitoring that was done provided useful information on both BMP effectiveness and water quality impacts, if any, from the maintenance activities.

26. Data should be compiled about the amount of material that is removed from the channels on an annual basis, broken down by natives, non-natives, and sediment.

Response: While the Feasibility Study was not required to include such information, in reports prepared as part of the annual reports of channel clearance activities, the LACFCD reports the percentage of non-native species removed during channel clearance activities. Also, channel maintenance activities remove very little sediment. In fact, SBC maintenance is designed to minimally disturb sediment. For example, vegetation is generally cut above the root to avoid removing the root structure and associated sediment.

27. What water quality parameters were studied, and how were impacts on Total Maximum Daily Loads (TMDLs) considered?

Response: As required by the WDR, the water quality parameters monitored in the Feasibility Study were water temperature, pH, turbidity, dissolved oxygen, and total suspended solids. The WDR did not require the Feasibility Study to assess TMDL water quality compliance.

28. How is Pacoima Wash affected by turbidity? Does vegetation removal impact the levels of suspended solids in the water?

Response: The activities conducted during the 2011 maintenance of Pacoima Wash caused temporary increases in turbidity and total suspended solids readings. Please see discussion in Feasibility Study Appendix C, Water Quality Monitoring Report. These impacts were not associated with vegetation removal per se but rather the special requirement in that year to mechanically regrade this reach to avoid the creation of ponds, which promote the breeding of mosquitoes carrying the West Nile Virus. The mechanical grading at this reach in 2011 was far more extensive than normal maintenance activities, which involves only the hand clearance of vegetation.

29. How would the future removal of concrete channels (i.e. conversion to naturalized soft-bottom channels) impact the Study?

Response: Analysis of the possible conversion of concrete channels to SBCs was not required as part of the Feasibility Study.

30. How does the Study consider the issue of liability? It is not clear that this issue has been resolved, regarding who is responsible and liable.

Response: In the WDR, the RWQCB required the Feasibility Study to address the issues of the flood control capacity of SBCs and their potential ability to incorporate additional native vegetation. The issue of liability was not a required topic of the Study.

31. Will new mitigation be required for vegetation that must now be removed from the 6 under-capacity channel reaches?

Response: Any mitigation requirements for vegetation that is to be removed from any channel must be discussed and approved by relevant resource agencies.

SECTION 3.0 RESPONSE TO WRITTEN COMMENTS

Letters commenting on the Los Angeles River Watershed Feasibility Study's Draft Technical Assessment and Recommendations were received from the following parties during the public review period (June 5, 2013 through July 5, 2013):

Federal, State, Regional, and Local Agencies

- U.S. Army Corps of Engineers, Los Angeles District, E-mail dated July 15, 2013

Organizations

- Friends of the Los Angeles River (FoLAR), Letter dated July 5, 2013
- Heal the Bay (HtB), Letter dated July 5, 2013
- Mountains Recreation & Conservation Authority (MRCA), Letter dated July 5, 2013

Individuals

- None

Comment excerpts from each letter/e-mail listed above is included below, followed by the LACFCD's response. Each comment letter has been divided into sequential numbered comments (i.e., 1, 2, 3, etc.), as shown on the enclosed letters. Each numbered comment corresponds to a matching numbered response. Copies of the written comment letters are provided in Appendix A.

3.1 U.S. ARMY CORPS OF ENGINEERS, LOS ANGELES DISTRICT (USACE-LAD)

July 15, 2013

Comment USACE-LAD-1

Several projects are within the Corps of Engineers Sepulveda Dam Flood Control Basin. They are identified in the report as;

- (a) Reach 7 - Bull Creek
- (b) Reach 9 - Tributary to the Sepulveda Flood Control Basin Project 106
- (c) Reach 10 - Tributary to the Sepulveda Flood Control Basin Project No. 469.

Of these projects, only Reach 9, Project 106 was determined to have opportunity to replace non-native vegetation with native vegetation. The other projects would not have any proposed modifications.

Please ensure that any proposed work within the boundaries of the Sepulveda Basin be coordinated with the Corps of Engineering Asset Management Division. The contact person for Asset Management is Ms. Karen Kennedy. She can be reach at 213.452.3128 or by email at Karen.M.Kennedy@usace.army.mil.

Response: Comment noted.

Comment USACE-LAD-2

Reach 24 Compton Creek: The results of your hydraulic analysis indicated that "Since showed no excess capacity for the assumed "clear" channel condition, no other scenarios were explored." Hence, no activity is proposed. Should this change for any reason, please coordinate with the Corps of Engineers Permit Coordinator, Mr. Steve Vaughn at 213.452.3654.

Response: Comment noted.

Comment USACE-LAD-3

Reach 25 - Los Angeles River: This reach extends from about 900 feet upstream of Willow Street bridge to about 1000 feet downstream of the Pacific Coast Highway bridge. Your analysis concluded that this reach has excess flow capacity and that additional vegetation in the form of four additional Willow trees would be allowed to grow and mature at the edge of water. From the technical presentation meeting on 24 June, it was presented that there exists some 20 to 30 Willow trees in the river in varies patches.

We have 3 major comments:

Comment USACE-LAD-3a

This reach is a Federally-constructed flood control facility and was turned-over to the Los Angeles County Flood Control District (LACFCD) for Operation and Maintenance (O&M). An accompanying O&M Manual was provided to the LACFCD to stipulate the O&M requirements to insure that the facility continues to properly function as designed. In short from the O&M manual, the channel should be maintained such that the channel is clear of debris, weeds, and wild growth that would impede flow conveyance. This statement would indicate that no vegetation is allowed in this reach. Vegetation removal would be the required maintenance.

Response: Based on the hydraulic analysis, LACFCD can allow four willow saplings to mature without impeding flow conveyance. The additional willow trees will be maintained under the existing maintenance plan that allows the trees to be “lollipoped” to about head height in order to minimize their effect on storm flows in the channel. LACFCD is committed to working with USACE regarding their vegetation policy.

Comment USACE-LAD-3b

Your analysis indicated that this reach has excess capacity with the vegetation in place. My review of the 2004 Storm Water Plan provided to the LACFCD indicates that freeboard is just at the minimum values. Given the recent upgrade to the project to increase flow capacity, your analysis does not appear consistent with our report. We would like to opportunity review your hydraulic analysis to confirm your analysis.

Response: The HATAR is posted on the LACFCD website. LACFCD staff is available to meet with USACE to discuss the hydraulic analysis.

Comment USACE-LAD-3c

The reach of the channel is leveed and therefore must comply with the Corps of Engineers' criteria on Vegetation Free Zone as described in the Corps of Engineers - Engineering Technical Letter ETL 1110-2-571, dated 10 April 2009. In general, the guidance calls for no trees and vegetation a distance of 15 feet from the toe on both the river side and land side of the levee. It is unclear from the report if the existing condition is free of vegetation.

Response: In Reach 25, the LACFCD annually removes all vegetation except for 15 polygons of mature willows on the east bank. This vegetation is more than 100 feet from the toe of the levee, so is not subject to the USACE's Vegetation Free Zone requirements.

Friends of the Los Angeles River (FoLAR)

July 5, 2013

Comment FoLAR-1

Long Beach

Sections 25 and 114 (over 56 acres) of the proposed WDR are located in the City of Long Beach and are of great concern to FoLAR. As shown in the photo (Below Right) there is an abundance of bird life that are feeding on many of the aquatic species found in this area. FoLAR does not want to see this area impacted in any way as it contains the only habitat to which the Southern Steelhead Trout (*Oncorhynchus mykiss irideus*) has a potential to return within the Los Angeles River (LAR) watershed. The efforts of FoLAR in the Glendale Narrows section of the LAR have resulted in a return of hundreds of species of birds and aquatic life since we stopped the United States Army Corps of Engineers (USACE) from the annual bulldozing almost 20 years ago. With over a decade of cleaning up trash near Willow Street during our Annual "La Gran Limpieza", FoLAR is noticing the same return to nature in the Long Beach sections near the Pacific. FoLAR feels that this area is the perfect candidate for a NO ACTION ALTERNATIVE, as historically this area has no known flood control issues.

Response: The annual vegetation clearing work in Reach 25 does not impact aquatic habitats. The aquatic habitats in that reach provide high quality habitat for wildlife species, especially birds. The LACFCD conducts biological monitoring prior to the clearing activities, including surveys for avian species. That monitoring has not shown any significant change in wildlife use of this reach since 1997/98. Reach 114 was not included in the Feasibility Study, as it is not covered by the WDR. Finally, with respect to the comment that “this area is the perfect candidate for a “no action alternative,” the LACFCD is required to maintain Reach 25 to maintain flood control capability, as set forth in the HATAR.

Comment FoLAR-2

Sepulveda Basin

The sections shown above (7. Bull Creek, 9. Project No. 106 Outlet and 10. Project No. 469) are of great concern to FoLAR (as well as several other environmental stewards) and has gathered much attention with the recent habitat destruction by the USACE. The photos (above middle & above right) show the area prior to the USACE bulldozing. FoLAR does not want to see this area impacted in any way nor do the thousands of stakeholders who have already voiced their concerns loud and clear. Located in Table 6 of the Los Angeles River Watershed Feasibility Study Biotech Assessment, the Bull Creek Section 7 has identified birds such as the Black Phoebe (*Sayornis nigricans*), the Northern Rough-Winged Swallow (*Stelgidopteryx serripennis*), the Cliff Swallow (*Petrochelidon pyrrhonota*), the Barn Swallow (*Hirundo rustica*)...

...the Common Yellowthroat (*Geothlypis trichas*), the Song Sparrow (*Melospiza melodia*), the Red-winged Blackbird (*Agelaius phoeniceus*), the American Goldfinch (*Spinus psaltria*), the Mallard (*Anas platyrhynchos*), the Mourning Dove (*Zenaidura macroura*), Anna's Hummingbird (*Calypte anna*), Allen's Hummingbird

(*Selasphorus sasin*), Cassin's Kingbird (*Tyrannus verticalis*), the Bushtit (*Psaltiriparus minimus*), the Northern Mockingbird (*Mimus polyglottos*), the California Towhee (*Melospiza crissalis*), the House Finch (*Haemorhous mexicanus*), and the Orange Bishop (*Euplectes franciscanus*.) This is a significant reason to not impact these areas--to assure future growth of these species. FoLAR recommends that the Sepulveda Basin should be a NO ACTION ALTERNATIVE area as well.

Response: The bird species identified during the breeding bird surveys at the three channel reaches located in the Sepulveda Basin are all common and widespread species in the Los Angeles region. These species are well adapted to many human modified habitats, including the maintenance of flood control channels. The annual clearing activities conducted by the LACFCD at these three channel reaches actually create habitats that are more favorable for most of these species. Additionally, clearing activities are scheduled to avoid impacts to nesting birds. As set forth in the HATAR, the LACFCD is required to maintain these reaches for flood control purposes, so a "no action alternative" is not appropriate.

Comment FoLAR-3

Compton Creek

The section shown above (24. Compton Creek) is of great concern to FoLAR as well as Heal the Bay. Located in Table 9 of the Los Angeles River Watershed Feasibility Study Biotech Assessment, the Migratory Bird Survey, there are several species who use this area and would suffer impacts of grading or any type of vegetation removal. These species include the Northern Mockingbird (*Mimus polyglottos*), the Common Yellowthroat (*Geothlypis trichas*), the Song Sparrow (*Melospiza melodia*), the Red-winged Blackbird (*Agelaius phoeniceus*), the House Finch (*Carpodacus mexicanus*), the American Goldfinch (*Spinus tristis*), the Orange Bishop (*Euplectes franciscanus*), Great egret (*Ardea alba*), Black-crowned night-heron (*Nycticorax nycticorax*), the Red-shouldered hawk (*Buteo lineatus*), the Red-tailed hawk (*Buteo jamaicensis*), the American Kestrel (*Falco sparverius*), and the Nutmeg manikin (*Lonchura punctulata*). FoLAR recommends that Compton Creek should be a NO ACTION ALTERNATIVE area as well.

Response: Most of the bird species identified during the migratory bird surveys at Compton Creek are common and widespread species in the Los Angeles region. They are well adapted to many human-modified habitats including maintained flood control channels. Riparian habitats in the region are adapted for periodic flood events and rapidly recover. The annual clearing activities conducted by the LACFCD mimic these naturally occurring flood events. The ephemeral habitats created after flood events provide high quality habitats for many bird species. These habitats often support a higher diversity and density of birds than mature and stable riparian habitats. The results of the migratory bird surveys actually reflect higher numbers (both as to species and overall abundance of birds) at Compton Creek after clearing activities.

Also of interest was the presence of a relatively high number of Wilson's Snipe (*Gallinago delicata*) during the post-clearing survey. This is a locally uncommon species in the region and one which has been declining due to loss of its preferred habitats, which include muddy river banks. As with the other reaches noted in the commenter's letter, the HATAR results indicate that maintenance of Compton Creek (Reach 24) is required to maintain the capacity of the reach for flood control, so a "no action alternative" is not appropriate.

3.2 HEAL THE BAY (HtB)

July 5, 2013

Comment HtB-1 (page one)

STUDY DOCUMENTS LACK A COMPREHENSIVE ASSESSMENT

The Study Documents (Biological Technical Assessment Report, Hydraulic Analysis Technical Assessment Report, and the Water Quality Monitoring Report) produced for the Los Angeles County Flood Control Department lack the comprehensive assessment the Regional Water Quality Control Board (RWQCB) intended, and calls for the WDR. WDR #44 specifically states that "the information to be provided in the Feasibility Study to determine that the channel clearing activities have avoided, minimized or appropriately mitigated for effects on the beneficial uses of the affected reaches or to require changes to channel clearing activities to achieve the necessary avoidance, minimization or mitigation."

In order to accomplish this task, the County needed to assess past practices, conditions, validate and calibrate models with actual data, as they relate to their channel clearing activities within the context of a changing environmental landscape. In short, the County should have provided complete data sets for this type of analysis so that the general public could assess the full costs and benefits of this type of work. Unfortunately, data shortcomings could be found in all three technical assessments: a CRAM analysis without any benthic macro-invertebrate data, much less independently validated data (Biological Analysis); no-actual flow data or analysis for the 25 reaches was provided, simply modeling data (Hydraulic Analysis); and a water quality report with half of the reaches having no data at all and ½ (12 reaches) having incomplete data sets (Water Quality).

Response: The scope of the Feasibility Study, as set forth in WDR Condition 45, is to "determine where a potential may exist for native vegetation to remain within the soft-bottom portion of the channel or if hydraulic capacity is needed." The specific scope of the Feasibility Study was set forth in the Feasibility Study Workplan, which was released for public comment (including to the commenter) and was approved by the RWQCB. The WDR did not require a cost/benefit analysis, and, moreover, recognized that the protection of public health and safety required channel maintenance.

With regard to the lack of benthic macro-invertebrate data, the RWQCB, in approving the Feasibility Study Work Plan, did not require the collection of such data, though the Work Plan was amended in other respects as the result of comments from the commenter. The CRAM analysis is a wetland monitoring tool that is designed to evaluate the overall condition of wetland habitats and does not include surveys for macro-invertebrates. The biological surveys employed in the Study were selected for their continuity with the on-going biological surveys that have been conducted annually since 1997/98 for the LACFCD soft-bottom channel maintenance program. Macro-invertebrate surveys require multiple visits and follow-up laboratory work to gather sufficient data for analysis, while bird surveys produce sufficient data generally in one

visit in a cost effective manner. Since macro-invertebrates are an important component of the overall prey base that birds require, bird surveys are an effective means by which to evaluate the overall health of the channel reach ecosystem and, indirectly, the prey base available to the birds. The LACFCD does not believe that such a separate macro-invertebrate survey would have furthered the goals of the Feasibility Study, which was to assess the overall condition of the riparian habitats in the SBCs.

With regard to the data upon which the hydraulic analysis was conducted, the HATAR followed the Feasibility Study Work Plan approved by the RWQCB. The flow rates used in the hydraulic analysis are the original design flow rates or are based on historical hydrologic data, which are appropriate inputs for the USACE's HEC-RAS model.

Fourteen reaches could not be sampled for water quality due to the lack of water in the reaches; while not all of the sampled reaches had complete monitoring reports, the monitoring did provide sufficient data for the LACFCD to assess BMP performance and general water quality impacts, which constitute the rationale for conducting the water quality assessment. Please see WDR Condition 49.

Comment HtB-2 (page 2, first paragraph)

Also, none of the Study documents assess or parsing-out the debris removed from the various channel reaches from year to year, such as native vegetated, non-native vegetated, sediment, and trash. For example, in 2010-11 the County removed 11.1 million pounds of debris from the 25 reaches. In 2011-12, this debris removed increased to 16.9 million pounds. Data for 2012-13 was not available for review. Despite the concern that the overall number is increasing, the public has no idea if trash, sediment, or vegetation is changing over time. Given that the Los Angeles River has a zero-trash TMDL, it would be interesting to note if trash is decreasing in these reaches based on RWQCB policies and municipality program implementation.

Response: Neither the WDR nor the Feasibility Study required the LACFCD to differentiate the debris generated from maintenance activities. However, as noted above, the LACFCD annually reports the percentage of non-native species removed during SBC maintenance. Also, the amount of trash and debris recovered from the trash boom serving the LA River is voluntarily recorded in the annual reports filed for the MS4 Permit. Since the trash boom was implemented in the year 2000, approximately 7,400 tons of debris and trash have been removed at the boom.

Comment HtB-3 (page 2, second paragraph)

In addition, there is no information on sedimentation rates or averages for each of the reaches. Nor is there any chemistry data provided for the sediment removed for each of the reaches. Sediment chemistry data would facilitate a better understanding of 1) potential beneficial impairments if TSS is not sufficient addressed – see Pacoima Wash comment, and 2) the cumulative effects of low level water quality contaminants. As a possible of example of such an assessment of sediment and its impact on a watershed, the County may want to reference the July 2013 USEPA Total Maximum Daily Loads (TMDL) for Malibu Creek and Lagoon to address sedimentation and nutrients. In its write-up, the USEPA states that “sedimentation can be indicative of a variety of stressors that are associated with urban runoff and altered hydrology...” (Page 10-2) The important element of this TMDL, as it relates to this WDR and Study Documents, was that the USEPA was able to determine the change in sedimentation transport/loading caused by extensive human-related activities compared to pre-development activities. USEPA determined that for the Malibu Creek Watershed, the 10-yr and 2-yr peak storm events flow increased from 5,370 to 7,360 cfs and 1,180 to 1,697 cfs. In addition, they concluded that sediment loadings could be reduced in the watershed by 38%. To this end, as we are discussing the opportunities to allow more vegetation to remain, or reduce the frequency of disturbances within these reaches, evaluating reductions in sedimentation or flows—beyond infiltration—need to be considered.

Response: Neither the WDR nor the Feasibility Study required the LACFCD to collect or analyze data on sediment rates or averages for any of the reaches, or to do a chemical analysis of the removed sediment. Such analysis would not further the purpose of the Feasibility Study, which was to assess the ability of the SBCs to retain or enhance native vegetation. Moreover, vegetation regrowth occurs very quickly in maintained reaches, as the maintenance occurs prior to winter rains. Thus, the reaches are only in a “vegetation-free” state for a short time between the maintenance activities conducted each fall.

Comment HtB-4 (page 2, third paragraph)

Finally, the WDR #44 intimates that a more temporal assessment should be completed, not just a snap shot data gathering exercise. The Study documents are in fact what the County should be submitting as part of their Annual Maintenance and Monitoring Report. However, these documents as is fall short in their effort to describe the temporal effects from channel clearing of earthen bottom waterways. Both the Biological and Water Quality assessments are simply one-year snap-shots of data. A comprehensive evaluation of impacts to these impacted waterbodies should be on the order of four-years to account for year-to-year variability in results.

As such, Heal the Bay recommends that the Study Documents submitted by the County become the standard by which future Annual Maintenance and Monitoring Reports are required. However, Heal the Bay believes that these Study Documents are incomplete to suffice as a true assessment of channel clearing impacts and possible habitat restoration opportunities, and as such should not be accepted as completion of their WDR reporting requirement.

Response: The WDR explicitly required one-year assessments of conditions in the SBCs, and not the four year assessment suggested by the commenter. Please see WDR condition 45 (“LACFCD shall implement the Feasibility Study process with a schedule of one or more watersheds per year to be analyzed, with completion of all watersheds/studies within six

(6) years.”) Moreover, as set forth in WDR Condition 44, the required analyses have been split among the various watersheds to allow the LACFCD flexibility in completing the required studies. The LACFCD is continuing to conduct these studies, watershed by watershed, to satisfy the requirements of the WDR.

The LACFCD submits that the Feasibility Study components do meet the requirements of the WDR and the Feasibility Study Work Plan. The Study results provide a technically supportable basis for additional native vegetation in some reaches and for removing vegetation to address flood control capacity requirements in other reaches. This was the intent behind the Feasibility Study, as set forth in WDR Condition 45.

Additionally, the annual reports for the maintenance of the SBCs provide a comprehensive review of maintenance activities; the documents produced for the Feasibility Study were intended to address specific questions raised by the WDR, and would not be appropriate as the template or standard for annual maintenance reporting documents.

Comment HtB-5 (page three, first four paragraphs)

Water Quality Monitoring Report is Incomplete

The WDR #49 (Water Quality Objective) specifically states that “water quality assessments within each reach will be required on a one-time basis before, after, and during maintenance clearing activities.” Yet, a review of the water quality monitoring report finds that 11 of the 25 reaches (46%) were not sampled at all. Of those 11 reaches (Reach 25 is double counted—while it is understood that the sampling took place on both side of the bank, the reach is counts as one overall), seven (7) of the 11 reaches (64%) had missing pre- (before maintenance) or post- (after maintenance) or both.

It is unacceptable for the County to be submitting this data as “completion” of its WDR #49 requirements. In addition, to the lack of temporal water quality data, the public should not be accepting incomplete one-year snap-shot data sets. The County’s argument for missing so many data collections was due to internal communications and coordination breakdowns. This excuse should ring hollow, since the County knew for three (3) years what its responsibilities were for achieving this simple WDR objective. Heal the Bay recommends that the County actually fulfill its WDR #49 requirement prior to submitting to the RWQCB.

Water Quality Monitoring Data Collection Requirements should be Clarified

In reviewing the water quality monitoring reports, I noticed that the “Temperature” constituent was considerably high until I realized that the readings were probably for air temperature and not water. I do not think the WDR #49 requirement or the RWQCB is asking for “air” temperature data, but more likely “water” temperature data.

In addition, as water quality monitoring is revisited, sampling post clearance should involve at least one rain event. By sampling a rain event after at these clearing events, the public can better understand the increase sediment loadings in the various reaches by these unnatural disturbances and their impacts on water quality.

Response: The WDR indicated that the water quality monitoring of those SBC reaches included within a Feasibility Study “in a particular year” would be done as part of the Study and reported with the Technical Assessment Report (WDR, Condition 49). The year chosen for assessment of the LA River SBC reaches was 2011. Please note that 14 reaches were not sampled

because they were either dry or no water left the project area. Where reaches were monitored, in some cases pre-work monitoring was not conducted and no post-work monitoring was conducted. However, these reaches still were monitored during the maintenance activities, including at upstream, within project, and downstream locations, which provided the required information on BMP performance and water quality impacts. The LACFCD has established new protocols to ensure coordination between maintenance field personnel and monitoring personnel and to ensure complete monitoring of reaches to be assessed in forthcoming Feasibility Studies in other watersheds.

The LACFCD collected water temperature data, which is set forth in Appendix C. With regard to sampling after one rain event, the LACFCD does not believe that such sampling would necessarily reflect any particular contribution by the SBC, even after its required annual maintenance. Sediment is an integral aspect of the SBC system as compared to the concrete channels. SBCs are an important part of the regional environment as the SBCs provide not only riparian habitat but also infiltration capabilities for urban runoff. In any event, neither the WDR nor the Feasibility Study Work Plan required such post-rain event monitoring. Finally, rain events may not occur for many days after a maintenance event, calling into question the value of any monitoring.

Comment HtB-6 (page 3, last paragraph and carryover to top of page 4)

Insufficient Explanation for Pacoima Wash (Reach #15) TSS exceedances

The WDR #43 (Best Management Practices) states that “The project shall not result in indirect impacts to water quality or beneficial uses of downstream water bodies. The Project shall not result in changes in water quality as a result of maintenance activities in downstream water bodies during maintenance...” For what appears to be 13 days (September 20 through October 5th), the Pacoima Wash (Reach 15) was heavily impacted by Total Suspended Solids from the County’s channel maintenance activities. The County noted in its summary that the prescribed BMP, straw waddles, were not sufficient to address impacts from the project. This is an insufficient addressing of the situation. Simply saying that “we will try better next time” does not adequately mitigate the damage done to the receiving waterbody, nor demonstrate any comprehension of being able to resolve such a problem in the future or within another

reach should the problem occur there. There is no explanation as to why other sediment control BMP’s measures were implemented. In addition, why was additional water quality monitoring constituents not added to the list of additional analytes to insure downstream water quality was not being impaired by other constituents of concern? Sediment is highly correlated to other pollutants such as metals, nutrients, and toxics.

Response: If the Pacoima Wash reach must again be re-graded to eliminate ponding (which can create breeding grounds for mosquitoes carrying the West Nile Virus), the LACFCD will divert water flows through piping, which would preclude contact between the water and the grading activities. In most years, maintenance in Pacoima Wash has involved only hand clearing of vegetation, for which standard BMPs were appropriate. With regard to constituents, the WDR specified the constituents to be monitored, and did not require further analysis of sediment.

Comment HtB-7 (page four, first paragraph)

The Biological Technical Assessment (BTA) Lacks any Valuation of Green Space to Surrounding Communities

Beyond the habitat values for Biological Ranking and CRAM, the BTA should develop a criteria or value for Green Space. The value could be based on importance to of the reach to local communities, or the importance of habitat (regardless of its “native” status) in absence of other adjoining habitats.

Response: As the comment points out, the CRAM study and final Biological Rankings of the Biological Technical Report (see Table 16) considered and incorporated the biological value of habitats adjacent to each of the channel reaches. Biological value was afforded to “green spaces” even if the vegetation was predominantly non-native. Although native vegetation in the channel reaches is generally given higher biological value, woodlands and even ruderal (weedy) habitats dominated by non-native species can provide high quality foraging (and sometimes nesting) habitats for many bird species. For example, the State and Federally listed endangered least Bell’s vireo will frequently forage and sometimes nest in non-native vegetation.

The annual biological surveys conducted for the LACFCD since 1997/98 monitor the extent of non-native vegetation in the channel reaches. Those species that are “invasive,” which tend to spread and thus reduce the amount of native vegetation in the channel reaches, are identified for removal during the LACFCD’s fall clearing activities. The giant reed (*Arundo donax*) has been a high priority for removal. Where it was particularly a problem (e.g. the San Gabriel River), its removal has been coupled with increasing numbers of nesting least Bell’s vireo. The results of the focused surveys mentioned in response to comment HtB-1 above have documented this increased use of the channel reaches by this endangered species.

Comment HtB-8 (page four, second, third and fourth paragraphs and carryover to page 5 and first paragraph page five)

The Vegetated Assessment (Table 11) in Biological Technical Assessment (BTA) needs Greater Clarity

First, the table has no footnote or citation for explaining how the calculations or values were determined for the various columns. For example, what are the N values for determining the percentages? As an example, I tried to determine for Reach 24 Transect 2, how the Pre- and Post- vegetation Native percentage values of 6.1 and 6.9 were derived and could not figure out the algorithm. As such, it was impossible to determine if the percentage difference between Pre- and Post- clearance is truly the best tool to use to determine impacts from channel clearance. The absent of the N-values for each of the percentages, means that the public does not know the true area of habitat impact. For example, a large positive percentage change in native vegetation post-clearing compared to a small negative percentage change in non-native vegetation could be construed as a positive outcome for channel clearance. However, if the N-values are respectively small for native and extremely large for non-native, then the overall effect of channel clearance may be negligible.

Without the N-values, it appears that channel clearance has a detrimental impact to native vegetation. Of the 45 reaches with data, only 9% (4 of 45) of the reaches demonstrated an actually increase in native vegetation (area/size/plant-total?) compared to non-native. 11% (5 of 45) of the reaches had greater non-native vegetation compared to native. For the remaining 36 reaches, the public has no idea on the overall change since the percentage change values for native and non-native point in the same direction.

Secondly, what is the value of this one-time grab data in identifying year-to-year variability? The summary for Table 11 is “Regrowth is rapid...for most SBC reaches as winter rains generally occur not long after completion of the fall clearing activities” (page 29). If so, then the data capture in Table 11 may be atypical, not average, if not random, since the time-period when the data was collected—December 2010—was one of the wettest months in the last 121 years. In addition, one might speculate that in extremely dry years, less vegetation to occur in these reaches, which might not need channel maintenance, or change the regrowth rate between natives and non-natives.

Overall, a recommendation regarding channel clearance and vegetation regrowth or channel clearance and present/absences of avian species cannot be made simply based on a year’s worth of data. There is extremely too much variability to accurately determine impacts or opportunities. However, this type of analysis should be collected annual, so that these temporal trends can be established, and in turn a better policy implemented.

Response: As explained in the Biological Technical Assessment Report, the Manning’s or hydraulic roughness coefficient values (*n* values) developed by the LACFCD hydrologists were used to select the locations for vegetation transects. The *n* values do not “determine” the percentages of native or non-native vegetation presented in Table 11 of the Biological Technical Report. The vegetation transects employed the point-intercept method, as described in Section 4.0 of the Biological Technical Assessment Report. Relative percent cover in these transects is calculated by adding the number of recorded “hits” (i.e. where all vegetation intersects the transect line) to obtain the “fraction” of the total length of each transect that is occupied by each species of vegetation. This fraction is then converted to a percentage. The Data Workbooks

showing the raw data for each species recorded in every survey are provided with the Biological Technical Assessment Report as Appendix F.

As the commenter points out, there is variability in vegetation growth from year to year in the channel reaches. However, additional multi-year data regarding channel regrowth and the presence/absence of avian species is not required. In fact, the annual biological surveys conducted for the LACFCD soft-bottom channel maintenance program since 1997/98 have monitored this variability. As explained above in response to comment HtB-7, the “invasive” species of vegetation (e.g., giant reed) that spread and threatened to reduce the amount of native vegetation in the channel reaches are identified for removal in these annual surveys. Moreover, the variety and abundance of avian species has increased in the soft-bottom channels since 1997/98. These results indicate that channel clearance has resulted in a beneficial, not detrimental impact to native vegetation.

Comment HtB-9 (page five, second, third and fourth paragraphs)

The Hydraulic Analysis Technical Assessment Report (HATAR) Lacks Any Real or Observed Data

As presented, the HATAR presents ample modeling data of the various reaches, which would suffice if we were interested in placing a new structure into an existing waterway due to the absence of existing or observed hydraulic data. However, we are evaluating existing engineered waterways that have experienced actual storm events, and yet there is no discussion anywhere in the HATAR document how these reaches have fared/failed in the past 20 years under various conditions. This is especially important given that the County is recommending additional vegetation removal for six (6) of the 25 reaches.

The Hydraulic Analysis Technical Assessment Report (HATAR) Lacks Any Alternatives Analysis

The only alternative/model that the HATAR looked at was flow reduction volume if Low Impact Standards (LID) were implemented across an entire watershed. Yet, the only LID element investigated was infiltration. There was mention if capture/water detention devices such as cisterns were included in the model. In addition, if they were, then to what sizing and distribution?

Also, there was no discussion of alternative approaches to channel structure that might enable more vegetation to remain within the channels. For example, there may be some reaches where a parapet wall added to the top of the banks enables greater vegetation to remain within the channel.

Response: All flood control channels, including the SBCs, are designed for very large events (50-year to 100-year events) with the potential to cause catastrophic damage to property and threaten the lives of residents. If these events have not occurred in the last 20 years, this does not imply that they will not occur in any future year. For example, there is a one percent chance that a 100-year flood may occur in any year. This 100-year flood could, for example, not occur in the next 100 years or occur several times in that same period. The occurrence of an event is expressed in terms of its probability.

Moreover, as noted above, the LACFCD, through a separate study, is currently examining the capacity of its flood control infrastructure in light of the impacts of climate change.

The LID example included in the HATAR assumes that LID BMPs installed over the entire watershed surface would capture and retain the “design storm” for LID, which is the 85th percentile storm. LID techniques include a variety of capture and retention BMP’s, including cisterns. As discussed in the HATAR, even the complete retention of LID design flow has an insignificant effect on reducing flow from the type of major storms used to design flood control channels.

With regard to the installation of such devices as a parapet wall, the effectiveness or not of such an installation depends on numerous factors well beyond the scope of the Feasibility Study. The flood control system must be seen in its totality; changes to one portion of the system could have adverse impacts in other sections. For example, installation of a parapet wall could create a “backwater” effect on upstream reaches.

Comment HtB-10 (page 5, last paragraph)

General Questions

- Is there a reason why macro-invertebrates were not collected within any of these reaches, given the amount of time and resources that went into avian sampling and plant community composition?

Response: The biological studies and surveys included in the Feasibility Study were selected for their overall usefulness to meeting the requirements of the WDR. Collecting data on macro-invertebrates would not have furthered the analysis, which correctly focused on the overall biological health of the reaches. As described in the response to comment HtB-1 above, additional tasks were included in the Study Work Plan as the result of comments from the RWQCB and Heal the Bay. There were no requests, however, to add surveys for macro-invertebrates. Moreover, the biological surveys employed in the Feasibility Study were selected for continuity with the on-going biological surveys conducted annually since 1997/98 for the LACFCD SBC maintenance program. These on-going biological surveys have shown that diverse assemblages of birds have the potential to occupy regularly maintained flood control channels situated in developed environments. Macro-invertebrate surveys require multiple visits and follow-up laboratory work to gather sufficient data for analysis, while bird surveys produce sufficient data generally in one visit. Since macro-invertebrates are an important component of the overall prey base that birds require, bird surveys are an effective means by which to evaluate the overall health of the channel reach ecosystem and, indirectly, the prey base available to the birds.

3.3 MOUNTAINS RECREATION & CONSERVATION AUTHORITY (MRCA)

July 5, 2013

Comment MRCA-1 (page one, second paragraph)

The MRCA is dismayed that management of our region's water resources is still done from the single perspective of flood control. As configured, the study is a missed opportunity to perform a holistic analysis that considers how the proposed action affects water quality, recreational uses, regional water supply needs and adaptability to climate change.

Response: The management of our region's water resources is done from multiple perspectives, not simply flood control. Many agencies are involved in the complexities of managing water resources in Southern California, including, but not limited to, the USACE, the State Water Resources Control Board, the various Regional Water Quality Control Boards in the region (Los Angeles, Santa Ana and Lahontan), the Metropolitan Water District of Southern California, the City of Los Angeles Department of Water and Power, wholesale water purveyors such as the Castaic Lake Water Agency, multiple municipal water districts and cities, as well as the flood control districts in each county. In particular, the flood control districts are charged by the Legislature not only with protecting the lives and properties of their citizens from flood waters but also with the conservation of those waters for beneficial use. As noted above, the LACFCD is participating in the *Los Angeles Basin Stormwater Conservation Study* being jointly conducted by the U.S. Department of Interior, Bureau of Reclamation, the Los Angeles County Flood Control District, and several local agencies. The purpose of the Study is to examine long-term flood control and water conservation impacts from projected population and climate conditions in the Los Angeles Basin.

APPENDIX A



570 West Avenue 26, Suite 250
Los Angeles, California 90065
323-223-0585 www.FoLAR.org

July 5th, 2013

County of Los Angeles Department of Public Works
Watershed Management Division: Cung Ngyen
P.O. Box 1460, Alhambra, California 91802-1460

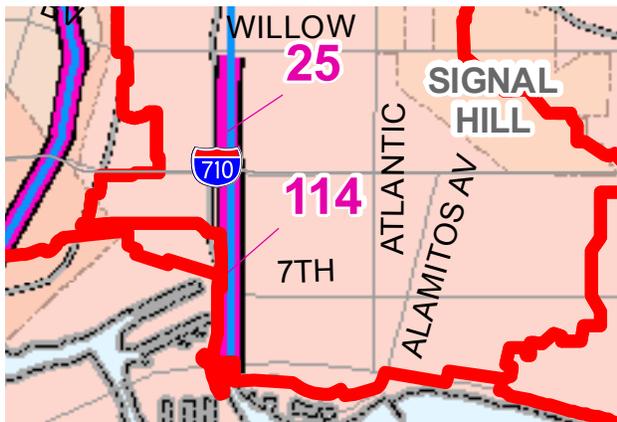
SUBJECT: FoLAR Comments on Waste Discharge Requirements for Earth-Bottom Channel Clearing
CASE/SITE: Sepulveda Basin and Long Beach Sections of Los Angeles County Flood Control Districts

Below are comments from FoLAR (Friends of the Los Angeles River) on the proposed Waste Discharge Requirements (WDR) for Earth-Bottom Channel Clearing of approximately 45 miles of earth-bottom channels maintained by the District. FoLAR recommends the No Action alternative for three reaches discussed below.

The District's earth-bottom maintenance activities come under the jurisdiction of many agencies, including; the US Army Corps of Engineers, the California Department of Fish and Wildlife (formerly California Department of Fish and Game), and the Regional Water Quality Control Board (Regional Board). On February 4, 2010, the Regional Board issued Order No. R4-2010-0021 Waste Discharge Requirements (WDR) for: Los Angeles County Flood Control District (Discharger), Proposed Maintenance Clearing of Engineered Earth-Bottom Flood Control Channels, Los Angeles County (File No. 99-011, CI 9580), which requires a Feasibility Study (FS) to be conducted for each of the earth-bottom reaches included in the WDR. The goal of this FS is to determine whether or not the channel has adequate flood control capacity and to determine the extent to which vegetation can be allowed within the earth-bottom reach.

Long Beach

Sections 25 and 114 (over 56 acres) of the proposed WDR are located in the City of Long Beach and are of great concern to FoLAR. As shown in the photo (Below Right) there is an abundance of bird life that are feeding on many of the aquatic species found in this area. FoLAR does not want to see this area impacted in any way as it contains the only habitat to which the Southern Steelhead Trout (*Oncorhynchus mykiss irideus*) has a potential to return within the Los Angeles River (LAR) watershed.. The efforts of FoLAR in the Glendale Narrows section of the LAR have resulted in a return of hundreds of species of birds and aquatic life since we stopped the United States Army Corps of Engineers (USACE) from the annual bulldozing almost 20 years ago. With over a decade of cleaning up trash near Willow Street during our Annual "La Gran Limpieza", FoLAR is noticing the same return to nature in the Long Beach sections near the Pacific. FoLAR feels that this area is the perfect candidate for a NO ACTION ALTERNATIVE, as historically this area has no known flood control issues.





Sepulveda Basin

The sections shown above (7. Bull Creek, 9. Project No. 106 Outlet and 10. Project No. 469) are of great concern to FoLAR (as well as several other environmental stewards) and has gathered much attention with the recent habitat destruction by the USACE. The photos (above middle & above right) show the area prior to the USACE bulldozing. FoLAR does not want to see this area impacted in any way nor do the thousands of stakeholders who have already voiced their concerns load and clear. Located in Table 6 of the Los Angeles River Watershed Feasibility Study Biotech Assessment, the Bull Creek Section 7 has identified birds such as the Black Phoebe (*Sayornis nigricans*), the Northern Rough-Winged Swallow (*Stelgidopteryx serripennis*), the Cliff Swallow (*Petrochelidon pyrrhonota*), the Barn Swallow (*Hirundo rustica*)...



...the Common Yellowthroat (*Geothlypis trichas*), the Song Sparrow (*Melospiza melodia*), the Red-winged Blackbird (*Agelaius phoeniceus*), the American Goldfinch (*Spinus psaltria*), the Mallard (*Anas platyrhynchos*), the Mourning Dove (*Zenaidura macroura*), Anna's Hummingbird (*Calypte anna*), Allen's Hummingbird

(*Selasphorus sasin*), Cassin's Kingbird (*Tyrannus verticalis*), the Bushtit (*Psaltriparus minimus*), the Northern Mockingbird (*Mimus polyglottos*), the California Towhee (*Melospiza crissalis*), the House Finch (*Haemorhous mexicanus*), and the Orange Bishop (*Euplectes franciscanus*.) This is a significant reason to not impact these areas--to assure future growth of these species. FoLAR recommends that the Sepulveda Basin should be a NO ACTION ALTERNATIVE area as well.



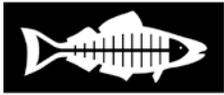
Compton Creek

The section shown above (24. Compton Creek) is of great concern to FoLAR as well as Heal the Bay. Located in Table 9 of the Los Angeles River Watershed Feasibility Study Biotech Assessment, the Migratory Bird Survey, there are several species who use this area and would suffer impacts of grading or any type of vegetation removal. These species include the Northern Mockingbird (*Mimus polyglottos*), the Common Yellowthroat (*Geothlypis trichas*), the Song Sparrow (*Melospiza melodia*), the Red-winged Blackbird (*Agelaius phoeniceus*), the House Finch (*Carpodacus mexicanus*), the American Goldfinch (*Spinus tristis*), the Orange Bishop (*Euplectes franciscanus*), Great egret (*Ardea alba*), Black-crowned night-heron (*Nycticorax nycticorax*), the Red-shouldered hawk (*Buteo lineatus*), the Red-tailed hawk (*Buteo jamaicensis*), the American Kestrel (*Falco sparverius*), and the Nutmeg manikin (*Lonchura punctulata*). FoLAR recommends that Compton Creek should be a NO ACTION ALTERNATIVE area as well.

Should you have any questions, please contact me at (323) 223-0585

Sincerely,

Lewis MacAdams
Founder/President FoLAR
Friends of the Los Angeles River



Heal the Bay®

July 5, 2013

Cung Nguyen
County of Los Angeles Department of Public Works
Watershed Management Division
Attention: Cung Nguyen
P.O. Box 1460
Alhambra, CA 91802-1460

RE: Waste Discharge Requirement (WDR) Los Angeles River Watershed Draft Feasibility Study Documents

Dear Mr. Nguyen:

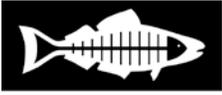
Heal the Bay appreciates the opportunity to provide comments on the WDR for the Los Angeles River Watershed Draft Feasibility Study Documents to the County. Based on our review of the documents, we have the following comments regarding the data and research:

General Comment

STUDY DOCUMENTS LACK A COMPREHENSIVE ASSESSMENT

The Study Documents (Biological Technical Assessment Report, Hydraulic Analysis Technical Assessment Report, and the Water Quality Monitoring Report) produced for the Los Angeles County Flood Control Department lack the comprehensive assessment the Regional Water Quality Control Board (RWQCB) intended, and calls for the WDR. WDR #44 specifically states that “the information to be provided in the Feasibility Study to determine that the channel clearing activities have avoided, minimized or appropriately mitigated for effects on the beneficial uses of the affected reaches or to require changes to channel clearing activities to achieve the necessary avoidance, minimization or mitigation.”

In order to accomplish this task, the County needed to assess past practices, conditions, validate and calibrate models with actual data, as they relate to their channel clearing activities within the context of a changing environmental landscape. In short, the County should have provided complete data sets for this type of analysis so that the general public could assess the full costs and benefits of this type of work. Unfortunately, data short-comings could be found in all three technical assessments: a CRAM analysis without any benthic macro-invertebrate data, much less independently validated data (Biological Analysis); no-actual flow data or analysis for the 25 reaches was provided, simply modeling data (Hydraulic Analysis); and a water quality report with half of the reaches having no data at all and ½ (12 reaches) having incomplete data sets (Water Quality).



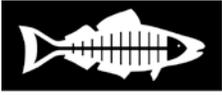
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Also, none of the Study documents assess or parsing-out the debris removed from the various channel reaches from year to year, such as native vegetated, non-native vegetated, sediment, and trash. For example, in 2010-11 the County removed 11.1 million pounds of debris from the 25 reaches. In 2011-12, this debris removed increased to 16.9 million pounds. Data for 2012-13 was not available for review. Despite the concern that the overall number is increasing, the public has no idea if trash, sediment, or vegetation is changing over time. Given that the Los Angeles River has a zero-trash TMDL, it would be interesting to note if trash is decreasing in these reaches based on RWQCB policies and municipality program implementation.

In addition, there is no information on sedimentation rates or averages for each of the reaches. Nor is there any chemistry data provided for the sediment removed for each of the reaches. Sediment chemistry data would facilitate a better understanding of 1) potential beneficial impairments if TSS is not sufficient addressed—see Pacoima Wash comment, and 2) the cumulative effects of low level water quality contaminants. As a possible of example of such an assessment of sediment and its impact on a watershed, the County may want to reference the July 2013 USEPA Total Maximum Daily Loads (TMDL) for Malibu Creek and Lagoon to address sedimentation and nutrients. In its write-up, the USEPA states that “sedimentation can be indicative of a variety of stressors that are associated with urban runoff and altered hydrology...” (Page 10-2) The important element of this TMDL, as it relates to this WDR and Study Documents, was that the USEPA was able to determine the change in sedimentation transport/loading caused by extensive human-related activities compared to pre-development activities. USEPA determined that for the Malibu Creek Watershed, the 10-yr and 2-yr peak storm events flow increased from 5,370 to 7,360 cfs and 1,180 to 1,697 cfs. In addition, they concluded that sediment loadings could be reduced in the watershed by 38%. To this end, as we are discussing the opportunities to allow more vegetation to remain, or reduce the frequency of disturbances within these reaches, evaluating reductions in sedimentation or flows—beyond infiltration—need to be considered.

Finally, the WDR #44 intimates that a more temporal assessment should be completed, not just a snap shot data gathering exercise. The Study documents are in fact what the County should be submitting as part of their Annual Maintenance and Monitoring Report. However, these documents as is fall short in their effort to describe the temporal effects from channel clearing of earthen bottom waterways. Both the Biological and Water Quality assessments are simply one-year snap-shots of data. A comprehensive evaluation of impacts to these impacted waterbodies should be on the order of four-years to account for year-to-year variability in results.

As such, Heal the Bay recommends that the Study Documents submitted by the County become the standard by which future Annual Maintenance and Monitoring Reports are required. However, Heal the Bay believes that these Study Documents are incomplete to suffice as a true assessment of channel clearing impacts and possible habitat restoration opportunities, and as such should not be accepted as completion of their WDR reporting requirement.



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Specific Comments

Water Quality Monitoring Report is Incomplete

The WDR #49 (Water Quality Objective) specifically states that “water quality assessments within each reach will be required on a one-time basis before, after, and during maintenance clearing activities.” Yet, a review of the water quality monitoring report finds that 11 of the 25 reaches (46%) were not sampled at all. Of those 11 reaches (Reach 25 is double counted—while it is understood that the sampling took place on both side of the bank, the reach is counts as one overall), seven (7) of the 11 reaches (64%) had missing pre- (before maintenance) or post- (after maintenance) or both.

It is unacceptable for the County to be submitting this data as “completion” of its WDR #49 requirements. In addition, to the lack of temporal water quality data, the public should not be accepting incomplete one-year snap-shot data sets. The County’s argument for missing so many data collections was due to internal communications and coordination breakdowns. This excuse should ring hollow, since the County knew for three (3) years what its responsibilities were for achieving this simple WDR objective. Heal the Bay recommends that the County actually fulfill its WDR #49 requirement prior to submitting to the RWQCB.

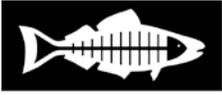
Water Quality Monitoring Data Collection Requirements should be Clarified

In reviewing the water quality monitoring reports, I noticed that the “Temperature” constituent was considerably high until I realized that the readings were probably for air temperature and not water. I do not think the WDR #49 requirement or the RWQCB is asking for “air” temperature data, but more likely “water” temperature data.

In addition, as water quality monitoring is revisited, sampling post clearance should involve at least one rain event. By sampling a rain event after at these clearing events, the public can better understand the increase sediment loadings in the various reaches by these unnatural disturbances and their impacts on water quality.

Insufficient Explanation for Pacoima Wash (Reach #15) TSS exceedances

The WDR #43 (Best Management Practices) states that “The project shall not result in indirect impacts to water quality or beneficial uses of downstream water bodies. The Project shall not result in changes in water quality as a result of maintenance activities in downstream water bodies during maintenance...” For what appears to be 13 days (September 20 through October 5th), the Pacoima Wash (Reach 15) was heavily impacted by Total Suspended Solids from the County’s channel maintenance activities. The County noted in its summary that the prescribed BMP, straw waddles, were not sufficient to address impacts from the project. This is an insufficient addressing of the situation. Simply saying that “we will try better next time” does not adequately mitigate the damage done to the receiving waterbody, nor demonstrate any comprehension of being able to resolve such a problem in the future or within another



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reach should the problem occur there. There is no explanation as to why other sediment control BMP's measures were implemented. In addition, why was additional water quality monitoring constituents not added to the list of additional analytes to insure downstream water quality was not being impaired by other constituents of concern? Sediment is highly correlated to other pollutants such as metals, nutrients, and toxics.

The Biological Technical Assessment (BTA) Lacks any Valuation of Green Space to Surrounding Communities

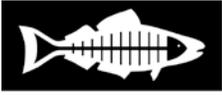
Beyond the habitat values for Biological Ranking and CRAM, the BTA should develop a criteria or value for Green Space. The value could be based on importance to of the reach to local communities, or the importance of habitat (regardless of its "native" status) in absence of other adjoining habitats.

The Vegetated Assessment (Table 11) in Biological Technical Assessment (BTA) needs Greater Clarity

First, the table has no footnote or citation for explaining how the calculations or values were determined for the various columns. For example, what are the N values for determining the percentages? As an example, I tried to determine for Reach 24 Transect 2, how the Pre- and Post- vegetation Native percentage values of 6.1 and 6.9 were derived and could not figure out the algorithm. As such, it was impossible to determine if the percentage difference between Pre- and Post- clearance is truly the best tool to use to determine impacts from channel clearance. The absent of the N-values for each of the percentages, means that the public does not know the true area of habitat impact. For example, a large positive percentage change in native vegetation post-clearing compared to a small negative percentage change in non-native vegetation could be construed as a positive outcome for channel clearance. However, if the N-values are respectively small for native and extremely large for non-native, then the overall effect of channel clearance may be negligible.

Without the N-values, it appears that channel clearance has a detrimental impact to native vegetation. Of the 45 reaches with data, only 9% (4 of 45) of the reaches demonstrated an actually increase in native vegetation (area/size/plant-total?) compared to non-native. 11% (5 of 45) of the reaches had greater non-native vegetation compared to native. For the remaining 36 reaches, the public has no idea on the overall change since the percentage change values for native and non-native point in the same direction.

Secondly, what is the value of this one-time grab data in identifying year-to-year variability? The summary for Table 11 is "Regrowth is rapid...for most SBC reaches as winter rains generally occur not long after completion of the fall clearing activities" (page 29). If so, then the data capture in Table 11 may be atypical, not average, if not random, since the time-period when the data was collected—December 2010—was one of the wettest months in the last 121 years. In addition, one might speculate that in extremely dry years, less vegetation to occur in



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these reaches, which might not need channel maintenance, or change the regrowth rate between natives and non-natives.

Overall, a recommendation regarding channel clearance and vegetation regrowth or channel clearance and present/absences of avian species cannot be made simply based on a year's worth of data. There is extremely too much variability to accurately determine impacts or opportunities. However, this type of analysis should be collected annually, so that these temporal trends can be established, and in turn a better policy implemented.

The Hydraulic Analysis Technical Assessment Report (HATAR) Lacks Any Real or Observed Data

As presented, the HATAR presents ample modeling data of the various reaches, which would suffice if we were interested in placing a new structure into an existing waterway due to the absence of existing or observed hydraulic data. However, we are evaluating existing engineered waterways that have experienced actual storm events, and yet there is no discussion anywhere in the HATAR document how these reaches have fared/failed in the past 20 years under various conditions. This is especially important given that the County is recommending additional vegetation removal for six (6) of the 25 reaches.

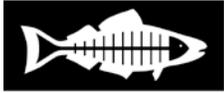
The Hydraulic Analysis Technical Assessment Report (HATAR) Lacks Any Alternatives Analysis

The only alternative/model that the HATAR looked at was flow reduction volume if Low Impact Standards (LID) were implemented across an entire watershed. Yet, the only LID element investigated was infiltration. There was mention if capture/water detention devices such as cisterns were included in the model. In addition, if they were, then to what sizing and distribution?

Also, there was no discussion of alternative approaches to channel structure that might enable more vegetation to remain within the channels. For example, there may be some reaches where a parapet wall added to the top of the banks enables greater vegetation to remain within the channel.

General Questions

- Is there a reason why macro-invertebrates were not collected within any of these reaches, given the amount of time and resources that went into avian sampling and plant community composition?



1444 9th Street
Santa Monica CA 90401

tel 310-451-1500
fax 310-496-1902

info@healthebay.org
www.healthebay.org

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In summary, Heal the Bay has significant concerns with the County's data collection, assessment, and suggested recommendations. If you have any questions or need clarifications on any of the comments made in this letter, then please do not hesitate to contact me at (310) 451-1500 ext.115 or via email jalamillo@healthebay.org. Thank you for the opportunity to comment on the effort.

Sincerely,

James Alamillo
Heal the Bay



MOUNTAINS RECREATION & CONSERVATION AUTHORITY
Los Angeles River Center & Gardens
570 West Avenue Twenty-Six, Suite 100
Los Angeles, California 90065
Phone (323) 221-9944 Fax (323) 221-9934

July 5, 2013

County of Los Angeles Department of Public Works
Watershed Management Division
Attention: Cung Nguyen
P.O. Box 1460
Alhambra, California 91802-1460

**Feasibility Studies Technical Assessment Report and Recommendations
for Engineered Earthen-Bottom Flood Control Channels
Located Within the Los Angeles River Watershed
Maintained and Operated by the Los Angeles County Flood Control District**

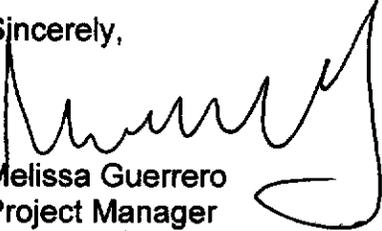
Dear Cung Nguyen:

The Mountains Recreation and Conservation Authority (MRCA), offers the following comments on the Feasibility Studies Technical Assessment Report and Recommendations For Engineered Earthen-Bottom Flood Control Channels Located Within The Los Angeles River Watershed (Feasibility Study).

The MRCA is dismayed that management of our region's water resources is still done from the single perspective of flood control. As configured, the study is a missed opportunity to perform a holistic analysis that considers how the proposed action affects water quality, recreational uses, regional water supply needs and adaptability to climate change.

While the Feasibility Study did assess the impacts of vegetation removal on flood control capacity and regional wildlife and native habitat, it is our hope that a more comprehensive approach would be considered in this study and the studies to be conducted for the region's other watersheds.

Sincerely,


Melissa Guerrero
Project Manager