Santa Barbara County Flood Control & Water Conservation District and Water Agency

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July 15, 2013

California Department of Water Resources
Division of Integrated Regional Water Management
Financial Assistance Branch
Post Office Box 942836
Sacramento, CA 94236
Attn: Laura McLean

SUBJECT: REQUEST TO RESCORE AND FUND THE LAS VEGAS AND SAN PEDRO CREEKS UNION PACIFIC RAILROAD BRIDGE REPLACEMENT PROJECT

Dear Ms. McLean:

Thank you for the opportunity to comment on the DWR evaluation of the Las Vegas and San Pedro Creeks Union Pacific Railroad Bridge Replacement Project (UPRR Bridge Project) application to the Integrated Regional Water Management (IRWM) Proposition 1E Round 2 Stormwater Flood Management Grant Program.

This letter provides clarifying comments in response to specific DWR evaluation notes. We hope that the information provided will be adequate to convince DWR that rescoring is appropriate and that funding should be granted to the UPRR Bridge Project.

The District looks forward to meeting with you and your team via conference call on Thursday, July 18th when we can discuss the application's evaluation in more detail.

Ultimately, we hope that the information provided will convince DWR that rescoring is appropriate and that funding should be granted to the UPRR Bridge Project.

Sincerely yours,

Jon Frye
Engineering Manager
Santa Barbara County Flood Control
and Water Conservation District

Attachment/DWR Score	Complete DWR Comment	Section of DWR Comment	District Response
3 - Work Plan (9/15)	The work plan criterion is less than fully addressed and documentation and rationales are incomplete or insufficient. The work plan does not describe all components of the proposed project with sufficient detail. The tasks are not fully explained or detailed enough to document the work required to complete the project. For example: the project includes creek and riparian habitat restoration (page 3-7), removal of a fish passage barrier, and reshaping the stream bed; the actual work that will be done to make those changes is vaguely described in the work plan. In addition, aside from quarterly reporting and the final report, there are no additional deliverables identified in the proposal. Although the development of the data management is included, it lacks the specificity per the standards.	**DWR Comment:** *The work plan does not describe all components of the proposed project with sufficient detail.*	**District Response:** The District requests that reviewers examine the "Project Specifics" section starting on page 3—10 for details of each bridge project.
		DWR Comment: *The tasks are not fully explained or detailed enough to document the work required to complete the project. For example: the project includes creek and riparian habitat restoration (page 3-7), removal of a fish passage barrier, and reshaping the stream bed; the actual work that will be done to make those changes is vaguely described in the work plan.*	**District Response:** Details of creek and riparian habitat restoration for each bridge project are included under the "Project Specifics" section (page 3-11 and 3-15). Note that the fish passage restructuring elements will be further refined through communications with the regulatory agencies as the project progresses, and prior to construction. In other words, it is not uncommon, and often the case that the fish passage design elements are negotiated and tested hydraulically as a contiguous yet dynamic component to the overall improvements up until construction begins. Furthermore, the restoration to a, "natural stream bed," as described in the project description is not a vague term, but is in fact one that is used prolifically in the field of anadromous fish passage design. A natural stream bed deemed conducive to fish passage is one that is designed to closely mimic and retain the natural stream characteristics of stream width, gradient, substrate, pool depth, pool spacing, roughness elements and vegetation placement. Furthermore, riparian habitat restoration is comprehensive element of this project as detailed in the Mitigated Negative Declaration. District biologists will carefully and expertly oversee revegetation as the standard procedure performed on all other District projects
		DWR Comment: *In addition, aside from quarterly reporting and the final report, there are no additional deliverables identified in the proposal.*	**District Response:** The additional deliverables listed in the application are numerous and can be found in the tables at the end of each task. There is a table listing deliverables for each and every task. Each table includes the heading "Project Administration Activities or Deliverable", "Completion Schedule", "Status", and "Completion (Before Aug 2013 and After August 2013)". The tables appear on pages 3-26 – 3-34. Examples of additional deliverables include: the 60%, 90% and Final plans and specification and estimate (PS&E) (Task 5). A final construction report (Task 11) is another deliverable.
		DWR Comment: *Although the development of the data management is included, it lacks the specificity per the standards.*	**District Response:** Comment noted.
4 – Budget (3/5)	The budget includes detailed cost information but not all costs can be determined to be reasonable, and supporting documentation is lacking for many line items presented in the budget. The project costs associated with	**DWR Comment:** *…supporting documentation is lacking for many line items presented in the budget.*	**District Response:** The supporting documentation of costs is shown in Exhibit 4-1. For example, on page 4-4, "project administration cost estimate of $32,000 is based on 40 percent of the Revised HDR's cost estimate for the District's administration and construction management ($80,000)". This is shown on line item 46 in Exhibit 4-1. All the costs reference to the "Revised HDR's cost estimate" is shown in Exhibit 4-1. These detailed cost estimates were provided by HDR, the design consultant for the District.

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	permitting and habitat restoration are not provided; therefore, the total project cost and 50% match aren't correctly reflected in the application. There is no documentation to clarify how lump sum costs included in the budget are derived. The budget identifies additional items which are not included in the work plan.	**DWR Comment:** *The project costs associated with permitting and habitat restoration are not provided; therefore, the total project cost and 50% match aren't correctly reflected in the application.*	**District Response:** Comment noted.
		DWR Comment: *There is no documentation to clarify how lump sum costs included in the budget are derived.*	**District Response:** The District believes that the derivation of lump sums is explained. For example, in Task 1 Project Administration we state "Project administration cost estimate…is based on 40% of the revised HDR cost estimate…" We further explain that "…the revised HDR cost estimate for the District's administration and construction management is 2% of the construction cost..."
		DWR Comment: *The budget identifies additional items which are not included in the work plan.*	**District Response:** The District has compared all the budget tasks with the work plan. The District identified 53 total line items in the budget (all tasks counted). Of the 53 budget line items identified in the budget tables, only 2 items were not included in the text of the work plan tasks. The District hopes that the detail provided is sufficient and complies with the Guideline's requirement for a detailed budget with tasks that are consistent with work plan tasks.
6 - Monitoring, Assessment, and Performance Measures (3/5)	The criterion is less than fully addressed and documentation or rationales are insufficient. Table 6.1 doesn't address all the benefits listed in Table 3.2. The applicant generally provides measurable targets but some of the measurement tools appear to be inappropriate or are poorly explained. This is particularly apparent for the goal of improving natural habitat.	**DWR Comment:** *Table 6.1 doesn't address all the benefits listed in Table 3.2.*	**District Response:** Table 3-2 lists the IRWM Plan Objectives. The goals are listed in Table 3-1 (page 3-5) which matches Table 6-1 (page 6-2 and 6-3).
		DWR Comment: *The applicant generally provides measurable targets but some of the measurement tools appear to be inappropriate or are poorly explained. This is particularly apparent for the goal of improving natural habitat.*	**District Response:** Comment noted.
7 - Technical Justifications (6/10)	The proposal appears to be technically justified to achieve most claimed benefits but lacks some documentation and not all physical benefits are adequately described. Although a water quality benefit is claimed in the work plan, no information was presented in this attachment to document the water quality benefits. The benefit justification for the change in expected	**DWR Comment:** *With the project, during events larger than 25 year flood event, there would still be treated discharge.*	**District Response:** The benefits analysis fully accounts for the fact that there would still be treated discharge for events larger than a 25-year flood event. Avoided discharge to the sewer system is constrained to one-half the increase in channel capacity produced by the project (page 8-11). Discharge of flood water to the sewer system beyond this volume under the with-project condition is treated as an economic cost. This is why the avoided cost of treatment shown in Table 8-7 (page 8-13) is constant across the 25-Year, 50-Year, and 100-Year events. If the benefits analysis had assumed the avoided cost of treatment was proportional to the volume of overflow entering the sewer system, the avoided costs shown in Table 8-7 would not be constant. They would increase with storm magnitude.

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	annual stormwater discharge treated by Goleta Sewer System is too generalized. With the project, during events larger than 25 year flood event, there would still be treated discharge. It is not clear from the proposal whether the habitat restoration claimed in the proposal is merely mitigation for the overall project or if additional habitat will be created.	**DWR Comment:** *It is not clear from the proposal whether the habitat restoration claimed in the proposal is merely mitigation for the overall project or if additional habitat will be created.*	**District Response:** Page 8-15 of our proposal states the project will add (not mitigate) 0.58 acres of riparian habitat to the watersheds of Las Vegas and San Pedro Creeks. The riparian habitat is created by the project by replacing cement channeling with a natural bottom (page 8-1) and replacing a concrete grade control structure on San Pedro Creek that blocks fish passage with a fish transition structure (page 8-1). The amount of riparian habitat for the without- and with-project conditions, and the value of the net increase, is tabulated in Table 8-9 (page 8-15).
8 - Benefits and Cost Analysis (18/30)	Collectively the proposal is likely to provide a medium level of benefits in relationship to cost, but the quality of the analysis or clear and complete documentation is lacking. Total project cost is shown as $5.65 million in net present value (NPV). Proposal uses FRAM to assess flood damage reduction (FDR) benefits for the two bridge replacements. It is unclear if the evaluation of without-project flooded area already accounts for the road culverts being improved to 1 in 25. This is important, because the road culverts could restrict stream flow regardless of the RR bridge improvements. All data inputs could not be verified; using the benefit summary in Table 8-7, reviewer's calculated expect annual damage (EAD) was somewhat smaller than reported in the proposal. The residential damages from flood events shown in Table 8-7 appear to be large for the relatively small number of affected structures, but insufficient data is provided for the reviewer to check calculations. In particular, the assumptions for residential replacement cost, content values, and foundation height were not provided.	**DWR Comment:** *[T]he proposal is likely to provide a medium level of benefits in relationship to cost, but the quality of the analysis or clear and complete documentation is lacking.*	**District Response:** The Benefits and Cost Analysis submitted shows our proposal would yield $8.6 million in present value economic benefits compared to a present value economic cost of $5.7 million. The net present value (NPV) of our proposal is $2.9 million. The benefit cost ratio is 1.5, indicating our proposal would yield a 50% return on investment. While the DWR review states this represents a medium level of benefits in relationship to cost, the PSP and DWR's Economic Analysis Guidebook (2008) do not provide any guidelines or criteria for making this determination. We note that the reviewer of our Lower Mission Creek proposal, which had a much lower BCR, also indicated that project would provide a medium level of benefit relative to cost. It would be helpful to applicants if DWR were to clearly articulate what constitutes a low, medium, or high level of benefits in relationship to cost, and set forth guidelines for its reviewers to follow to ensure consistency across proposals when making these determinations. We are also puzzled by the reviewer's comment that the "quality of the analysis or clear and complete documentation is lacking." The reviewer does not provide any examples to support this assertion. We feel strongly the analysis is both clear and well supported. The attachment provides maps and references to all documents supporting the analysis of benefits. Flood impacts with and without the project are based on detailed hydrologic studies referenced on pages 8-4 and 8-5 of the attachment. Hydrologic conditions were modeled for 10-year, 25-year, 50-year, and 100-year storm events. Biological resources impacts with and without the project are based on the CEQA documentation referenced on page 8-5 of the attachment. With and without project conditions pertaining to residential and commercial structures, roads and highways, and stormwater capture and treatment are quantified in Tables 8-3, 8-4, 8-5, 8-6, and 8-7. A summary of estimated flood damages for each impact category is provided on pages 8-11 and 8-12. With and without project EAD estimates for residential and commercial structures and damages to roadways were calculated with DWR's F-RAM model. Monetized riparian habitat benefits are fully documented in Table 8-9 and are based on current market prices for riparian mitigation credits at the nearby Los Carneros Mitigation Bank.

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		DWR Comment: *It is unclear if the evaluation of without-project flooded area already accounts for the road culverts being improved to 1 in 25. This is important, because the road culverts could restrict stream flow regardless of the RR bridge improvements.*	**District Response:** As discussed on page 8-2 of our proposal, flood protection benefits are jointly produced by improvements to both the road culverts and the railroad bridges. The road culvert improvements are therefore not part of the without-project condition. They are part of the with-project condition. While DWR is correct that flood protection benefits of the railroad bridge improvements would be negatively impacted if the road culvert improvements were not implemented, this is not a possible outcome. As documented on page 8-2 of our proposal, Caltrans has already programmed funds for the road culvert improvements and initiated the work. This is why the economic analysis treats the costs for the road culvert improvements as economic sunk costs.
		DWR Comment: *All [F-RAM] data inputs could not be verified*	**District Response:** The data sources for F-RAM flood-depth, structure inventory, and road inventory inputs are clearly listed in the attachment (page 8-4, 8-7). These data and the F-RAM model files are included as an attachment to this response document so that all calculations can be replicated by DWR if it chooses to do so.
		DWR Comment: *The assumptions for residential replacement cost, content values, and foundation height were not provided.*	**District Response:** Our analysis uses F-RAM's default assumptions for these parameters. The F-RAM User Guide posted on the DWR website strongly discourages users from modifying these default values (see page A-10 of F-RAM User Guide). Past DWR guidance for using F-RAM has been to use the model's default assumptions for residential replacement cost, content values, and foundation height.
		DWR Comment: *The residential damages from flood events shown in Table 8-7 appear to be large for the relatively small number of affected structures.*	**District Response:** The residential damage estimates are calculated using F-RAM's default assumptions for residential foundation height, replacement cost, content values, cleanup costs. These assumptions were developed by DWR and F-RAM's User Guide strongly discourages users from changing them.
		DWR Comment: *[R]eviewer's calculated expect (sic) annual damage (EAD) was somewhat smaller than reported in the proposal.*	**District Response:** Without recourse to the reviewer's EAD calculation it is not possible to know with certainty why this was the case. Possible explanations include the following. (1) F-RAM model results are in 2007 constant dollars. Our proposal updated F-RAM results to 2012 dollars, per PSP requirement. It is possible the reviewer did not make a similar conversion. (2) The F-RAM model posted on DWR's website has formula errors that cause it to not calculate residential damages for single family residences with basements. We corrected these formula errors prior to using the model for our proposal. (3) The EAD estimate in our proposal includes EAD associated with Hwy 101 closure and Goleta sewer overflow. These damages are entered in F-RAM's Special Cases worksheet. The reviewer's estimate may not have accounted for these damages. (4) On F-RAM's Inputs worksheet, the user can set the Extrapolate Y-intercept switch to Yes or No. The reviewer may have set the switch to No, which would produce a lower EAD estimate.

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9 - Program Preferences (4/10)	Applicant claims that 4 program preferences and 3 statewide priorities will be met with project implementation. However, applicant demonstrates this with a high degree of certainty, and adequately documents the magnitude and breadth to which each will be achieved for only 4 of the preferences claimed. The proposal will achieve the following: 1) Include regional projects or programs; 2) Effectively integrate water management programs and projects within hydrologic region; 3) Expand Environmental Stewardship; and 4) Practice Integrated Flood Management.	**DWR Comment:** *Applicant claims that 4 program preferences and 3 statewide priorities will be met with project implementation. However, applicant demonstrates this with a high degree of certainty, and adequately documents the magnitude and breadth to which each will be achieved for only 4 of the preferences claimed. The proposal will achieve the following: 1) Include regional projects or programs; 2) Effectively integrate water management programs and projects within hydrologic region; 3) Expand Environmental Stewardship; and 4) Practice Integrated Flood Management.*	**District Response:** The District believes that a score of 6 is justified for this attachment. The application states that 6 program preferences and 4 statewide priorities will be met with project implementation, including: Effectively integrate water management with land use planning and Climate change response actions, which are described on page 9-3 and 9-5, respectively. The District strongly believes that a solid explanation was given as to why the project resolves significant water-related conflicts within a hydraulic region. Please see page 9-2 where the regional conflict regarding severe flooding in 1998, 1998, and 2000 is described and where the battle to reestablish the Southern California Distinct Population Segment of Steelhead trout is detailed. The District also believes that this project effectively integrates water management with land use planning as described on page 9-3. Land use planners have been integral to planning this project from its beginning. This project is eligible for SWFM funding as described on page 904 which is another preference that reviewers did not credit the District. The project meets four Statewide Priorities meaning that it meets the criteria for achieving another Program Preference. The District believes that a score of 6 is justified for this attachment.

Attachments (via email)

1. DWR's F-RAM model – Las Vegas Creek
2. DWR's F-RAM model – San Pedro Creek
3. San Pedro and Las Vegas Creeks Capacity Improvement Project, UPRR Bridge Replacement Hydrology and Hydraulic Analysis Report, Draft Technical Report, HDR Engineering, Inc., January 2013
4. San Pedro and Las Vegas Creeks Capacity Improvement Project, Final Hydrology and Hydraulic Analysis Report, HDR Engineering, Inc., April2008
5. FEMA flood insurance reduction map