

Board Meeting Date: May 19, 2004
Agenda Item No. 7

SCHAEFER RANCH PROJECT, DUBLIN, ALAMEDA COUNTY
RESPONSE TO COMMENTS

Note of May 7, 2004: Please note that as the Tentative Order (TO) was revised, Receiving Water Limits were added as Section B. This shifted the Provisions to Section C. Each Provision has retained its same number, but the letter has shifted. For example, Provision B.3 is now C.3. For ease of reading the comments and responses, where the comment letters or responses refer to a specific provision, this change was not made in the table below.

Commenter (Comment Number)	Comment	Response
Applicant's Attorney, letter of March 23, 2004 (1)	Provision B.3: This provision requires that construction may not commence until the submission of all required documents, reports, plans and studies and until the Executive Officer has found them to be acceptable. We ask that this provision [be revised to] include an automatic acceptance condition whereby any such documents, reports, plans and studies be deemed accepted by the Executive Officer if no action is taken within 60 days of their submittal.	We do not concur with proposed change. The TO, as written, assists the applicant by providing significant flexibility for the applicant to submit reports and final plans after Order adoption. Review by the Executive Officer is a substantive review deferred by the Board, and it is inappropriate to automatically approve a document without review, should circumstances require a lengthier review period. The appropriate alternative action would be to require all of these documents to be submitted prior to Order adoption for Board review. Staff believes this is not a preferred alternative. The flexibility provided to the applicant by the TO is a reasonable accommodation for the regular project planning process, which typically results in the most detailed plans being prepared following a project's receipt of regulatory approvals. Under the current situation, staff has reviewed sufficiently detailed conceptual and/or draft final plans to allow Board consideration without having to require the applicant to go to the substantial expense of preparing very detailed final plans in the absence of regulatory approvals. While the circumstances of some projects do require that level of detail before the project can be

		considered by the Board, staff does not believe it is necessary here.
Applicant's Attorney (2)	Clarifies CRLF monitoring.	Comment noted. TO Provision B.4.h has been revised to reference this letter and require the condition to be incorporated into a finalized Mitigation Plan.
Applicant's Attorney (3)	Adds performance criterion for creek monitoring	Comment noted. Provision B.4.i has been revised to reference this letter and require the condition to be incorporated into a finalized Mitigation Plan.
Applicant's Attorney (4)	Provisions B.8 and B.11. These provisions require the submission and approval of final draft Conservation Easements and Open Space Management Agreements. As the Order stands, Schaefer Heights must submit draft Conservation Easements and draft Open Space Management Agreement to the Executive Officer 60 days prior to construction. We would prefer that the deadline for execution of these documents be tied to this submission date, rather than to the adoption of the Order. We suggest a requirement that final Conservation Easements and Open Space Management Agreements be in place 12 months after drafts are submitted for approval by the Executive Officer.	<p>The TO has been revised to incorporate the applicant's comment. However, the due date time periods have been shortened to six (6) and eight (8) months, rather than twelve (12).</p> <p>The dates have been provided to ensure that the proposed mitigation is completed at the same time as or, ideally, in advance of project construction, to reduce the time lag associated with the timing of construction impacts and the more gradual establishment of proposed mitigation. Establishment of easements and identification of a third-party land manager are key elements of the proposed mitigation package. In addition, a number of other mitigation projects have recently had difficulty with one or both of these steps, leading to potentially significant delays in mitigation. We believe the revised dates will work to ensure the timely implementation of mitigation, while also meeting the applicant's request for dates tied to the start of construction, rather than the date of Order adoption.</p>
Applicant's Attorney (5)	Requests 24-hour notice prior to inspection (Provision B.26).	Staff does not concur with the proposed request. In general, Board staff endeavors to provide advance notice of site inspections to a discharger, when appropriate. Situations when such notice may not be appropriate may include: when a complaint has been received regarding a violation of an order or an ongoing unpermitted discharge affecting State waters; during a significant storm event; immediately following observation of a condition of pollution downstream that may have originated at a project;

		unannounced inspections to determine compliance; and, any other situations that may warrant unannounced inspections.
Alameda County Public Works Agency, letter of March 29, 2004, signed by William Lepere (1)	The TO did not include a map showing the layout of the proposed development that will influence stormwater management. Such a map is essential to provide the reader.	Commenter is correct that the TO did not include this figure. Staff understands, based on commenter’s subsequent comments and discussions with County staff, that the commenter also reviewed the Project’s Conceptual Stormwater Management Plan (SWMP) and Revised Mitigation and Monitoring Plan (Mitigation Plan). The Mitigation Plan includes a plan sheet showing the requested information. In addition, this information was available for review at the Board’s office during the comment period, upon request. Staff has subsequently met with County staff to go over the Project’s layout.
ACPWA – Lepere (2)	How will the diminished flows from Marshall Creek downstream of the detention basin influence the proposed floodplain restoration project PW32 that is discussed in the Mitigation Plan?	The channel geometry is such that the restoration project to be constructed can be located at the appropriate elevation to receive flood flows. As such, it would remain a viable component of the Mitigation Plan.
ACPWA – Lepere (3)	Discusses sediment yield from the Project’s catchments and nearby catchments, noting that the estimate in the SWMP is potentially too low.	We concur that there are differing estimates regarding the amount of sediment generated from the Marshall/Hollis Creek catchments. However, we believe that all parties are in agreement that the amount of sediment generated by the catchments is significant and will remain so, barring a significant change in land use and/or land management. A significant part of the applicant’s mitigation package is to implement measures—including reducing grazing intensity and excluding livestock from site creeks—that are expected to significantly reduce the amount of sediment generated from these catchments.
ACPWA – Lepere (4)	The references to the P/A Design Resources 2000 and 2001 are not listed in the references (SWMP pp.2-3)	The applicant has stated that the following are the references, both produced in 2000, for the works cited: P/A Design Resources, Inc., 2000a, Site plan for alternative #15. Project map prepared at scale of 1”=300’, dated July 11, 2000. P/A Design Resources, Inc., 2000b, Hydrologic

		<p>modeling, alternative #15. HEC-1 hydrologic model output files.</p>
<p>ACPWA – Lepere (5)</p>	<p>It is unclear what the distinct differences are between groups B and D in the discussion of soil characteristics. Please define their unique characteristics (SWMP pp. 5-6)</p>	<p>The applicant has provided the following definition: Group B soils are characterized as having moderate infiltration rates when thoroughly wetted and consist chiefly of moderately deep to deep, moderately fine to moderately coarse textures. These soils have a moderate rate of water transmission. By contrast, Group D soils have very slow infiltration rates when thoroughly wetted and consist chiefly of clay soils with a high swelling potential, soils with a permanent high water table, soils with a claypan or clay layer at or near the surface, and shallow soils over nearly impervious material. These soils have a very slow rate of water transmission.</p>
<p>ACPWA – Lepere (6a)</p>	<p>Clustered development is proposed and runoff from individual homes will be routed into the storm drain system by grading lots towards the streets. [This type of routing]...will increase and concentrate runoff to the detention basin. There are no reported amounts of how much or by what percentage runoff will actually increase to the point of the detention basin.</p>	<p>We understand that the applicant will be required to work with the commenter to address any Project impacts on downstream flood flows, including the issue raised here. With respect to the water quality design of a basin, it is not clear to us that the question raised by commenter—the difference between an estimate of current flows and an estimate of flows after the project is constructed—is significant. Basins to treat water quality are sized with the goal of treating approximately 80-90 percent of average annual runoff. This amount is based on what comes off the built project, not what was present before the project. This issue may be considered significant for hydromodification management. Regarding basin sizing for hydromodification, please see response to ACPWA – Lepere comment #9b.</p>
<p>ACPWA – Lepere (6b)</p>	<p>The SWMP proposes to...treat 85% of the average annual runoff...and to slow its discharge by holding it in [a] detention pond for a period of time to reduce downstream peak flows. The report states that for the majority of storm events, the upper basin will hold all the incoming runoff that will be metered out to the lower basin by a perforated riser drain in 48 hours. It is not discussed how</p>	<p>Commenter is correct that this information is not discussed in the SWMP or elsewhere in the application. However, the upper basins are the water quality basins designed to treat 85% of average annual runoff. The applicant has submitted the following additional explanation of how the basin sizing was completed, noting that using its model, the ponds are somewhat larger than the methods allowed under Dublin’s</p>

	<p>quickly the upper basin will fill or if it will fill to the point of spillage with just a 2-year event, although we are told that the design storm is for the 2-year event.</p>	<p>municipal stormwater permit. We note that the Board has accepted the use of this conservative model on past projects, including the WDRs and Water Quality Certifications issued for the Blue Rock Country Club, in Hayward, and Gale Ranch, in Contra Costa County:</p> <p>The proposed size of these basins was actually set by use of a rainfall–runoff model that analyzes nine years of actual hourly data on a continuous basis. This model gives a somewhat more conservative estimate of the volume required than do the volume-sizing criteria identified in the updated Alameda County [NPDES Municipal Stormwater] Permit. For example, the design chart based sizing criteria for the Marshall Canyon basin (118 acres at 27 percent impervious) would suggest a treatment volume of 0.18 watershed inches or approximately 1.8 acre-feet. This is markedly lower than the 5.0 acre-feet proposed.</p>
<p>ACPWA – Lepere (6c)</p>	<p>The SWMP states that for larger storms or moderate storms in rapid succession, excess runoff will flow [from the upper basin] over a spillway into the lower basin. Are moderate storms implied to be anything greater than those that produce a 2-year recurrence interval flow, and isn't it fairly typical for local rainfall patterns from December through February to produce back-to-back storms in less than 48 hours? If the latter is true, then is it that the upper basin could occasionally fill? Is there a spillway designed in case the lower basin overtops?</p>	<p>We share the applicant's concern regarding flow timing and whether the upper basin is appropriately sized to treat approximately 80-90 percent of average annual runoff, consistent with other projects approved by the Board and the NPDES municipal stormwater permit for Alameda County. The applicant submitted an additional discussion of sizing (see ACPWA – Lepere comment #6b and response), and stated:</p> <p>The water-quality design basis is not the 2-year storm event, since this event is much larger than the numerous small to medium storm events that produce 85 percent of the average annual runoff.</p> <p>The conceptual design does include a spillway draining down to the lower basin. This design would be finalized following Order adoption and prior to the start of Project construction, as is required by Provision B.9.</p>

<p>ACPWA – Lepere (6d)</p>	<p>The model that generates the “before and after” project hydrographs is not well explained. Do these hydrographs assume that there is no water in the basins such that the hydrographs always reflect an empty reservoir at time zero and no additional rainfall within 48 hours? Also, are the hydrographs based on saturated or unsaturated soil conditions at the time of runoff?</p>	<p>The applicant provided the following response to the comment:</p> <p>The hydrographs were generated using the SCS unit hydrograph suggested in the Hydrology and Hydraulics Criteria published by Alameda County Public Works Agency. The U.S. Army Corps of Engineers HEC-1 model was used within the Watershed Modeling System software to give the hydrographs for the 24-hour design storms stipulated in the County criteria. The models were run using curve numbers equivalent to Antecedent Moisture Condition II, which represents average winter soil saturation conditions at the beginning of the storm. To be conservative, all runs were carried out assuming that the water-quality bays [i.e., the upper basin in each set of two basins] were completely full at the beginning of the model runs for single design storms. Given the more rapid drawdown for the detention outlets compared to the water-quality outlet, the detention bays [i.e., the lower basin in each set of two basins] were assumed to be empty at the beginning of the modeled storms. However, runs were also carried out with multiple design storms in sequence to assess how the basins would perform in prolonged rain periods. In these cases, the 10-year event was immediately followed by the 100-year event and the models included residual storage volume in the detention bays when runoff from the second storm occurred.</p>
<p>ACPWA – Lepere (6e)</p>	<p>The discharge rate designed for the outer basin to convey flow to the creek is not reported, so it is not possible to assess what the flow rate will be when the lower basin is at full capacity. There is no discussion of a dissipation structure at the outlet of the conveyance structure designed to drain the lower basin.</p>	<p>The applicant has provided the following additional statement on this issue:</p> <p>County staff also notes that the discharge rate from the outer bay of the basins is not given, so that it is not possible to assess the flow rate when the lower (outer) bay is at capacity. However, this flow rate is</p>

		<p>precisely that shown in Figures 7 through 12 as the “developed” condition. The outflow value for the 100-year case is actually quite close to the “full basin” discharge. We do agree that a new table summarizing the stage-storage-discharge relationship for each basin should be included in the Final Draft SWMP.</p> <p>An energy dissipation structure to dissipate the transitional energy of water flowing from the basin to the headwaters of the creek would be designed when final designs for the basin are submitted, prior to construction, as is required by Provision B.9.</p>
<p>ACPWA – Lepere (6f)</p>	<p>Is there a plan to monitor, clear, and maintain the outlet of the lower basin?</p>	<p>This plan, along with associated inspection checklist forms and related material, would be submitted as a part of the final SWMP, as is required by Provision B.9.</p>
<p>ACPWA – Lepere (7)</p>	<p>Will the basin function as a sediment detention basin during the construction phase of Schaefer Ranch? Will it be dredged when the storm drain system is completed? After housing construction is completed will there be a potential for sediment to be supplied through the storm drain system into the detention basin and if so will there be access to desilt the basin, a plan for maintenance, and a plan for monitoring to insure that it does not lose capacity to treat the design storm events?</p>	<p>The basin could be used during construction, but as commenter implies, would need to be reworked prior to post-construction use. As with almost any storm drain system, sediment would be expected to accumulate in the basin over time. The basin’s operation and maintenance are required to be addressed as a part of the final SWMP required by Provision B.9.</p>
<p>ACPWA – Lepere (8)</p>	<p>Commenter discusses the applicant’s estimates of bankfull discharge and erosion potential downstream of the project. Commenter questions whether the bankfull discharge estimates are potentially too high or if bankfull dimensions may have been over-estimated in the field?</p>	<p>The applicant has provided the following response: County staff correctly notes that the Conceptual SWMP identified a wide range of bankfull (effective) discharges, especially in the reach of Marshall Canyon directly above the existing large stock pond. This is not surprising since the watershed area (0.10 square miles) is at the lowest end of the range at which bankfull dimensions are readily observed, especially in the incised reaches, impacted by cattle, that characterize the upper San Lorenzo watershed. This is precisely why the SWMP includes three separate measurements in this reach.</p>

		<p>Balance [Hydrologics - applicant’s consultant] staff recently reviewed this situation in the field with County staff to better assess their concerns in this regard. Review of Table 4 in the SWMP does show that the overall bankfull discharge may have been overestimated due to use of too low an estimate for the channel roughness. Nonetheless, subsequent fieldwork focused on this uppermost reach of Marshall Canyon has confirmed that the original estimates of cross-sectional flow area were representative, comparing well with the observed high water marks from Water Year 2004.</p> <p>We agree with County staff that this is an important component in sizing the outlets of the proposed stormwater basins and Table 4 will be corrected to include the updated information, which indicates that an effective discharge on the order of 6.0 cfs is more appropriate, though this may be markedly smaller than the discharge that is most problematic from the standpoint of channel erosion in the watershed. It is important to note that the recessional flow from the Marshall Canyon basin will be adjusted to account for the latest field data.</p>
<p>ACPWA – Lepere (9a)</p>	<p>Since the upper basin will capture all sediment, is there a potential for increased erosion downstream of the basin due to the “clean water” effect? Won’t this be a particular issue during events that exceed the 2-year recurrence interval flows where there will be higher discharges for artificially extended periods of time during the waning limb of they hydrograph where more work or erosion can be performed on the channel?</p>	<p>The basin will be located in the catchment’s headwaters, at the top of the creek. As such, one would not expect the “clean water” or “hungry water” effect to be significant relative to the location in the catchment, since this is a location where one would expect very limited sediment production. The erosion issue, however, remains important, and the applicant has committed to complete additional modeling to address that question. The results of this modeling are expected on May 12.</p>
<p>ACPWA – Lepere (9b)</p>	<p>It would also be very useful to have an additional hydrograph that shows the increase in discharge that would occur without the detention basin but as influenced by the development.</p>	<p>For the purposes of hydromodification on this particular site, we do not believe that this is an important piece of information to prepare. Creeks on and downstream of the site are currently impacted by downcutting and erosion. In</p>

		<p>the absence of proposed controls, one would expect this situation to continue and/or worsen in degree. A hydrograph modeling current site conditions would necessarily be a model of conditions that have resulted in an impacted catchment. As the goal is to achieve a catchment without those significant impacts, it would not be useful as a reference target for this project.</p> <p>Staff understands that this type of analysis is frequently used to determine flood control requirements for a particular project, in order to identify the changes in discharge due to the development that must be controlled. Based on Staff's meeting of May 4, 2004, with County staff, we understand that the County will be working with the applicant to determine Project requirements for flood control. We have not substantively reviewed Project proposals regarding flood control.</p>
<p>ACPWA – Lepere (10)</p>	<p>Shouldn't there be more consideration given to the potential impacts on San Lorenzo Creek downstream of the Eden Creek confluence where the channel is in its natural state? The report only focuses on Upper San Lorenzo Creek that has been artificially modified, rather than downstream of Eden Creek where there is natural habitat and viable fish populations. Discussion of the potential combined influences of changes in discharge and sediment supply from the combined Project Site drainages on the San Lorenzo channel downstream of Eden Creek confluence.</p>	<p>We concur that the modeling should be extended further downstream of the site, and the applicant has committed to extend it at least as far as immediately above the confluence with Eden Creek, depending on the results. It seems possible that the site's hydromodification effects, with the detention basin controls in place, will be substantially reduced and may become impossible to discern at that point. The results of this modeling are expected on May 12, and the need for any additional work will be considered as a part of staff's review of those results.</p> <p>The applicant has provided the following response:</p> <p style="padding-left: 40px;">County staff suggests that the SWMP should include a more detailed description of the potential impacts to San Lorenzo Creek downstream of the Eden Creek confluence. County staff is correct in noting the need to consider a larger watershed context where appropriate and this was precisely the starting point for the work on the Conceptual SWMP. However, the initial modeling and analyses indicated that the Project, with its diverse mitigation measures</p>

		including stormwater basins, Mitigation and Monitoring Plan and Grazing Management Plan would not create any adverse impacts at points further downstream. Nonetheless, we agree that the Final Draft SWMP will be more complete if the hydrologic analyses are expanded to include several downstream tributaries, so that the impacts are given a larger context.
ACPWA – Lepere (11)	SWMP p. 18. The locations downstream of the sediment basin where deposition of sediment on point bars and erosion of outside banks is expected to occur is reported to be identified on the longitudinal profiles in Figure 5, yet the Figure does not convey this specific information.	We concur with commenter. The applicant has provided the following response, which we believe will address the comment: The County notes that the areas where sediment deposition can be expected are not clearly indicated on Figure 5. We apologize for not labeling the low-slope areas to aid in interpretation of the stream profile. The figure will be revised in the Final Draft SWMP.
ACPWA – Lepere (12)	The location of the sediment basins relative to the development, topography or longitudinal profiles is not shown anywhere in the SWMP.	Commenter is correct that the TO did not include this figure. Staff understands, based on commenter’s subsequent comments and discussions with County staff, that the commenter also reviewed the Project’s Conceptual Stormwater Management Plan (SWMP) and Revised Mitigation and Monitoring Plan (Mitigation Plan). The Mitigation Plan includes a plan sheet showing the requested information. In addition, this information was available for review at the Board’s office during the comment period, upon request. Staff has subsequently met with County staff to go over this information.
ACPWA – Lepere (13)	Figure 5 should show the locations of the bankfull width and depth measurements.	We concur with commenter. The applicant has proposed to incorporate this information into the final SWMP, and we concur with this proposal.
ACPWA – Lepere (14)	SWMP p.18. Among the adverse impacts mentioned for fine sediment in San Lorenzo Creek, there should be a reference to the potential for increased loss of capacity of the flood control channel and subsequent increased needs	Comment noted. We concur that this can be a significant impact. Indeed, it is one of the drivers behind flood control districts’ support of hydromodification mitigation work in the Bay Area. Provision B.9 has been revised to ensure that

	and costs for dredging.	the final SWMP includes this language.
ACPWA – Lepere (15)	Is there a reference for the recurrence interval of bankfull flows being on the order of 2-5 years for the East Bay Hills?	The applicant has stated that this recurrence interval was incorrectly stated, and the interval should have been 1.5 to 2 years. There are a number of references for this recurrence interval, several of which are cited in <i>Riley, Ann L., Restoring Streams in Cities. Washington, D.C.: Island Press, p.123.</i>
ACPWA – Lepere (16)	SWMP p.8 states that the project site receives a mean annual rainfall of about 24 inches. Have the report authors conducted a water balance analysis that demonstrates there would be insufficient water supply at the site to prevent use of wet ponds? If they have, could the ACPWA review the methodology? If no water balance has been conducted then on what basis was it decided to use extended dry detention basins?	Board staff believes that the applicant’s choice of extended detention basins is an acceptable choice of treatment controls for this project. While wet basins may provide somewhat more effective treatment, the Board presently does not require projects to use a specific treatment control, as long as a project’s proposed controls appear to be effective, as is the case here. Wet ponds include a permanent pool of water and typically support a broader range of vegetation, including emergent vegetation, which together are thought to improve their ability to improve water quality. By contrast, extended detention ponds are designed to dry out after each storm event or series of storm events, and support a less-diverse range of vegetation. Some research has suggested that the quality of the discharge from each type of pond can be similar, but other work has found better pollutant removal by wet ponds. Both are presently accepted as treatment controls under the stormwater program. As such, the basis for deciding whether to use wet ponds or extended detention basins is not germane.
ACPWA – Lepere (17)	SWMP Table 3 and Fig. 4. Outlet structures for the Marshall Canyon and San Lorenzo Creek basins. The lower orifice is literally at the bottom of the basins. Will this placement cause unnecessary velocities disturbance near the bottom, resuspension of bottom sediments and generate increased sediment concentrations and loads downstream? Will the outlet riser be on a concrete base to minimize sediment particle disturbance?	This comment is noted and will be considered during the basins’ final design process. These basin design details are required to be submitted as a part of the final SWMP required by Provision B.9. Past designs of similar basins (e.g., for the Gale Ranch and Windemere projects in Dougherty Valley, Contra Costa County) have included riser placement either on a concrete base, or within a concrete structure, as well as appropriate energy dissipation measures to minimize sediment erosion and resuspension. We would expect similar designs to be implemented here.

<p>ACPWA – Lepere (18)</p>	<p>Table 1 identifies surficial soils at the site. Stormwater treatment basins function on the basis of settling sediment particles. Has any estimate been made of what size particles will be controlled by the 48-hour drain time? ACPWA experience shows that it is possible to achieve control of medium silt particles down to about the 10-micron size.</p>	<p>The applicant has provided the below response. We note that extended detention basin design criteria, such as those found in the California BMP Handbooks, have often been prepared based on a USEPA guideline of achieving 80 percent removal of suspended sediment. As such, we would expect that the analysis proposed by the applicant would estimate effectiveness and revise the basin(s)' design based on this or a similar guideline:</p> <p style="padding-left: 40px;">County staff notes that water-quality basins function on the basis of settling sediment particles from the runoff and asks whether analyses have been carried out to assess the size of particles that will be settled by the proposed basins at Schaefer Ranch. Settling is indeed a primary method of water-quality enhancement, though not the only operative one. The current design criteria in the Alameda County [Municipal Stormwater] Permit do not suggest that particle-settling analyses are needed. However, Balance Hydrologics has previously modeled settling rates in various types of basins and the Final Draft SWMP will include a discussion of the expected settling rates for the proposed stormwater basins.</p>
<p>ACPWA – Lepere (19)</p>	<p>The 48-hour drain time should substantially help settle smaller soil particles, but also will increase the potential for mosquitoes. The County Mosquito Abatement District needs to be involved in the design and maintenance of the basins.</p>	<p>We concur with commenter's statement that the mosquito abatement district must be involved in the basin design, or at least made aware of the design and provided the ability to comment and revise the design, as necessary. In general, the shortest-breeding-time mosquito in California requires 72 hours to breed and hatch. By limiting detention to 48 hours, the basin design significantly reduces the potential for the creation of mosquito habitat, and provides a time buffer in the event that drain times slightly increase between maintenance inspections (e.g., because of trash or debris clogging a portion of an outlet structure). The applicant has confirmed that it will be working with the Mosquito Abatement District as a part of preparing the final SWMP</p>

		required by Provision B.9.
ACPWA – Lepere (20)	...Has consideration been given to installation of either trash racks or floatable booms to localize and control the inevitable trash/litter that will be deposited in the basins? The provision of racks, booms, or a similar device will reduce the maintenance time (and thus cost) to remove this material. Over time, this reduction could reduce complaints about litter accumulation in the basins and save money.	Provision B.9 of the Tentative Order has been revised to reference the issues raised in the County’s letter and ensure that these design issues are addressed as a part of preparing the final SWMP required by Provision B.9.
ACPWA – Lepere (21)	Table 5 indicates a substantial reduction in peak flows presumably into the proposed basins. Has consideration been given to installation of energy dissipators, rip-rap, concrete pads, or other mechanisms to further reduce the velocity of stormwater influent into the basins?	Table 5 indicates reductions of peak flows from the proposed basins <u>into</u> the downstream creeks, and <u>not</u> from the development into the basins. However, the issue of energy dissipation as runoff flows into the basins is important. This issue is appropriately part of the final design process for the basins. Provision B.9 of the Tentative Order has been revised to reference the issues raised in the County’s letter and ensure that these design issues are addressed as a part of preparing the final SWMP required by Provision B.9. In general, past designs have incorporated these types of design elements, and we would expect to see the same here.
ACPWA – Lepere (22)	Is there adequate easement around both basins for maintenance vehicle access?	Based on a review of the maps provided in the Mitigation Plan and a discussion with the applicant, the basin designs incorporate vehicle access roads and are surrounded by undeveloped open space such that there is adequate space for maintenance access, including with vehicles.
ACPWA – Lepere (23)	What are the slopes on the basin’s side walls? Steep slopes will contribute to erosion, a 3:1 side slope appears to be a general standard.	The basins’ proposed slopes are presently approximately 2:1, as shown in SWMP figures 3 and 4. Staff concurs that these slopes are relatively steep for the proposed use. Provision B.9 of the Tentative Order has been revised to reference the issues raised in the County’s letter and ensure that these design issues are addressed as a part of preparing the final SWMP required by Provision B.9.
ACPWA – Lepere (24)	If the side slopes and basin bottoms are to be soil rather than some impervious material then it is advisable to vegetate the slopes and bottoms with a grass mixture.	We concur with commenter’s comment. The basins are anticipated to be vegetated earthen basins. Board staff also supports the use of trees to provide shading and thus minimize any maintenance to control dense emergent plants

		such as bulrush and cattails. A detailed planting plan for the proposed basins must be submitted as a part of the final SWMP required by Provision B.9.
ACPWA – Lepere (25)	A sediment forebay in both basins would allow for more efficient maintenance and removal of sediment and thus provide lower maintenance costs over time.	Provision B.9 of the Tentative Order has been revised to reference the issues raised in the County’s letter and ensure that these design issues are addressed as a part of preparing the final SWMP required by Provision B.9.
ACPWA – Lepere (26)	What are the erosion protection measures at the high-flow spillways between the water quality and detention basins?	Provision B.9 of the Tentative Order has been revised to reference the issues raised in the County’s letter and ensure that these design issues are addressed as a part of preparing the final SWMP required by Provision B.9.
ACPWA – Lepere (27)	What entity will be responsible for operation and maintenance of the proposed basins? ACPWA experience indicates that public ownership of these types of facilities significantly increases the adequacy of long-term facility maintenance.	Staff concurs that public ownership can regularize maintenance. In this case, the basins would be maintained by the Homeowners’ Association, under the oversight of the City of Dublin. As per Provision C.3.e of the City’s NPDES municipal stormwater permit, the City must oversee and ensure the adequate maintenance and operation of these basins.
ACPWA – Lepere (28)	The SWMP should include set goals that could be achieved in the Grazing Management Plan. If not already reflected, the primary objective of the Grazing Management Plan should be to attenuate stormwater discharge and reduce sediment input to the stream channels. This can be accomplished by managing rangelands to restore and sustain native perennial bunch grasses and keeping grazing to a sustainable level.	Staff views the Grazing Management Plan and SWMP as separate documents, although they are likely to have related beneficial effects. The Grazing Management Plan presently would exclude livestock from almost all creeks on the Project site, with the exception of a few short reaches of creek immediately above Interstate 580. In addition, it will reduce overgrazing on the property, which should reduce flows and creek erosion. Staff believes this will work in concert with the hydromodification sections of the SWMP to help reduce creek erosion below the Project.
ACPWA – Lepere (29)	The conversion of rangelands in this area from native perennial grasses to European annual grasses has had a devastating effect on stormwater runoff and excessive erosion. The existing annual grass-dominated rangeland: <ol style="list-style-type: none"> 1) has a shallower root network that is less capable of holding the soil together; 2) offers greater soil exposure and mobilization of the soil by wind and the impact of rain drops 	Staff concurs with commenter. However, while such a restoration could provide substantial benefits, we also note that that type of restoration is considered very challenging, and the TO does not presently require the applicant to complete one. Rather, the TO requires implementation of other measures (see commenter’s comment 28 and response) expected to provide significant benefits to water quality and beneficial uses of waters of the State in the absence of the

	<p>through the summer and early rainy season; and, 3) is less capable of intercepting and slowing overland flow than native perennial bunch grass-dominated rangeland. Restoring the native perennial bunch grasses will improve all these conditions.</p>	<p>applicant restoring native bunchgrasses to the landscape.</p>
<p>ACPWA – Lepere (30)</p>	<p>Current grazing practices have led to excessive erosion and increased runoff at this site. Rangelands have been denuded, soils compacted, and gullies formed by cattle grazing kept at unsustainable levels. These effects can be corrected by (several methods listed).</p>	<p>We concur with the commenter. The methods listed have been incorporated into the project’s Grazing Management Plan.</p>
<p>ACPWA – Lepere (31)</p>	<p>The rangeland management practices of the EBRPD’s Vasco Caves Regional Preserve is successfully restoring native perennial bunch grasses and reducing erosion. Implementing the same or similar practices at this site is highly recommended.</p>	<p>Comment noted. The Grazing Management Plan referenced in the TO implements a number of measures to reduce the effects of grazing on the Project site, although, as noted above, it does not require and is not expected to result in the restoration of native perennial bunchgrasses at the site.</p>
<p>ACPWA – Lepere (32)</p>	<p>Figure 5 shows that there are 23,500 linear feet of natural creek from the proposed development to the confluence with San Lorenzo Creek.... From the confluence of Eden Creek to S.F. Bay there is an additional 28,431 feet of natural creek and an additional 25,344 feet of improved channel. There is no mention of how the excess runoff from this development will impact stream habitat or flood potential in these reaches.</p>	<p>We concur that the modeling should be extended further downstream of the site, and the applicant has committed to extend it at least as far as immediately above the confluence with Eden Creek, depending on the results. It seems possible that the site’s hydromodification effects, with the detention basin controls in place, will be substantially reduced and may become impossible to discern at that point. See also response to ACPWA – Lepere comment #10. The applicant has provided the following additional response to this comment, noting the additional modeling it has stated will be completed by May 12: The expanded modeling of the upper San Lorenzo watershed that is currently being completed for inclusion in the Final Draft SWMP will allow for a clear assessment of the effectiveness of the stormwater management and mitigation strategies at the site.</p>
<p>Alameda County Public Works Agency, email of</p>	<p>Based on the most current information from USGS and the inclusion of a 1998 storm event in the flood frequency analysis from USGS, we are now informed that a 100-</p>	<p>Comment noted. Staff met with Mr. Saleh on May 4, 2004, and spoke with the applicant separately the same day. A meeting between Board staff, the applicant, and County staff</p>

<p>March 29, 2004, from Rohin Saleh (1)</p>	<p>year event for San Lorenzo Creek is around 14,000-15,000 cubic feet per second, which is substantially higher than the CORE original design using a standard project flood of 9,700 cfs. The implication of this change in hydrology is [that] we are expecting a large part of San Lorenzo to be included in the 100-year flood plain. ...the flood control design section is initiating a study to show how far and how deep the floodplain will extend and what can be done to minimize its impact. ...we need to make sure that the impact of new developments in this watershed are studied in an overall watershed-based model, instead of a local pre/post analysis.</p>	<p>is scheduled for May 14, 2004. Based on the meeting of May 4 with County staff, we understand that the applicant must obtain permits from the County in order to discharge into the County’s creeks, and that this process is likely to occur no earlier than sometime this summer. The applicant has stated it will work as required with the County on this issue. The Water Board typically defers to the local flood control agency regarding necessary flood protection. We believe that remains the appropriate path in this case.</p>
<p>ACPWA – Saleh (2)</p>	<p>The [SWMP] does not include details about assumptions and methodologies, but provides some comparisons between pre- and post-development runoff. I am not sure about the curve numbers or the design storm used for these comparisons, but assuming everything is okay, the post-development peak runoff is greatly reduced with the proposed ponds, which is good. However, a brief review of the recession curves of the outflow hydrographs from the ponds shows much higher steady flows for a substantially longer period, and especially for more frequent events, such as the 2-year event. Considering the erosion potential downstream of the development, this is an important factor to be considered. [Given increases in the duration of certain flows]...the development should minimize those flows and consider downstream erosion protection.</p>	<p>Staff concurs with commenter. The applicant is working to complete an additional analysis of flows downstream of the Project, to a point where the Project’s hydromodification affects are not significant. The results of this analysis are expected May 12. Commenter suggests consideration of downstream erosion protection. We note that creek reaches downstream are off of this applicant’s property, and thus we believe the appropriate approach is to control erosive flows on the project site. We also note that the Board’s approach to this issue is to control flows and, as appropriate, allow the use of creek restoration in advance of flow increases that cannot be controlled (for example, the restoration-in-advance approach was taken on a reach of Tassajara Creek in Dublin, just upstream of Interstate 580). As such, the implementation of downstream erosion protection in an engineered or “hard” form (e.g., rock rip-rap, concrete slabs, gabion baskets) would generally not be permitted, except to the extent that it was only a small component of a much larger restoration project.</p>
<p>ACPWA – Saleh (3)</p>	<p>Due to a very long recession curve created as a result of this development, the effect of the proposed design should</p>	<p>Based on staff’s meeting with County staff on May 4, 2004, we understand this comment to be related to flood flows,</p>

	<p>also be studied using a storm event with multiple peaks. It is only after a combination of these studies that we can determine the impact of this project and plan for the required mitigation.</p>	<p>although a separate County comment, in its other letter, addressed the same issue for the water quality storm (See ACPWA - Lepere comment 9a). We understand that the flood flow issue would be addressed as a part of the modeling expected to be completed by the County this summer.</p>
<p>Citizens Committee to Complete the Refuge (1)</p>	<p>Discusses proposed mitigation for impacts...The TO suggests there may be an additional 13,725 linear feet of unconfirmed jurisdictional waters on an adjacent property that may be enhanced?</p>	<p>Commenter is correct. The adjacent property will be placed under a conservation easement and grazing intensity reduced on it. Additionally, the applicant has committed to complete creek enhancement activities as described in the mitigation plan, and will be fencing all creeks on the Machado site to exclude cattle. While all of the creeks on the Machado property have not been officially delineated, there are approximately 13,725 linear feet of creeks that would be enhanced by the proposed mitigation work.</p>
<p>CCCR (2)</p>	<p>The mitigation proposes only a 1.5:1 mitigation ratio for impacts to habitat known to support a federally-listed threatened species, the California Red-legged Frog (CRLF). Seasonal freshwater ponds capable of supporting CRLF are becoming more and more uncommon in our area due to increasing development pressure on the headwater regions of many of our local creeks. The mitigation ratio for CRLF should be increased to at least a 3:1 ratio. The mitigation areas should be sited well away from the development envelope to reduce the level of adverse impacts from human activities (e.g., direct human use of the ponds for recreation or pets, noise disturbance, introduction of non-native predators, potential mosquito abatement activities) including those which degrade water quality. Runoff from paved areas, runoff containing potential fertilizer, pesticide, or herbicide components, and overflow from water quality ponds should not flow through the CRLF ponds. For example, will Pond 1 receive overflow waters that may contain runoff from paved areas?</p>	<p>We concur with commenter that the mitigation plan will result in the creation of ponds with an area approximately 1.5 times the area of CRLF ponds being filled. Given the Board’s review of past projects and the high-quality CRLF habitat provided on the Project site, this number, taken alone, does appear low. However, two aspects have led staff to consider the overall package of mitigation acceptable, including for CRLF impacts. First, while the overall creation numbers for CRLF pond habitat are low, the overall mitigation package for the Project includes several other components that we expect to benefit CRLF, which are comprised of:</p> <ul style="list-style-type: none"> • Preservation in perpetuity as undeveloped open space of approximately 605 acres of watershed lands that include creeks and ponds providing CRLF habitat; • Management of preserved lands to reduce the existing grazing intensity, which is expected to allow for improvements to water quality stream health; and, • Preservation and enhancement through livestock

		<p>exclusion of approximately 20,650 linear feet of creeks on site and on the Machado lands immediately to the north of the Project site, including more active restoration activities on portions of approximately 5000 linear feet of streams.</p> <p>Second, the CRLF mitigation, as an overall package that included the relatively modest amount of pond creation, was reviewed and accepted by USFWS in its Biological Opinion (BO) for the Project site. In general, the Board has tended to defer to the USFWS and State Department of Fish and Game regarding their species-specific mitigation requirements. On occasions where the Board has found those requirements to be inadequate to also address all water quality impacts, it has required additional mitigation, but staff believes the Project’s overall package acceptably mitigates CRLF impacts, given the existing BO from USFWS.</p> <p>The proposed new mitigation ponds would be located in the Machado easement areas, well away from proposed development. The pond to be expanded, Pond 1, would have a buffer of at least 500 feet on the two uphill sides on which it would be adjoined by development. For a discussion of stormwater pond flows into CRLF ponds, please see Response to Ohlone Audubon comment #5.</p>
<p>CCCR (3)</p>	<p>Does the mitigation and monitoring plan adequately provide for the long-term management of the CRLF mitigation areas? Is a mechanism included for the long-term removal of non-native predators (e.g., bullfrog)?</p>	<p>We believe the Mitigation Plan, in concert with the Grazing Management Plan, adequately provides for the long-term management of CRLF mitigation areas. This will be accomplished through the following:</p> <ul style="list-style-type: none"> • Placement of the ponds under a conservation easement, as per Provision B.8; • Management of the easement areas by a qualified third party that will be provided with a management endowment as described in the revised TO, Provisions B.4.f and B.11; and,

		<ul style="list-style-type: none"> • Pond inspections twice annually to determine presence of CRLF predators (e.g., bullfrogs and predatory fish), then more frequent inspections and implementation of appropriate management measures to remove any predators (Mitigation Plan p.57)
<p>CCCR (4)</p>	<p>The mitigation proposed includes enlarging a freshwater pond by at least 0.4 acres. This pond currently provides “high-quality CRLF habitat.” Has the applicant adequately demonstrated the mitigation activities will not degrade the existing habitat? Will monitoring be required to demonstrate the existing CRLF habitat is not being degraded by the mitigation activities? Has the applicant supplied adequate information to demonstrate the local watershed has sufficient hydrology to support the increased acreage?</p>	<p>Staff believes that the applicant has demonstrated that the proposed pond expansion will result in an increase in pond area without degrading the existing CRLF habitat. Pond 1, a rancher-constructed stock pond, was identified as a pond in need of work, given existing erosion on the face of its downstream berm, which could result in the pond being drained in the future. The proposed mitigation would remove this berm and reconstruct it approximately 120 feet further downstream. This and the reduced sediment inputs from upstream that are expected once the project is constructed will also extend the pond’s lifetime by providing additional ponded area (i.e., area where sediment can deposit without entirely filling the pond). This should substantially increase the time over which the developing emergent marsh at the top of the pond might expand to fill the pond, and reduce the need for periodic maintenance to maintain the pond, as is required in USFWS’ BO.</p> <p>USFWS, in its BO, required a number of standard measures to protect the CRLF during construction, including: limits on work timing to avoid impacts to CRLFs during their breeding season; completing pre-construction surveys for CRLFs; requiring the presence of a biological monitor, on-site, for the duration of the Project’s grading, which includes pond construction; and, installation of construction fencing to exclude CRLFs from moving into areas under construction.</p> <p>Both the TO and USFWS’ BO require annual monitoring of the ponds to ensure that they are providing conditions</p>

		<p>suitable for CRLF breeding and rearing. Additionally, the revised TO requires monitoring for the presence of CRLFs. Should this monitoring show problems with the ponds' function as breeding, rearing, and general habitat for CRLFs, then the applicant would be required to complete appropriate remedial measures to address those problems.</p> <p>By inspection, the catchment will not be significantly reduced in size as a result of development. As such, given that the pond presently retains water for a significant portion of the year, while also sending overflow downstream, and given the applicant's modeling of flows at its upstream pond, sufficient flows appear available for the proposed pond expansion.</p>
<p>CCCR (5)</p>	<p>It appears Pond 5 will be eliminated due to the Dublin Boulevard Extension. Pond 5 in past years has had water in it well into the summer months. In our arid hills, ponds that contain water well into the summer months are extremely valuable for wildlife. Does the mitigation plan adequately offset this adverse impact?</p>	<p>We concur that ponds containing water well into the summer can be of high value to wildlife. Substantial discussions regarding the need for the extension of Dublin Boulevard, its location, and its design were completed with the applicant, and the need and location were confirmed. The Mitigation Plan takes this impact into account as a part of its pond mitigation, and we believe that the overall mitigation package appropriately offsets project impacts, including the removal of Pond 5. Please see also response to Ohlone Audubon comment #2.</p>
<p>CCCR (6)</p>	<p>The applicant is proposing to post financial assurance in the amount of \$1,150,000. We believe this amount is insufficient. The Windemere project provided over \$3,000,000. While there was more extensive creek work [at Windemere], the Schaefer Ranch project is impacting known CRLF habitat. There should be sufficient financial assurance to cover the cost of acquiring additional mitigation sites should the mitigation proposed not meet the required success criteria.</p>	<p>Staff believes that the applicant's proposed financial assurance amount is appropriate. The applicant has submitted a bond estimate for the establishment of mitigation, including construction costs, maintenance and monitoring, and potential remedial actions. We believe that the proposed Mitigation Plan describes mitigation that can be successfully implemented at the mitigation sites. The Board has not required other projects, in addition to providing this financial assurance, to also provide financial assurance equivalent to the purchase price of additional mitigation sites. Because the Mitigation Plan for this project seems reasonable (i.e., it is not proposing actions that seem</p>

		impracticable, and the types of actions proposed have been successfully implemented on other sites), we do not believe it is appropriate to require this additional financial assurance.
Howard Perry Beckman/Friends of San Lorenzo Creek (joined by Sierra Club) (1)	We are concerned about the prospect of intensive development of the lands at the head of the creek system particularly in light of the competition between the seemingly endless demand for new housing in the East Bay and the limits set by Alameda County Measure D (establishing an urban growth boundary). In this we are joined by the Sierra Club....	Comment noted. The Project is within the urban growth boundary established by Measure D, meaning it is not subject to the Countywide vote required of proposed new projects outside the Measure D boundary. As discussed elsewhere in this Response, staff believes that the Project has been appropriately designed, given current regulatory requirements, to address its potential water quality impacts, including creek and wetland impacts, the expected discharge of polluted urban runoff, and potential hydromodification impacts leading to increased downstream erosion.
Friends of San Lorenzo Creek (2)	We insist that no further harm be done to San Lorenzo Creek, and that the...Board support a balanced policy on creeks that protects their multiple roles—as flood control channels, as critical elements of local water quality, as urban wildlife corridors, and as unequaled public recreational settings.	Comment noted. The TO has been prepared within the requirements of existing law and regulations, including the Board’s mandate to protect water quality and beneficial uses of waters of the State. These beneficial uses include wildlife habitat and recreation.
Friends of San Lorenzo Creek (3)	To the extent the TO is based on the SWMP for the project prepared by Balance Hydrologics and dated August 14, 2003, further investigation or documentation is required in order to assure the public that San Lorenzo Creek will be protected from adverse consequences of the project.	<p>Comment noted. As noted elsewhere in this Response, the applicant’s consultant, Balance Hydrologics, is preparing additional modeling of site discharge. The modeling is expected to be completed by May 12. The project is being considered by the Board at the cusp of change for more detailed work on hydromodification issues by municipal stormwater programs. It is likely that significantly more refined tools will be available to address hydromodification issues in the next few years. However, those tools are not yet fully ready. Given the current state of hydromodification tools in the Bay Area, the Project’s application makes a strong effort to implement appropriate best management practices to control the impacts of hydromodification to the maximum extent practicable.</p> <p>As is typical for this kind of project, final details for the basins and related infrastructure would be prepared prior to</p>

		<p>construction. However, the basin designs, sizing, location, and related information would remain as proposed in the applicant’s SWMP. Thus, staff believes that the TO, as revised, provides appropriate assurance that the Project is appropriately protective of water quality and beneficial uses of waters of the State.</p>
<p>Friends of San Lorenzo Creek (4)</p>	<p>The report states that the [SWMP] will be refined with time. If the [SWMP] is significantly changed, public should be afforded new opportunity to comment on plan.</p>	<p>The additional detail work required under the Order is not expected to significantly change the SWMP, which presently sets out the sizing, general design, location, and expected discharges from the basins. However, staff concurs with commenter that significant changes to the designs proposed in the SWMP should receive public review in front of the Board. Provision B.9 of the Tentative Order has been revised to incorporate this.</p>
<p>Friends of San Lorenzo Creek (5)</p>	<p>The geographic relationship of these drainage systems, the proposed engineered storm drain systems, and the planned development is not specifically illustrated, causing much confusion and speculation on this question. Lacking this information, it has not been possible to evaluate many details of the [SWMP}. ...we request that the Board require the applicant to submit a detailed topographic map showing the above relationships and that this map be made available to the public for analysis and comment on the question whether the SWMP effectively protects San Lorenzo Creek from harm.</p>	<p>Commenter is correct that the TO and SWMP do not include this figure. As noted above, the Project’s Mitigation Plan does include a plan sheet showing the requested information. This information was available for review at Board offices during the comment period, but no requests for such review or for such a map were received. The revised TO Provision B.9 requires the final SWMP to include this information.</p>
<p>Friends of San Lorenzo Creek (6)</p>	<p>The SWMP characterizes the planned siting of housing—clustering of units in a relatively small area near the center of the site—as a management “opportunity,” claiming that the siting plan allows stormwater treatment measures to be localized. The report states that the steep terrain of the area presents another opportunity, allowing large volumes of water in the separate detention (flow regulation) and water quality basins. The logic of this claim is unclear.</p>	<p>Comment noted. Staff believes that the SWMP appropriately addresses the Project’s post-construction impacts to water quality, subject to the applicant’s completion of additional monitoring work and pre-construction submittal of an acceptable final SWMP, as required in the Provisions.</p>
<p>Friends of San</p>	<p>...the SWMP does not state in plain language how, in</p>	<p>Comment noted. Staff believes the SWMP, with the</p>

<p>Lorenzo Creek (7)</p>	<p>view of the combination of steep terrain and unusually high amounts of local rainfall, the detention basins are expected to be able to regulate peak water flow from the basins into the creek under “ordinary conditions” (two-year recurrent storms?), let alone under the unusually intense rainfall conditions characteristic of the subject property. Since the applicant has chosen to minimize “hydromodification” effects by maintaining peak flows at or below current levels, the question of the efficiency of the engineered basins is crucial.</p>	<p>additional modeling and any necessary design changes, appropriately addresses project impacts. Commenter makes a distinction between ‘ordinary conditions’ and the ‘unusually intense rainfall conditions characteristic of the subject property.’ We note that for this Project, these rainfall conditions are the ordinary condition for which the design was developed.</p> <p>Commenter notes that it is not clear how the detention basins are expected to be able to regulate peak water flows. In general, regulation of flows would be achieved using some sort of engineered discharge structure, such as orifice plates, a staged weir, or a perforated riser pipe. The final design of that structure will be provided with submittal of the final SWMP required under Provision B.9.</p> <p>Staff has not analyzed the basins’ effects on peak flood flows (e.g., 25-, 50-, or 100-year flood flows). Any flood flow requirements will be implemented by the Alameda County Flood Control District, as they have stated in meetings with Board staff. In general, Board staff defers to local flood control districts on that issue. To the extent that County requirements would lead to significantly re-sized basins, Provision B.9 of the TO has been revised to clearly state that the revised design would have to be brought before the Board for consideration and approval.</p>
<p>Friends of San Lorenzo Creek (8)</p>	<p>The plan to limit water quality impacts of the development relies principally on siting of the planned development. Again, without a detailed topographic map showing the relationship of the development and the storm drain systems it is not possible to evaluate this critical assumption.</p>	<p>Please see response to commenter’s comment #5. Additionally, the water quality impacts of the Project are principally addressed by the project’s proposed water quality and detention ponds, which take runoff from the vast majority of the developed project site, with the exception of the Dublin Boulevard Extension, which drains to Alameda Creek. It is the function of these ponds, rather than the general layout of the project, that are key to ensuring the Project’s water quality impacts are limited. Staff believes that the ponds have been appropriately designed for this purpose, subject to design revisions once additional modeling has been completed.</p>

<p>Friends of San Lorenzo Creek (9)</p>	<p>The “Upper San Lorenzo Creek” is defined in the [SWMP] as that portion of the main creek upstream of the confluence of Eden Creek and San Lorenzo Creek. The [SWMP] states there will be no hydromodification effects in the Upper San Lorenzo Creek because of its channelized condition, and thus focuses entirely on Hollis Creek, an early tributary of the San Lorenzo Creek. The report does not examine the impacts of runoff from the development on the <u>whole</u> creek. Beginning at the confluence of the Eden Creek, San Lorenzo Creek is in a natural state. The creek remains in a natural state until it reaches San Lorenzo Village, where the walls and floor of the streambed are lined with concrete as a flood control measure.</p>	<p>Staff concurs that it is important to model the Project’s effects further downstream than had been completed as of the time the TO was issued for public comment. However, it seems likely that there will be a point downstream at which the Project’s hydromodification influence disappears due to effects such as larger volumes of flow from other tributaries, detention provided by downstream reservoirs, and changes in channel form. The applicant is completing additional modeling that will further inform the design of the detention ponds to address this issue.</p>
<p>Friends of San Lorenzo Creek (10)</p>	<p>The [SWMP] states that the proposed development would reduce sediment flow into San Lorenzo Creek through grazing management and planting, but does not give any quantitative estimates of the reduction. ...This omission deprives the public and the Board of important information by which to evaluate the Project’s impact on San Lorenzo Creek.</p>	<p>Staff concurs that the Project application does not include a quantitative estimate on reducing sediment flows. However, we do not believe that omission is crucial in this case. The applicant’s proposed measures, including reducing livestock grazing intensity, excluding livestock from the creeks and an associated buffer, replanting oaks over a portion of the mitigation area, implementing creek restoration activities along a number of the most-impacted creek reaches, and constructing detention basins to address the Project’s hydromodification impacts, are likely to significantly reduce the ongoing high levels of sediment produced at the site and the adjacent mitigation lands.</p> <p>Estimates could be prepared of existing sediment discharge and likely sediment discharges post-project. However, such estimates—and particularly the post-project estimate—are necessarily inexact, as existing models tend to combine a large number of variables in a very simplified calculation. The results of the model can be significantly affected by the underlying assumptions. Also, because of the uncertainty associated with weather, the timing of landscape response to grazing change, and similar factors, a quantitative estimate</p>

		<p>of changes in sediment loading would have very limited meaning. Staff does not believe that the relatively low quality of information that could be prepared would provide additional information that would significantly inform the project and the public beyond what has already been submitted.</p> <p>One might ask what else the Project could do to address sediment issues at the Project and related mitigation sites. There are several activities that could be completed, including completely removing livestock grazing from the entirety of the site and substantially increasing the active restoration of eroding creek reaches. The presently proposed livestock grazing regime is one that also addresses other landscape issues, primarily including potential wildfire threat resulting from the growth of fuel load over time. As such, it proposes a balance between full removal of livestock and the overgrazing currently practiced. Similarly, additional intervention into existing creek reaches could in many locations require substantial work, including operation of heavy machinery in the creek, which could significantly impact existing riparian vegetation and which would have some potential for failure even if completed correctly. So, the proposed creek work also strikes a balance between repairing some of the most degraded reaches and setting conditions (e.g., livestock exclusion) that are expected to result in substantial recovery of the creek system while minimizing disturbance. Staff believes that the present proposal provides sufficient demonstration that sediment loadings should be substantially reduced, without including a quantitative estimate.</p>
<p>Ohlone Audubon Society (1)</p>	<p>Board should require applicant to provide an endowment to Alameda County to address downstream sediment removal required by project impacts.</p>	<p>We do not agree with the comment. The Project has been designed to substantially reduce these impacts as compared to the current condition. Also, the County, as the entity responsible for operation and maintenance of the downstream creek system with respect to flood control, is the entity that would consider requiring an endowment for such</p>

<p>Ohlone Audubon Society (2)</p>	<p>An area of concern is Pond #5, located on the south side of the property where the Dublin Blvd. extension is planned. This spring-fed pond will be eliminated to make way for the new boulevard. There must be a better way to plan a road that does not destroy a pond used by wildlife. Why can't this pond be preserved?</p>	<p>work. Staff had significant concerns about the proposed road design, and this issue was discussed with the applicant at length. Per the applicant and the City of Dublin, the Dublin Blvd. extension is required for public safety purposes, and appears to be a less-impacting alternative as compared to the other alternatives of running roads either through EBRPD lands from the northeast corner of the property or through the undeveloped lands to the west of the property. The earthwork required to construct a stable road on these steep slopes, where the extension is now proposed, necessitates the destruction of Pond #5. Please see also response to Citizens' Committee comment #5.</p>
<p>Ohlone Audubon Society (3)</p>	<p>The Project has been reduced in size, but there will still be a loss of over a mile of freshwater creeks. Freshwater creeks are a natural resource, and RWQCB should require that this resource is retained.</p>	<p>Comment noted. Staff concurs with commenter, and notes that the project has gone through the alternatives analysis process to show that impacts have been appropriately avoided and minimized, before mitigation is considered. Staff believes that test has been met in this case.</p>
<p>Ohlone Audubon Society (4)</p>	<p>The mitigation for the loss of the CRLF ponds is not sufficient compensation. The ratio of mitigation should be at least 3:1. The consolidation of the existing CRLF ponds is not beneficial for the continued existence of the CRLF. The Society requests that the new CRLF ponds be created and functioning properly as habitats for the CRLF that survive the grading and other land development activities. What protection is there for the CRLF that leave the breeding ponds and estivate in areas within the project site?</p>	<p>Please see Responses to Citizens' Committee to Complete the Refuge Comments 2 and 4. Also, the majority of land area within the Project site would be perpetually maintained as undeveloped open space, under a conservation easement and managed for reduced grazing intensity as compared to the current condition. Staff believes that these conditions would be appropriately protective of CRLF. CRLFs estivating (i.e., spending the summer in a period of relative inactivity) in developed areas of the Project site would be subject to predation by pets and other disturbance by the regular activities of residents within the Project. These impacts have been addressed through the mitigation package described in the Tentative Order and further discussed, for example in the Responses to Citizens Committee to Complete the Refuge comments 2 and 4.</p>
<p>Ohlone Audubon Society (5)</p>	<p>According to the plans, one of the stormwater basins will drain into an enlarged CRLF pond (Pond #1). This is not an acceptable design due to contaminants from urban</p>	<p>Staff shares the concern regarding the potential for urban runoff pollutants to impact aquatic habitat, but believes that the water quality basin has been appropriately designed to</p>

	<p>runoff. This runoff should bypass Pond #1 to protect CRLF. Urban runoff contains various road oils, anti-freeze, heavy metals, herbicides, and pesticides.</p>	<p>remove and minimize upstream contamination prior to flows discharging downstream. We concur that the discharge is unlikely to be as clean as an undeveloped and lightly grazed landscape, but believe it is being appropriately treated under current regulations.</p> <p>Further, under the Project’s proposed design, the Pond will be surrounded on its two uphill sides by residential development, located approximately 500 feet away. With the exception of water draining from the arms of development located uphill, there is very little catchment to provide flows for the Pond. Such water could be pumped from another source, but we and other resource agencies generally do not view pumping as a long-term solution to preserve resources, because of the potential for pumps to fail and the difficulty in ensuring they are adequately maintained in perpetuity. During the application process, it was determined through consultation with the agencies that the preferred alternative did not fill Pond 1. Thus, the pond remains and a sufficient source of water is necessary for it. It is unlikely that sufficient flows would be present to support the pond in the absence of flows from the water quality basin. Because the basin complies with current design guidelines regarding treating runoff prior to discharge to waters of the State, we believe it is an appropriate design solution.</p>
<p>Ohlone Audubon Society (6)</p>	<p>Has there been any concern regarding mosquito problems within the Project site? Has Alameda County Mosquito Abatement District been contacted for advice?</p>	<p>This issue was raised during the permitting process, and the water quality and detention ponds have been designed with detention periods of 48 hours, approximately 24 hours less than the time needed for the fastest-breeding mosquito in California to breed. The Final SWMP required in Provision B.9 must include a vector control plan, which must address in greater detail all aspects of pond design that could result in mosquito habitat. The applicant has stated that they have contacted the Mosquito Abatement District, and we expect them to continue to work with the District as the SWMP’s</p>

<p>Ohlone Audubon Society (7)</p>	<p>The mitigation site for the loss of native trees is questionable. According to the plan, a south-west facing hillside slope will be revegetated with live oaks. This type of location is not natural for oaks. Will an irrigation system be provided to maintain this unnatural setting? Who will maintain the re-vegetated area and for how long? What happens if the oaks do not survive? Deer and cattle eat tender young oak trees.</p>	<p>details are finalized.</p> <p>Board staff has requested a response from the applicant, but had not yet received the response as of the date of this Response to Comments. In general, the proposed oak woodland mitigation has been required by the State Department of Fish and Game, and is only indirectly a Water Board issue, insofar as an expansion of oak woodland would be expected to reduce runoff and potential erosion in creeks downstream of the oak woodland restoration site. According to the figure provided in the Mitigation Plan, it does appear that at least one of the three oak restoration areas may have some southern exposure, and we have asked the applicant to address this question.</p> <p>Following a 10-year establishment period, during which the oak area would be maintained by the applicant, the oak area would be maintained by the third-party land manager, and the maintenance supported by the proposed open space endowment. As per the Mitigation Plan, livestock will be fenced out of the oak mitigation area for at least the first 10 years of oak establishment, and an analysis would be made at that time as to whether it is appropriate to open the area to grazing. We anticipate that standard measures such as browse cages would be implemented should oak seedlings be impacted by deer browse.</p>
<p>Ohlone Audubon Society (8)</p>	<p>The on-site stormwater projects that affect off-site water quality should be managed by an agency such as the Alameda Countywide Clean Water Program. RWQCB should require the Discharger to provide a sufficient financial endowment for the agency.</p>	<p>As presently proposed, the basins will be operated and maintained by the on-site Homeowners' Association (HOA), with oversight by the City of Dublin under Provision C.3.e of its municipal stormwater permit. We concur that HOAs generally have not been as reliable as municipal agencies. However, we also believe that the HOA, as overseen by the City, is an acceptable solution that has been implemented on other projects within this Region.</p>