California Regional Water Quality Control Board
San Francisco Bay Region

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Arnold Schwarzenegger
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Ms. Lori Salamack, Planning Director
Town of Moraga Planning Department
329 Rheem Boulevard, Suite 2
Moraga, CA 94556

Subject: Draft Environmental Impact Report for the Rancho Laguna 2 Project
SCH Number 2003022062

Dear Ms.Salamack:

San Francisco Bay Regional Water Quality Control Board (Water Board) staff have reviewed the *Draft Environmental Impact Report for the Rancho Laguna 2 Project* (DEIR) in the Town of Moraga, Contra Costa County. The DEIR evaluates the reasonably anticipated environmental impacts of the project proposed by Rancho Laguna, LLC (Project Sponsor) to develop 35 homes and related facilities on about 44 acres of a 180-acre parcel of land adjacent to Rheem Boulevard in the Las Trampas Creek watershed. Construction of the project as currently proposed would result in the fill of a small intermittent creek, eliminating the creek and its associated riparian zone. Several small seasonal wetlands and what the DEIR calls 'wetland swales' found elsewhere on the site would also be lost as a result of fill. The Water Board has serious reservations about the ability of the Project Sponsor to mitigate for the magnitude of such losses. We do not agree with the DEIR finding that the loss of this locally important habitat is "less than significant" after mitigation. Further, we do not support the concept of creating a water course on top of engineered fill in the manner proposed by the Project Sponsor due to the high risk of failure and potential for downstream water quality impacts.

General Plan Conformance and Water Board Goals. The Water Board's objective with respect to rural and urban creeks within the San Francisco Bay area is to promote and maintain the development of a stable landscape that provides for maximum stream and wetland function. This objective would appear to be in agreement with the goals and policies of the General Plan for the Town of Moraga that are aimed at the preservation of riparian environments and watercourses. However, given that the Rancho Laguna 2 development would result in the fill of a

creek and seasonal wetlands, it appears to be at odds with these goals and policies as stated in of the General Plan as well as goals and policy of the Water Board and the *San Francisco Bay Basin Plan*. Under these circumstances, more effort to avoid and minimize impacts to streams, wetlands, and related riparian habitat is required.

Permanent Loss of Creek Function & Habitat & and the Need to Avoid & Minimize. The Water Board's primary concern with the Rancho Laguna 2 project is the proposed fill of a natural stream and seasonal wetlands at the project site. The DEIR rates the loss of these locally significant habitats as "less than significant" after mitigation. However, the mitigation proposed for the project is far from adequate compensation for the impacts the project will cause and does not merit rating the project's impacts as less than significant.

The drainage which would be filled by the Project as it is currently envisioned is an excellent example of what is becoming increasingly rare in the Bay Area, even in the less developed portions of Contra Costa County: a small headwaters stream. Despite the fact that it is intermittent and subject to cattle grazing, the creek that runs along Rheem Boulevard (hereinafter referred to as Rheem Creek in this letter, and called the Rheem Boulevard drainage in the DEIR) supports a well-developed riparian habitat including mature native trees, shrubs, and annual plants. In turn, this plant community provides important habitat to resident and transient species of fauna including a variety of raptors, mammals, and amphibians. Generally, headwaters streams and the flora and fauna they support are under significant pressure from development that is spreading in rural Contra Costa County as evidenced by the Rancho Laguna 2 as well as other recently completed and proposed projects in the vicinity. It is important that the DEIR explain that Rheem Creek and streams like it provide numerous functions in a watershed and their losses, which are seemingly minor when taken individually, are *cumulative* and can undermine the integrity of the entire watersheds, in this case the Las Trampas watershed.

Under the provisions of the Clean Water Act (CWA) and the *San Francisco Bay Basin Water Quality Control Plan* (Basin Plan), a project sponsor is required to avoid impacts to waters of the U.S. and waters of the State in conformance with the U.S. Environmental Protection Agency's (EPA) CWA 404 (b)(1) Guidelines (Guidelines). The policy of the State of California with respect to environmental impacts to water resources is to require – in ranked order – first, avoidance, and second, where impacts are unavoidable, to minimize such impacts, and last, to mitigate impacts that cannot be avoided or fully minimized, but only as a last resort. This means that no discharge of fill shall be permitted if there is a practicable alternative to the proposed discharge that would have less adverse impacts on the aquatic ecosystem. The Project Sponsor has not demonstrated in the DEIR, or in materials submitted to the Water Board as part of their CWA Section 401 water quality certification application, that the proposed project constitutes the least environmentally damaging alternative (LEDPA) as specified in the Guidelines.

Furthermore, the State of California maintains a policy of 'No Net Loss' with regard to streams and wetlands in the State. The proposed mitigation for the loss of Rheem Creek based, in part, on creating an engineered water course that attempts to replicate the functions of a natural creek with doubtful prospects for success, is not consistent with this State policy.

Alternatives Analysis. As stated in various correspondence regarding the CWA 401 water quality certification application to the Project Sponsor and their agent, Sycamore Associates, the Water Board does not believe that the LEDPA has been identified, or that the proposed impacts are warranted for the development of housing on the project site. The Water Board has requested further consideration of alternatives for the project that would avoid fill of the creek. Such alternative considerations included the use of a below grade retaining wall for stabilization of Rheem Boulevard, which would not require the filling of Rheem Creek. The Project Sponsor has asserted that the Town of Moraga is adamantly opposed to any long-term (more than a few days) closure of Rheem Boulevard, as it would create traffic impacts that cannot be mitigated to less than significant.

While we recognize that the Town of Moraga has justified concerns about closure of Rheem Boulevard for its repair and stabilization, this restriction appears to pose a competing and conflicting interest to the need for protection of water resources in the planning of the Rancho Laguna project. On the one hand, there are the beneficial uses provided by the creek that would be filled. On the other, there is the convenience local residents derive from the use of Rheem Boulevard for reaching destinations such as schools, Highway 24, and commercial areas in a timely manner, and the General Plan's requirement for the protection of the view shed by prohibiting residential development along the ridge lines and hillsides. This view shed protection requirement appears to have a substantial influence on the site plan for the proposed development and creates yet another set of constraints for the site. Although the closure of Rheem Boulevard, and view shed protections are significant issues to the Town and local residents, the permanent loss of a creek and its associated water quality functions and riparian habitat is also a significant impact to the Las Trampas and Walnut Creek systems that would be very difficult to mitigate. The natural creek that would be filled by the project offers a degree of complexity and diversity with respect to micro invertebrate and benthic organisms that would not be replaced by creation of a water course on fill, or by preservation of land and creeks either on-site or at an off-site location.

As pointed out earlier in this letter, the Rancho Laguna 2 project appears to be contrary to several of the goals stated in the General Plan for the Town of Moraga. With no indication of a need for additional housing within Moraga, the Project Sponsor should include in the Alternatives Analysis section additional design options that reduce the footprint of the project thus also

reducing the amount of grading and consequent fill material planned for disposal in Rheem Creek. If grading and fill were reduced, impacts to Rheem Creek could be avoided. The general discussion and summary information provided in the Alternatives section of the DEIR for alternatives that were considered but then eliminated from further analysis, is extremely brief and does not provide the degree of detail necessary for understanding other potential options. Further, the Alternatives section included assessment of only those options that include fill of the Rheem Creek valley, as opposed to alternatives that would avoid fill of the creek, such as a below grade retaining wall. If stabilization of Rheem Boulevard is necessary for its continued use by local residents and other users, then the below grade retaining wall must be further considered and should be further discussed as part of the DEIR.

Proposed Mitigation & Inherent Instability of Watercourse Created on Fill. The Project Sponsor proposes as partial mitigation for project impacts recreation of a creek on fill material placed over Rheem Creek. This is unacceptable as mitigation for a variety of reasons including the fact that urban stormwater would be discharged to the system. Streams considered for mitigation purposes cannot be used for stormwater treatment and the Water Board is not in favor of discharging treated stormwater to a mitigation stream. Urban runoff, including treated runoff, may contain pollutants such as pesticides or herbicides and oil or gas. These pollutants could substantially degrade water quality in the creek and associated wetlands, making them unsuitable as habitat for native plants and animals. In addition, under well-established Water Board policy, double counting (using a single area to fulfill more than one requirement where mitigation is one of the functions) is not allowed.

Creation of a water feature on the engineered fill is also not acceptable as mitigation because it is outside normal restoration practice and remains, at best, experimental. In fact, constructing naturally functioning channels on fill in inherently unstable landscapes is something for which restorationists have not yet developed reliable, successful designs. A stream placed on fill would need to be carefully constructed to remain stable over time. As such, it would be designed to prevent natural movement of its bed and banks, which normally allow creeks to develop physical complexity associated with features formed by erosion and deposition. These types of features, such as shallow riffles, deep pools, and point bars, provide variation in habitat for creek organisms, and energy dissipation.

It is important that the text of the DEIR be expanded to explain that headwaters streams make up a significant part of most watersheds and function as a primary connection between surface and groundwater. The suggestion that an engineered stream placed on fill could fulfill the same role as a natural creek seems optimistic at best and reflective of a limited understanding of the ecological part played by headwaters streams at worst. Specifically, among the key function of such creeks and streams is to provide a conduit from surface water sources to groundwater. Even where such

a stream does not run above ground continuously, water seeps through its bed and under-bank area (known as the hyphoreic zone) into underground streams before eventually making its way into groundwater or larger streams. This can also transport important micro biota and nutrients through the watershed, which are basic building blocks of a healthy aquatic ecosystem. As noted above, in order to attempt to keep the channel of an engineered creek on fill stable, the creek would have to be separated from the underlying fill by an impermeable layer to prevent meandering, incising, or saturation that could make the fill subject to movement. Clearly, this would prevent the engineered creek from functioning in the same ways as the existing natural creek. Re-creation of a creek resting on fill material might have the appearance of a natural creek, but it would certainly lack many of its essential functions.

The project design in this case calls for a grass-lined channel – presumably on soil installed over an impermeable boundary. This grass-lined channel would include rock check dams located approximately every 100 feet along this portion of the channel. In order to connect the higher elevation of the created water feature with the natural creek remaining at the toe of the fill, a rock-lined chute would be constructed, with a pool, or pools located within the system to dissipate energy prior to discharge. We expect that it would be prohibitively difficult to connect this upper stream channel on the engineered fill with the lower natural creek channel in a manner that protects the stability of the stream system. One concern is that the slope and sinuosity of the channel created on fill would not conform to the larger valley slope that would dictate what the slope and sinuosity should be. Disruption of the relationship between the valley and channel slope so that you no longer have a system in balance is inherently likely to create an unstable situation, because the landscape will continue to drain in the original manner. Yet another concern with such a design is the impacts that could occur to the remaining natural creek downstream of the rock chute. It has not been demonstrated that energy generated in the water drop would be adequately dissipated, and/or that the potentially sediment starved water discharged from the chute would not cause downstream erosion problems. Overall, we find that the proposed design for creation of a water feature on the fill material, with re-connection to the natural creek, has an inherent risk of failure, and it should be noted that the Water Board is adverse to permitting activities that carry such a risk for future negative impacts.

Off-site mitigation of an undefined type and in an undisclosed location is also proposed. Even if the Project Sponsor had demonstrated that the proposed creek and wetland fill is warranted for development of the project, the DEIR does not clearly outline in sufficient detail what type of off-site mitigation is being offered for consideration. Therefore, evaluation of such mitigation is not possible at this time. It should be noted that all possibilities for on-site mitigation must be explored prior to considering off-site mitigation. On-site mitigation is generally required at a minimum ratio of 2:1 (replaced to lost). For offsite mitigation the ratio is generally substantially

higher, particularly if it is outside of the watershed or out-of-kind. Beyond that, it is important to recognize that the type and amount of compensatory mitigation (substantial restoration of stream channel and riparian habitat) for the permanent burial of streams and wetlands such as that proposed by Rancho Laguna 2 is extremely difficult if not impossible to find, hard to implement, and very costly. Recent experience has indicated that suitable opportunities in the County are very limited.

Summary & Conclusion.

In closing, we reiterate that Water Board and State policy require avoidance of wetlands and creek habitat to the maximum extent feasible. Projects which do not adequately demonstrate avoidance and minimization of impacts to wetlands and other waters of the State may result in our inability to issue required water quality certification and/or waste discharge requirements for the project as proposed. Without more serious consideration of other alternatives that would avoid and minimize impacts to water resources on site, the DEIR does not adequately address State requirements for protection of water quality.

Thank you for the opportunity to comment on the DEIR for the Rancho Laguna 2 project. If you have any questions, please contact me at (510) 622-2356 or via e-mail at khart@waterboards.ca.gov.

Sincerely,

Kathryn Hart
Water Resource Control Engineer

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