



City of Malibu

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May 11, 2012

Jack Ainsworth, Senior Deputy Director
California Coastal Commission
South Central Coast District
89 S. California Street, Suite 200
Ventura, CA 93001

RE: Malibu Lagoon Restoration and Enhancement Plan

Dear Mr. Ainsworth:

State Parks recently delivered the *Final Dewater Plan* dated December 2010 and the *Hydrologic and Biological Project Monitoring Plan* dated March 2012 documents to the California Coastal Commission to comply with Coastal Development Permit 4-07-098 for the Malibu Lagoon Restoration Project. I would like to thank the Coastal Commission for providing those documents to the City in an electronic format.

The City met with State Parks more than 18 months ago and requested an opportunity to review and comment on these documents before submission to the Coastal Commission and the Los Angeles Regional Water Quality Control Board (RWQCB). Unfortunately, we were not afforded the courtesy to review the documents in advance of the latest submittal.

Therefore, the City of Malibu is now providing the California Coastal Commission with its preliminary comments on these documents. The City is anticipating that the Coastal Commission and RWQCB will be able to use these comments to refine these two plans to ensure the public health is protected for the thousands of ocean-going visitors at Surfrider Beach.

Final Dewatering Plan, December 2010

Based upon the City's simple review of the plan, it is readily apparent the plan has fatal flaws. The City believes the Final Dewatering Plan that was developed nearly 18 months ago must be revised to include description and information on critical details that are missing from the plan. In addition, it is recommended that the dewatering plan be signed and stamped by a California licensed civil engineer.

The most glaring and troublesome read of the dewatering plan deals with the initial lowering of the entire lagoon. As described in detail on page 11 of the report, the plan indicates that the entire lagoon must be lowered to an elevation of 3.0 in order to begin to install the interior dike. Therefore, it is estimated that the entire lagoon area would need to be pumped at a rate of 25 cfs



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(11,200 gpm) to overcome the inflow. It is stated this work will likely run continuously, 24 hours a day, for 3 days and possibly up to 7 days. There are no statements on how this flow will be stored, treated or dispersed.

Therefore, based upon the above, it is estimated that over just a 3-day dewatering period, the contractor will need to collect, store, treat and discharge 48.5 million gallons ($25 \text{ cf/s} \times 7.48 \text{ gal/cf} \times 3600 \text{ s/hr} \times 24 \text{ hr/day} \times 3 \text{ days} = 48.5 \text{ million gallons}$). Knowing the contractor is required to install a water treatment system with a capacity of 1100 gpm, it will take over 30 days to treat this amount of water and require approximately 2500 "Baker" tanks, with each tank having a capacity of 20,000 gallons. Nowhere in the report is this issue addressed. This is a fatal flaw in the design.

Hydraulics and Water Quality

The sources of groundwater flows are not correctly identified. The project planners and construction bid documents did not include information learned from many studies. Most recently, the Malibu Civic Center Hydrology Study, August 2010, a comprehensive multi-year study that was made available to the project planners but seemingly, was not referenced in the Final Dewatering Plan, would have corrected some historical misassumptions about the project area and groundwater influences. The study is available for your review on the City's website: <http://www.malibucity.org/index.cfm/fuseaction/detail/navid/493/cid/16288/>.

Tidal Flows

The report does not accurately reflect tidal flow influences. It is known that throughout all times of the year, the lagoon berm is often overtopped by high tides and waves. The plan does not address this issue. As an example, in July 2009, during a closed berm period, USGS equipment on the lagoon side of the berm was lost and the hydraulic gradient and water quality in the lagoon was significantly altered due to high tides overtopping the lagoon.

Water Quality – Bacteria

The City has provided project designers with various scientific studies that have not been considered in the assumptions, and some assumptions made in the dewatering plan cannot be supported by the research that is cited. For example, project planners use mean totals in monitoring wells to account for expected bacteria levels that will be encountered during the project period from June 1 to October 15. Only summer bacteria levels should be considered. In 2009, UCLA measured total coliform levels in the project area at six locations at greater than 24,000 mpn/100mL, E. coli ranges from 7,700 - >24,000 MPN/100mL, and enterococcus ranges from 41 to 20,000 MPN/100mL. These results in the Lagoon are consistent with other research work; however, the Final Dewatering Plan does not reflect this in the report.

Hydraulic Conductivity

Project planners do not take into consideration the cumulative knowledge that has been acquired in multiple sequential groundwater and water quality studies. URS Greiner Woodward Clyde (1999 and 2000) observed that the barrier berm that closed off Malibu Lagoon from Surfrider Beach drives the groundwater flows in the project area and explains why monitoring wells adjacent to Malibu Creek and Lagoon are not a good reflection of the source of bacteria from nearby onsite wastewater treatment systems (C-1, C-2 and P-7). This effect was confirmed in later studies by Stone Environmental (2004) and verified further by USGS in its extensive research in 2009 and 2010 and the Hydrology Study of Cumulative Impacts for the Civic Center Area, Malibu, California, Stone Environmental (2010). USGS used isotopes to verify the source of the water in these monitoring wells and confirmed that, when the berm is closed, the Creek and Lagoon waters migrate back towards the monitoring wells. When the berm is open (generally during wet weather), the groundwater migration is from the Civic Center area to the Creek or the Lagoon. There is no evidence in multiple studies conducted by recent research work that bacteria from nearby onsite wastewater treatment systems is contained in monitoring wells, the Creek or the Lagoon. The high levels of bacteria have been associated with bacteria stored in lagoon sediments and lagoon waters that are affected by the high nutrient levels and high bird population. During times of berm closure, these same bacteria can be detected in nearby monitoring wells.

Treatment of Dewatered Flows

The Final Dewatering Plan has no description or site plan for discharge of treated water from the temporary interior dike dewatering or the dewatering associated with the construction project. This is a critical component needed to protect public health and details must be provided to the Coastal Commission and RWQCB. The project applicant defers these details and responsibility onto the selected contractor. Therefore, the submitted Final Dewatering Plan must include all contractor-proposed details.

Hydrologic and Biological Project Monitoring Plan, March 2012

This plan must also be amended in order to fully understand the project benefits and whether the stated goals of the project have been achieved. The primary omission is the project planners dropped Sample Site 9 on the eastern wetted area of Malibu Lagoon. The report states that small excavation will be conducted on the east side. On page 8 of the Dewatering plan, the report states, "The entire area of the Lagoon will be ultimately influenced by the Phase 2 construction ...". The project analysis noted the main channel and the western channels are an ecosystem. This project proposes major removal of sediment and recontouring of the western channels; however, no monitoring is proposed that will assess unintended consequences or project benefits on the main channel bank. Project planners note that this project is without precedent, and project funders provided millions of dollars in the hopes that the project would achieve the stated goals and lessons could be learned for future similar projects. The fact that no monitoring will occur on the eastern bank of the Lagoon is a serious omission that can be corrected.



The monitoring plan places a very important burden on the Coastal Commission's Executive Director who must determine, using pre- and post-project monitoring, whether the project was successful, whether it caused unintended consequences that need to be mitigated and whether additional corrective work must be done. Without a full monitoring plan to evaluate project conditions and impacts, the Executive Director's hands will be tied.

Thank you for this opportunity to address many concerns about this project that could be corrected by the Coastal Commission and the Regional Water Quality Control Board before the project begins.

Sincerely,



Jim Thorsen
City Manager

cc: Mayor Rosenthal and Honorable Members of the Malibu City Council
Sam Unger, Executive Officer, Los Angeles Regional Water Quality Control Board
Suzanne Goode, Senior Environmental Scientist, State Department of Parks & Recreation

