

Item 18.3

**Strike-Out Tentative
Waste Discharge Requirements/Water
Reclamation Requirements
Order R4-2008-XXXX**



STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

ORDER NO. R4-04-XXXX
WASTE DISCHARGE REQUIREMENTS and
WATER RECLAMATION REQUIREMENTS
FOR
MALIBU LUMBER LLC - CITY OF MALIBU'S
MALIBU LUMBER AT THE CITY OF MALIBU'S LEGACY PARK
(File No. 02-058)

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) finds:

PURPOSE

Beneficial uses of recreation, habitat, migration and spawning in the vicinity of the Malibu Civic Center, including swimming at Surfrider Beach and swimming and eutrophication in Malibu Creek and Lagoon, are impaired and are therefore subject to Total Maximum Daily Loads (TMDLS), adopted by the California Regional Water Quality Control Board, Los Angeles Region (Regional Board). The purpose of this Waste Discharge Requirements/Water Reclamation Requirements (WDR/WRR) is to ensure that a proposed redevelopment at Malibu Lumber does not further impair beneficial uses, and that it supports appropriate reductions in emissions of pathogens and nutrients.

BACKGROUND

1. Malibu Lumber and Hardware operated a lumber store on ~~less than an acre~~ approximately 1.8 acres of land located at ~~23419 West Pacific Coast Highway~~ 3939 Cross Creek Road in the City of Malibu. Until February 2005, when the owner shut down the store, the business generated 200 gallons per day of wastewater from a restroom for customers and employees. The septic system discharge was enrolled under State Water Resources Control Board Water Quality Order No. 97-10-DWQ, a General Waste Discharge Requirement. The Monitoring and Reporting Program (MRP) CI-8695 did not include a groundwater monitoring.
2. To redevelop the site, the City of Malibu (City) purchased the land at 3939 Cross Creek Road ~~23419 West Pacific Coast Highway (PCH)~~ and the adjacent parcel at 23500 Civic Center Way, bounded by PCH, Civic Center Way and Stuart Ranch Road which is currently being developed as the Legacy Park Stormwater Control Project. The City ~~sold~~ leased the Malibu Lumber and Hardware building and ~~leased~~ the underlying ~~23419 PCH parcel~~ 3939 Cross Creek Road to Malibu Lumber LLC, where the structure is being expanded to include a 30,316 square foot redevelopment of retail stores, hair salons, two

November 24, 2008

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restaurants and ~~public~~ restrooms. Malibu Lumber LLC and the City are hereinafter referred to as Dischargers under these WDR/WRRs.

3. Malibu Lumber LLC and the City of Malibu filed a Report of Waste Discharge (ROWD) for discharge of a maximum of 17,000 gallons per day (gpd) of domestic and commercial wastewater, which will be treated by an advanced wastewater treatment system located on off the site and discharged to an irrigation system and/or a disposal field covering more than 80,000 square feet on the adjacent Legacy Park, also owned by the City (Figures 4 ~~yet to be supplied by the Discharger-1 and 2~~).

HYDROLOGY

4. A water imbalance in Malibu Valley has resulted from more water imports, uses, and discharge at rates that exceed what can be percolated, evaporated or moved into surface water bodies, under some conditions. Additional discharge of water or effluent may exacerbate this existing condition.
5. During wet conditions, Regional Board staff finds that waste discharge systems, which operate successfully under dry conditions, may fail resulting in discharge to the surface. The absence of sufficient dry soil beneath leachfields is known to limit or prevent pollutant removal and treatment. Additional discharge of water may exacerbate these conditions.
6. The Malibu Lumber Yard building, treatment plant and disposal system is in the City's Civic Center area, which is located 2,000 feet west of Malibu Creek, 1,200 feet inland of the Pacific Ocean and one half mile east of the coastal area designated by the State Water Resource Control Board (SWRCB) as Mugu Lagoon to Latigo Point Area of Special Biological Interest Significance Number 24. Furthermore, the site is located near Malibu Lagoon, and the popular Surfrider Beach. The SWRCB and the Regional Water Quality Control Board (Regional Board) designated Malibu Creek, Malibu Lagoon and Malibu Lagoon (Surfrider's) Beach as impaired for coliform, nutrients (algae), scum/foam-unnatural; viruses, eutrophication, coliforms and swimming restrictions; and beach closures and coliforms, respectively, on the 2002 303d list¹. The 2006 303(d) list included the same impairments, except that Malibu Creek, Malibu Lagoon and Surfrider's Beach were placed on the List of Water Quality Limited Segments Being Addressed by USEPA Approved TMDLs. On January 24, 2002 and on December 12, 2002, the Regional Board adopted a Total Maximum Daily Load (TMDL) for bacteria during dry and wet weather, respectively, into Santa Monica Bay which was amended to the Basin Plan. On December 13, 2004, the Regional Board also adopted a TMDL for bacteria in Malibu Creek and Lagoon which was included in the Basin Plan. On March 21, 2003, the United

¹ Federal Clean Water Act section 303(d) list of Water Quality Limited Segments.

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States Environmental Protection Agency (USEPA) promulgated a nutrient TMDL for Malibu Creek Watershed. This WDR/WRR considers the existing impairment of beneficial uses in these waterbodies adjacent to the site.

7. The addition of subsurface discharge from current and future developments in Malibu Valley, as documented planned in the City's May 1996 report titled *Malibu Civic Center Specific Plan Background Information Existing Conditions*, is estimated to double the current discharge from septic systems and onsite waste water treatment plants in the Civic Center area.
8. The operation of the Malibu Lumber Yard and other developments will require that additional potable water be imported into the Malibu Valley groundwater basin. The Los Angeles Waterworks District Number 29 intends to serve potable water imported by Metropolitan Water District of Southern California and distributed through the West Basin Municipal Water District to the City of Malibu consumers.
9. Improvement of many individual waste treatment systems at the existing businesses in the Civic Center area is necessary because the City currently does not provide centralized wastewater collection and treatment system. Also, no community services district or other special district has been formed to provide such community services. Residents and businesses in the City rely on on-site subsurface disposal systems for disposal of their wastewaters.
10. The City did not complete a cumulative analysis of environmental impacts from the proposed discharge at Malibu Lumber. As a responsible agency under the California Environmental Quality Act (Public Resources Code, section 21000 et seq.), the Regional Board submitted comments to the Dischargers describing concerns about critical impacts of elevated groundwater, reduced evapotranspiration and increased infiltration and runoff and the cumulative effects from new discharges which may flood existing leachfields.
11. On November 30, 2007, the Dischargers met with Regional Board staff to modify the ROWD submitted in May 2007. The Dischargers and Regional Board staff agreed that discharges from Malibu Lumber could be made subject to the successful operation of Legacy Park and the results of a groundwater study under preparation by the City of Malibu. The City would prepare an RFP and hire a team of experts to model the groundwater for the entire Civic Center area. The Malibu City Council allocated about \$300,000 for modeling in January 2008.
12. On February 8, 2008, the Dischargers were notified that their ROWD must contain hydrogeological and engineering evidence that the discharge could coexist with the discharge from the City's adjacent proposed Legacy Park stormwater disposal system.

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13. On March 22, 2008, Regional Board staff sent a letter to the Dischargers stating that the ROWD was still incomplete and that predicted separation between the water table and the bottom of the leachfield in the engineering report was based on an historically-low (2004) and not a critical condition (1992) groundwater level as reported in a 2007 report by Van Beveren and Butelo.

The City was directed to provide a short-term groundwater modeling result to evaluate the mounding impact resulting from the proposed Malibu Lumber discharge and from existing adjacent and future discharges in and around the Malibu Lumber site and Legacy Park area. A modeling project was initiated in April 2008, but the work contracted as of October 20, 2008 will extend existing modeling and will not assess high groundwater, low evapotranspiration and high infiltration and runoff (critical) conditions. In August 2008, the City agreed to complete the study by October 2009.

14. In the absence of an additional definitive modeling study, the Dischargers, at a meeting on April 29, 2008, agreed to develop additional disposal options and changes in system operation for periods when the water table rises, including recycling water and limiting use.

In letters dated May 6, 2008 and May 7, 2008, the Dischargers notified the Regional Board that they will: 1) prepare a water conservation plan that will review conservation measures to be implemented at Malibu Lumber Yard and water usage by Malibu Lumber Yard tenants will be monitored, 2) the Engineering Report will be amended to include a statement identifying the appropriate level of operator certification, 3) a groundwater level monitoring plan will be prepared that provides locations of groundwater monitoring wells, monitoring protocol and contingency plans in the event there is a groundwater rise, and treatment system operation will include scheduled monitoring of the groundwater levels in the wells, 4) commitment to connect to the future Civic Center sewer system and terminate use of the individual treatment plant when the sewer district system is operational and 5) the treated wastewater will meet tertiary recycled water standards.

On May 15, 2008, the Dischargers agreed to modify the ROWD to limit waste effluent flows when the water table was elevated because there was insufficient documentation to show that the project and the stormwater disposal system could be operated simultaneously without effluent surfacing.

On November 20, 2008, the Dischargers notified Board staff that no re-use of effluent will occur within the Malibu Lumber Yard facility. Irrigation disposal had been proposed for the engineering design, but the Dischargers stated that piping may be installed for future connection to Legacy Park for re-use of the Malibu Lumber Yard effluent through spray irrigation.

~~The complete revised engineering design has not been received as of October 20, 2008~~ was received November 20, 2008.

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~~15. The Civic Center area of the Malibu Valley currently has more subsurface discharge than can be assimilated while maintaining 5 feet of separation between the water table and the bottom of a leachfield under some conditions. New use and disposal in the Civic Center area, even with high levels of treatment, is predicted to cause the failure of the existing older septic systems and increased bacteria discharge from flooded leachfields. At present, the four largest businesses in the Civic Center area remove 10-12% of their effluent by pumper truck to prevent spills, are not meeting the water quality limits in their WDRAWRR, and are not maintaining the minimum 5 feet of separation between the base of the leachfield and the water table.~~

~~Because the City has made no legal commitment to construct a centralized wastewater treatment system or other long-term solution to replace leachfields in the Civic Center area, the Civic Center businesses are expected to continue to rely on leachfield disposal systems. Therefore, the prevention of increased groundwater levels becomes necessary to meet the TMDL targets and allow compliance with water quality objectives. The addition of new or increased discharges, like that proposed for Malibu Lumber, should be allowed only when coupled with other measures to reduce total subsurface discharge and bacteria and nutrient loading to Malibu Creek and Lagoon, which are impaired for these constituents. Further, more extensive monitoring of groundwater conditions is necessary to ensure new projects improve groundwater conditions and do not result in the elevation of groundwater to within 5 feet of the base of leachfield systems.~~

FACILITY AND TREATMENT PROCESS

- ~~16. The discharge from the land use activities at the Malibu Lumber redevelopment, which will be generated from liquid waste streams from restaurants, hair salons, retail businesses and public restrooms, will be of a higher-toxicity and more complex nature than a residential waste stream. A portion of the discharge may be directly recycled/reclaimed for irrigation and other uses, and if recycling/reclamation occurs, the Dischargers will need to meet rigorous water recycling criteria, established by the State Department of Public Health, in the California Code of Regulations, title 22.~~
- ~~17. The land area at the Malibu Lumber redevelopment is not large enough for disposal of wastewaters through a conventional septic system. Furthermore, the elevation of the water table is, on occasion, too high to allow for attenuation of contaminants that would occur through unsaturated flow from a conventional septic system. Accordingly, the Dischargers propose to (a) treat their influent through an advanced on-site wastewater treatment system located on the site, (b) discharge treated effluent from the advanced on-site wastewater treatment equipment through a leachfield in Legacy Park, (c) construct pipelines and pumping systems for recycle/reclamation of treated effluent for irrigation in~~

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- Legacy Park and to recycled/reclaimed water users who have yet to be identified, and (d) divert a portion of the influent to holding tanks for emergency discharge to tankers that will truck the influent to a sanitary sewer with written notice to the Executive Officer.
18. The Malibu Lumber treatment system consists of a gravity flow collection system with a grease interceptor; a trash trap and primary clarifier, sludge storage tank and digester; an equalization tank with anoxic denitrification; a modified plug-flow activated sludge process for aerobic treatment with suspended growth; a hollow-fiber micro-membrane filtration system; and ultra-violet disinfection system and disposal through sub-surface drip dispersal into a leachfield and irrigation system (Figure 2 and 3 yet to be supplied by the Discharger). The effluent may meet California title 22 disinfected tertiary recycled/reclaimed standards, when the system is operated as designed, ~~in the treatment system~~ before being discharged to the leachfield, but must meet these requirements before it is discharged for recycled/reclaimed use. Anaerobic decomposition of sludge in the bottom of the primary settling tank will release carbon dioxide, methane and hydrogen sulfide which the Dischargers will remove by mechanical carbon filtration of gas discharges from the treatment plant.
 19. A 100% replacement area for the Malibu Lumber leachfield shall be identified before discharge ~~unless the addition of soil to increase the separation between the bottom of the leachfield and the groundwater.~~
 20. To protect the existing septic systems in the area, groundwater monitoring wells will be installed per a workplan to be submitted for approved by the Executive Officer within 30 days of adoption of this Order. The wells will be located within 5 feet of the edge of the Malibu Lumber leachfield and in the center and at the perimeter of Legacy Park. Groundwater quality may not be degraded or the level of groundwater allowed to rise to within 5 feet of the base of the leachfield. The wells will be outfitted for manual surface sampling and with a transducer with surface connections capable of providing 24-hour water level measurements. Well completion shall follow California Department of Water Resources Bulletin 74-90 for monitoring well standards (January 1990).
 21. Groundwater at the Malibu Lumber leachfield was found at 14 feet below ground surface (bgs) in 2004 and at ~~7~~ 6.5 feet bgs in 1992. Ten feet of separation between the groundwater and the bottom of the disposal system is considered desirable. Five feet of separation is mandatory. Because the bottom of the proposed leachfield is 1.5 feet below the surface and water table variations of 2 to 8 feet have been recorded at the nearby Cross Creek, this separation may not always be maintained. ~~When~~ If the daily separation between the water table and the bottom of the leach field is less than 5 feet, operational changes at Malibu Lumber ~~and at Legacy Park~~ are required to eliminate effluent discharge until the water table is found to be more than five feet below the base of the leach field.

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22. Because sufficient separation may not always be present to remove nitrogen species, organics such as 1,4-dichlorobenzene and toluene and acetone, metals such as lead, cadmium and copper², and surfactants, effluent limits are required.
23. A recycled/reclaimed water system is proposed by Dischargers to reduce effluent discharge to the subsurface, including landscape irrigation. A Water Reclamation Requirement (WRR) for Malibu Lumber is contained within this document, based on conceptual approval by the California Department of Public Health (CADPH), which requires completion and approval of a full title 22 Engineering Report for recycle/reclamation use before discharge at Malibu Lumber and Legacy Park. Detail must be added to the conceptual plan already approved by CADPH. Regular reporting of water conservation and recycling/reclamation efforts will ensure ongoing participation by the tenants.
24. The waste flows at the Malibu Lumber redevelopment ~~are likely to~~ could potentially exceed the Malibu Plumbing Code requirement of 50 gallons per restaurant seating per day on the weekends and on holidays and especially in the summer. As an example, an equivalent use measured at Duke's Malibu for Memorial Day weekend on May 27, 2007 was found to be 71.5 gallons per day per seat. At this rate, the system maximum discharge would be 22,620 gallons per day, an increase of 5,620 gpd over the proposed maximum 17,000 gpd. Sufficient storage capacity shall be maintained to contain flows to within the maximum daily effluent limit defined under the Influent Limitation section. If the storage capacity becomes compromised, equalization tank pumping on an emergency basis, with written notification to the Regional Board Executive Officer, will be allowed.
25. With regard to the use of groundwater for municipal and domestic supply, the Dischargers have stated there are no public water supply wells downgradient of the leachfield. Potable water consumers in the area receive only imported water, and this is from the Los Angeles County Waterworks District No. 29. District No. 29 has received water from the Metropolitan Water District of Southern California via the West Basin Municipal Water District since 1961.
26. The facility is located in Section 32, Township 1S, Range 17W (USGS Malibu Beach 7' Quadrangle). It has a latitude is of $34^{\circ} 02' 4.20''$ and a longitude of $118^{\circ} 41' 4.92''$.

² page 3-37 Onsite Wastewater Treatment Systems Manual EPA 625/R-00/008, February 2002

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CONFORMANCE WITH REGIONAL OBJECTIVES

27. Water conservation practices must be implemented because the water table is has been less than ten feet from the surface. This project requires disposal of additional potable water, imported into the Malibu Valley Groundwater Basin, which already has groundwater levels that preclude the operation of septic systems under some conditions (e.g. high groundwater, low evapotranspiration, and rainfall or stormwater flows). As a result, the Dischargers are required to have tenants fully implement water conservation at the facility.
28. The capacity of unsaturated soils to remove pollutants during disposal into the groundwater of the Malibu Valley Groundwater Basin is a finite value defined by technical means and is known to vary with the elevation of the water table, the travel time of groundwater to surface discharge points, and the regional groundwater and surface water quality objectives. Because the existing technical information is not sufficient to ensure that this WDR/WRR will not result in further impairment of groundwater and surface water quality, groundwater monitoring is required which triggers a temporary end to discharge. ~~In addition,~~ Because cumulative effects may cause the failure of existing permitted facilities or preclude the operation of planned projects designed to remedy regional water quality problems, regular review of Discharger performance is necessary.
29. It may be necessary to modify the daily operation of Malibu Lumber and Legacy Park to maintain sufficient separation between the water table and the base of the leachfield. To ensure simultaneous operation does not impact existing facilities, groundwater monitoring wells shall be constructed at the Malibu Lumber leachfield and surrounding Legacy Park. The wells will provide daily water table levels used to indicate when operational changes at both facilities are required to prevent unacceptable rises in groundwater. Should the water table rise to within 5 feet of the base of the leachfield, waste discharge through the leachfield cannot continue and additional operational measures are required including reduced restaurant use, additional water conservation, and equalization tank pumping on an emergency basis with written notification to the Regional Board Executive Officer.
30. Because the existing and planned waste disposal flows, estimated at the time of the preparation of this WDR/WRR, may exceed the assimilative capacity of 35,000 gpd quantified by the City for the Civic Center area in its April 28, 2005, *Final Integrated Water Quality Management Feasibility Study*, new subsurface disposal in Malibu Valley beyond this WDR/WRR may not be permitted before additional disposal capacity is documented.

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APPLICABLE LAWS, PLANS, POLICIES AND REGULATIONS

31. On June 13, 1994, the Regional Board adopted a revised Water Quality Control Plan for Coastal Watersheds of Los Angeles and Ventura Counties (Basin Plan) and subsequently amended. The Basin Plan (i) designates beneficial uses for surface and groundwater, (ii) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the State antidegradation policy (Statement of Policy with Respect to Maintaining High Quality Waters in California, State Water Resources Control Board (State Board) Resolution No. 68-16, October 28, 1968), and (iii) describes implementation programs to protect all waters in the Region. In addition, the Basin Plan incorporates by reference applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. The Regional Board prepared the 1994 update of the Basin Plan to be consistent with previously adopted State and Regional Board plans and policies. The Basin Plan has been updated to include adopted Total Maximum Daily Loads. This Order implements the plans, policies and provisions of the Regional Board's Basin Plan.
32. On November 16, 2000, the State Board adopted a revised Water Quality Control Plan for the Ocean Waters of California (Ocean Plan). The State of California Office of Administrative Law and the USEPA approved a revised plan in 2005. The revised plan contains water quality objectives for coastal waters of California. This Order implements receiving water limitations, prohibitions, and provisions that implement the objectives of the Ocean Plan.
33. The State Board designated Malibu Lagoon (Surfrider) Beach, Malibu Lagoon and Malibu Creek as impaired for pathogens on the 2002 303(d) list. They are on the 2006 303(d) list of Water Quality Limited Segments Being Addressed by USEPA TMDLs. On January 24, 2002 and December 12, 2002, the Los Angeles Regional Water Quality Control Board (Regional Board) adopted a Total Maximum Daily Load (TMDL) for bacteria during dry and wet weather, respectively, in Santa Monica Bay which amended to the Basin Plan. On December 13, 2004, the Regional Board also adopted a TMDL for bacteria in Malibu Creek and Lagoon. The Malibu Lumber redevelopment is located 1,500 feet from Santa Monica Bay and 1,000 feet from the tributary, Malibu Creek. On March 21, 2003, the United States Environmental Protection Agency (USEPA) promulgated a nutrient TMDL for Malibu Creek Watershed. This WDR/WRRs must consider the continuing exceedance of Basin Plan standards in these waterbodies adjacent to the site.
34. The City of Malibu submitted their report *Risk Assessment of Decentralized Wastewater Treatment Systems in High Priority Areas in the City of Malibu* on August 30, 2004. The report states that 78,000 to 127,000 cubic feet per day (page 94) of groundwater from the project vicinity discharges into Santa Monica Bay or Malibu Creek. As part of the Memorandum of Understanding between the Regional Board and the City of Malibu, the City committed to reduce the bacteria loads from onsite wastewater treatment systems in

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the "Malibu Lagoon Contributing Area" where the transit time of groundwater to surface waters is 6 months or less. The Malibu Lumber redevelopment project area lies within the area requiring reduction of bacteria loads.

35. The bacteria numeric targets are defined in the Santa Monica Bay beaches, including Surfrider Beach, and the Malibu Creek and Lagoon TMDLs, all of which lie downgradient from the site. The number of days when fecal coliform can exceed 400 or when enterococcus can exceed 104 per 100 milliliters, as defined in the Regional Board's Santa Monica Bay Beaches TMDL, is zero for dry and wet weather. In the Malibu Creek and Lagoon Bacteria TMDL, the allowable exceedance days for the single sample limits based on daily sampling are three, 17, and zero for winter dry-weather period (November 1 to March 31), wet weather period (November 1 to October 31) and summer dry weather period (April 1 to October 31), respectively.
36. Nutrient load numeric targets³ for the EPA's TMDL for Malibu Creek Watershed, which lies downgradient from the site, are as follows:

Malibu Creek:

Total Nitrogen (November 16-April 14)	8.0 milligrams per liter (mg/L)
Total Nitrogen (April 15-November 15)	93% reduction in septic system loading
Phosphorus (April 15-November 15)	90% reduction in septic system loading

37. The Basin Plan designates beneficial uses and water quality objectives for groundwater is as follows:

Malibu Valley Groundwater Basin:

Existing: agricultural supply.

Potential: municipal and domestic water supply, industrial service supply

38. TMDLs promulgated by the Regional Board and USEPA, and the 2004 risk assessment completed by the City of Malibu, identify the vicinity of the project as an area of high risk for bacteria and nutrient impairment of surface water and identified a principal cause of that impairment as discharged groundwater. Under such conditions, the groundwater quality must be sufficient to protect the beneficial uses of that surface water, which are follows:

Malibu Creek

³ (page 42) "The highest priority for implementation is to ensure that discharges from commercial septic systems do not cause nutrient discharges to surface waters, particularly in the Malibu Lagoon area".

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Existing: Recreation 1 and 2, Warm freshwater habitat, Cold freshwater habitat, Wildlife habitat, Rare, threatened or endangered species, Migration of aquatic organisms, Spawning reproduction and/or early development, and Wetland habitat.
Potential: Municipal and domestic water supply.

Malibu Beach:

Existing: Recreation 1 and 2, Commercial and sport fishing, Marine habitat, Wildlife habitat, Migration of aquatic organisms, Spawning reproduction and/or early development, and Shellfish harvesting.

Malibu Lagoon:

Existing: Navigation, Recreation 1 and 2, Estuarine habitat, Marine habitat, Wildlife habitat, Preservation of Biological Habitat, Migration of Aquatic Organisms, Spawning, Reproduction and/or Early Development, and Wetland Habitat.

39. A recycled/reclaimed water policy is being considered by the State Water Resource Control Board which is expected to redefine the responsibilities of the California Department of Public Health (CADPH) and the Regional Water Boards. Upon adoption of the policy, this WDR/WRR may be modified.
40. Upon approval of a complete title 22 Engineering Report by the California Department of Public Health with the construction design for the facility, and their incorporation in this document by reference and other modifications as may be necessary, the Regional Board Executive Officer may consider these WDRs to include Wastewater Reclamation Requirements.
41. The Dischargers are not able to quantify all potential impacts, if any, that may result from the discharge to groundwater or to nearby surface waters. The Dischargers are required to monitor for caffeine, MBAS, total coliform, fecal coliform and enterococcus bacteria, nitrate, nitrite, ammonia and organic nitrogen in groundwater in accordance with Monitoring and Reporting Program (MRP) No. CI XXXX. Ongoing groundwater studies in the Civic Center area may cause the Executive Officer to modify the requirements of the MRP.

CEQA and NOTIFICATION

42. This project involves new facilities and, as such, must meet the provisions of the California Environmental Quality Act (Public Resources Code, section 21000 et seq.), in accordance with California Code of Regulations, title 14, section 15301. The City, as lead agency, certified a Mitigated Negative Declaration (MND) on August 21, 2007.

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43. The Regional Board has notified the Dischargers and interested agencies and persons of the intent to issue Waste Discharge Requirements for this discharge, and has provided them with an opportunity to submit their views and recommendations for the requirements.
44. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge and to the tentative requirements.
45. Pursuant to California Water Code section 13320, any aggrieved party may seek review of this Order by filing a petition with the State Board. A petition must be sent to the State Water Resources Control Board, P.O. Box 100, Sacramento, California, 95812, within 30 days of adoption of the Order.

IT IS HEREBY ORDERED that Malibu Lumber LLC and the City of Malibu shall comply with the following:

A. PRETREATMENT REQUIREMENTS

1. Pretreatment Education: Dischargers shall provide documentation that they have taken steps to prevent chemicals added to the water by activities at the Malibu Lumber redevelopment (such as plumbing agents, cleaning agents and cosmetic/grooming products) from interfering with biological processes in the treatment system. The Dischargers and operator shall control chemical additives in the influent through the education of tenants and customers to minimize the presence of pollutants of concern in the wastewater stream and violation of the effluent limits.
 - a. Occupants of the property shall be notified by the Dischargers that they are responsible for eliminating influent waste from garbage disposals, every-flush toilet bowl cleaners, grease, and cleaning products.
 - b. Volatile organic compounds, such as those found in gasoline, solvents, and cosmetic products (including hair, nail and skin -care and treatment products), shall not be discharged into the disposal system.
 - c. Paints, anti-freeze and industrial chemicals shall not be discharged to the treatment plant, but sent to a local recycling or hazardous waste collection program.

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- d. Discharge of chlorine-treated water from pools, water features, and tanks and pharmaceuticals may also cause the system to produce water quality that may not meet effluent limits and shall not be discharged.
 - e. Documentation of the pretreatment educational materials and and/or lease provisions shall be included in a report on water conservation and recycling/reclamation to be provided within 30 days of adoption of this Order.
2. Restaurant Waste Management: The Dischargers shall provide a summary of:
- a. The adequacy of the capacity and design of the Best Management Practices (BMPS) to trap and manage fats, oils, and grease before entering the primary separation tank.
 - b. An operation and maintenance plan for all restaurants and food services establishments, that is capable of preventing fats, oils and grease from entering the treatment system, and also controlling cleaning agents in wastewaters that enter the treatment system.
3. Water Conservation: Water conservation technology and practices shall be used by tenants and customers throughout the redevelopment to decrease the additional potable water added to Malibu Valley Groundwater Basin and the impact on the water balance. The reduction in water consumption shall be predicted and quantified in the Water Conservation Report, which shall include the number and flow standards of all plumbing fixtures and water usage assumptions, and submitted for approval by the Executive Officer within 30 days of adoption of this Order.

B. INFLUENT REQUIREMENTS

1. Monitoring Point: The influent shall be sampled before the waste stream enters the Malibu Lumber treatment system.
2. Domestic Waste: Waste discharge shall be limited to domestic-commercial wastewater only. No water softener or garbage disposal discharge is allowed into the collection systems that flow to the treatment unit.
3. Zero Discharge: The influent flow to the treatment system will be reduced through operational changes at Malibu Lumber or ~~Legacy Park~~, such as elimination of use, increased water recycling, irrigation, water conservation or off-site discharge, when the water table is equal to or less than 5 feet below the base of the leach field. Should the water table rise to within 5 feet of the base of the leach field in any well, waste discharge

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through the Malibu Lumber leachfield or irrigation system cannot continue and additional operational measures shall be implemented. These measures include reduced restaurant use, water conservation, and equalization tank pumping on an emergency basis with written notification to the Regional Board Executive Officer approval. The influent and effluent flow limits are as follows:

TABLE 1: INFLUENT AND EFFLUENT FLOW LIMITS

Daily Water Table Separation From the Base Of the Leach Field		
In Wells	System Influent (gpd)	System Effluent (gpd)
More than 10 feet	max daily 17,000	max daily 17,000
Less than 10 feet	max daily 10,000 ⁴	max daily 17,000
Less than 5 feet	less than Recycle and Storage Capacities ⁵	No discharge

4. Continuous Flow Measurement: Influent daily flows will be measured mechanically with an in-stream flow meter. The flow measurements will be confirmed with the submission of average and maximum daily use in monthly potable water bills.

C. EFFLUENT REQUIREMENTS

1. Monitoring Points: The effluent shall be sampled and effluent requirements shall apply (a) as effluent leaves the disinfection system at Malibu Lumber and also (b) before discharge to the leachfield or recycled/reclaimed system if the effluent is stored for more than 72 hours.
2. Zero Discharge: Discharge can be allowed to leachfields only when the groundwater table is 5 feet or below the bottom of the leachfield as measured in groundwater

⁴ The flow levels are predicted to be achievable through several methods, including storage and conservation operation.

⁵ Recycle and Storage capacity to be quantified in the title 22 Engineering Report. Another disposal alternative is pumping of groundwater which requires additional permitting from the Regional Board. Pumping of treatment system tanks is considered an alternative discharge from the system, if it is not maintenance-related pumping, and is allowed only with written notice to the Executive Officer.

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monitoring wells around a perimeter 5 feet from the edges of the leachfield and at the edges of Legacy Park and as described in Table 1.

3. Maximum Flows: The maximum daily flow from the on-site wastewater treatment system shall not exceed the flows listed in the Table 1 above. Effluent daily flows shall be measured mechanically with in-stream flow meter.
4. Title 22: The effluent shall be oxidized and comply with the title 22 Department of Public Health Division of Drinking Water Treatment Technology Report for Recycled/reclaimed Water, January 2007, guidance for disinfected tertiary recycled/reclaimed water, sections 60301.230(a) and (b).
5. pH: The pH of wastes discharged shall at all times be 6.5 to 8.5 pH units.
6. Numerical Limits: The wastewater discharged to the leachfield disposal system shall not contain constituents in excess of the following limits which are based on Basin Plan requirements for groundwater in Malibu Valley Groundwater Basin and title 22 water recycling/reclamation regulations:

Constituent	Units ⁶	Monthly Average	Daily Maximum
Total Dissolved Solids	mg/L	--	2000
Biological Oxygen Demand	mg/L	30	--
Oil and Grease	mg/L	10	15
Turbidity	NTU	2	10 ⁷
Sulfate	mg/L	500	--
Chloride	mg/L	500	--
Boron	mg/L	2	--

7. Pathogen Limits: The wastewater discharged to the disposal system shall not contain constituents in excess of the following limits from the Basin Plan, the Ocean Plan and based on the numeric target in the Santa Monica Bay Beaches and Malibu Creek and Lagoon Bacteria TMDLs for surface discharge during wet and dry weather:

⁶ mg/L is Milligrams/liter, NTU is nephelometric turbidity units

⁷ After the adoption of the Recycled/reclaimed Water Policy, this WDR/WRR may be modified to include California Department of Public Health title 22 turbidity requirements.

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Constituent mpn/100mL ⁸	30-day Log Mean	Geometric		7-day Maximum	Maximum
		30-day Mean			
Total coliform	--	--		1.1 ⁹	230 ¹⁰
Fecal coliform	200 ¹¹		200 ¹³	--	400 ¹³
E. Coli coliform	126 ¹³		--	--	235 ¹³
Enterococcus	--	35 ¹²		--	104 ¹⁵

8. Nutrient Limits: The nutrient in the wastewater discharged to the disposal system must not contain constituents which would exceed the load allocations in EPA's Nutrient TMDL for surface water in Malibu Creek Watershed which calls for a 93% reduction in total nitrogen discharge. Typical discharge concentrations from standard commercial septic discharges with a denitrification process are 10 mg/L or below. While 20% additional nitrogen loss, from 17,000 gpd at 10 mg/L, might be expected during nitrification within an elevated leachfield where soil addition has provided an expanded unsaturated zone beneath the leachfield, the 93% reduction must otherwise be met at the effluent monitoring point¹³.

Constituent	Monthly Average (mg/L)
Total Nitrogen ¹⁴	1 (applies if the leachfield is constructed without soil addition and less than 10 feet of separation is maintained between the bottom of the leachfield and the highest historical groundwater)
Total Nitrogen	3 (applies if the leachfield is constructed with soil addition and/or more than <u>10</u> 5 feet of separation is maintained between the bottom of the leachfield and the groundwater)

9. Phosphorus: The phosphorus in the wastewater discharged to the disposal system shall not contain constituents that would exceed the load allocations or numeric targets in

⁸ MPN/100mL: Most Probable Number per 100 milliliter.

⁹ Municipal potential use Basin Plan

¹⁰ Title 22

¹¹ RWQCBLA Basin Plan and/or Malibu Creek TMDL

¹² 2005 Ocean Plan and/or the Santa Monica Bay TMDL

¹³ page 3-29 to 31 Onsite Wastewater Treatment Systems Manual EPA 625/R-00/008, February 2002. 93% load reduction of 17000 gpd at 10 mg/l is a 0.7 mg/L. 73% load reduction at 10mg/L is 2.66 mg/L.

¹⁴ Total nitrogen to include Nitrate-N, Nitrite-N, Ammonia-N and Organic nitrogen.

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EPA's Nutrient TMDL for surface water in Malibu Creek Watershed, which calls for a 90% reduction in phosphorus from septic systems.

10. Priority Pollutants: Priority Pollutants (Appendix A) shall not be discharged in concentrations which exceed the more restrictive of the California Chronic Toxicity Rule, because of documented discharge of effluent to the Ocean from the site, or Federal Maximum Contaminant Limits.
11. Narrative Limits: The wastewater discharged to the disposal system shall not contain salts, metals, nitrogen and phosphorous species, organic chemicals, or priority pollutants at levels that would impact groundwater or surface water that may be in hydraulic connection with groundwater.
12. Noncompliant Waste: Any wastes that do not meet the foregoing requirements shall be held in impervious containers, and discharged at a legal point of disposal.

D. GROUNDWATER REQUIREMENTS

1. Groundwater Monitoring Workplan: The Dischargers shall submit a workplan for a groundwater network and monitoring program for approval by the Executive Officer within 30 days from adoption of this Order, with groundwater monitoring to commence within the first quarter.
2. Monitoring Network: The groundwater quality and elevation limits shall apply to groundwater monitoring wells placed at Malibu Lumber and Legacy Park. The separation between the base of the Malibu Lumber leachfield and the water table and the water quality shall be measured within 5 feet of the edge and center of the leachfield. The separation shall also be measured at wells around the perimeter of the Legacy Park property. The wells shall also serve as the compliance points for groundwater quality monitoring because the treated effluent is expected to improve the groundwater quality in the vicinity of the discharge. This effect can be best quantified by contrasting groundwater quality in wells immediately up and downgradient of the leachfield system and irrigated areas.
3. Groundwater Limits: The groundwater sampled at the wells shall not contain constituents in excess of the following limits based on Basin Plan and Ocean Plan requirements and in conformance with the TMDLs quoted above:

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<u>Constituent</u>	<u>Units</u>	<u>Maximum</u>
Total Dissolved Solids	mg/L	2,000
Nitrogen ¹⁵	mg/L	1 or 3 ¹⁶
Sulfate	mg/L	500
Chloride	mg/L	500
Boron	mg/L	2
Fecal coliform	MPN/100mL	200
Enterococcus ¹⁷	MPN/100mL	104

4. Groundwater Discharge to Surface: Any discharge from the groundwater to the surface or surface water, which Regional Board staff identifies as related to the treatment plant operation and disposal of effluent, shall also be sampled by the Dischargers (a) at the surfacing location, (b) at a background location and/or upgradient location such as City of Malibu well 7b and (c) at the effluent sampling point. Testing in a California certified laboratory shall be for three of the following: caffeine, an endocrine disrupter, methylene blue active substances (MBAS) or a tracer placed in the leachfield and sampled at an interval sufficient to allow subsurface transport. A report confirming test results shall be delivered to the Executive Officer 30 days after the effluent's appearance at the surface. If Regional Board staff determines that an equivalent proportion of the chemicals, regardless of the absolute magnitude, are present in the discharged fluids and the effluent or discharge, the fluid shall be considered an illicit discharge to the surface, which is prohibited. If the system discharges to the surface, it is a violation of this WDR/WRR and also a discharge without filing a Report of Waste Discharge.
5. Water Table Elevation: If Regional Board staff determines that discharge has occurred when the water table is 5 feet below the base of a leachfield at Malibu Lumber or Legacy Park, the discharge shall be considered an illicit discharge to the groundwater, a Water of the State, which is prohibited.

E. RECYCLING REQUIREMENTS

1. Monitoring Point: The recycling requirements shall apply to effluent before it is discharged into the reuse/recycled/reclaimed system or after 72 hours of storage.

¹⁵ Nitrogen to include Nitrate-N plus Nitrite-N.

¹⁶ 3 mg/L is allowed where 10 feet of separation is present between the groundwater and the bottom of the leach field, otherwise 1 mg/L is required beneath the leachfield.

¹⁷ 2005 Ocean Plan or Santa Monica Bay TMDL numeric target

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2. Title 22 Regulations: The effluent shall be oxidized and comply with the title 22 Department of Public Health Division of Drinking Water Treatment Technology Report for Recycled/Reclaimed Water, January 2007, guidance for disinfected tertiary recycled/reclaimed water, sections 60301.230(a) and (b).
3. Title 22 Approval: There shall be no direct or indirect discharge of wastes to a recycle waste system until the California Department of Public Health has approved a complete title 22 Engineering Report. At the time of the approval of the complete recycling plan, the Dischargers will provide quantification of temporary conservation measures such as changes in restaurant operation and water consumption in the water recycling system and irrigation system ('recycle capacity') for approval by the Executive Officer. Storage of the flows before or within the treatment system which does not limit system performance will also be quantified ('storage capacity.')
4. Numeric Limits: The recycled/reclaimed water shall not contain constituents with concentrations in excess of the following limits (Table 2)

TABLE 2: RECYCLED/RECLAIMED WATER LIMITS

Constituent	Units	Monthly Average	Daily Maximum
Oil and grease	mg/L	10	15
Total dissolved solids	mg/L	--	2000
Chloride	mg/L	--	500
Sulfate	mg/L	--	500
Boron	mg/L	--	2
Total nitrogen ¹⁸	mg/L	--	4 or 3 ¹⁹

5. Turbidity: The turbidity of the membrane product water prior to disinfection shall not exceed 0.2 NTU more than 5 percent of the time within a 24-hour period and 0.5 at NTU at any time. The turbidity shall be continuously measured with at least one reading every 4 hours and recorded. When the turbidity requirements are exceeded, delivery of recycled/reclaimed water shall be suspended until such time the cause of the exceedance has been identified and corrected.

¹⁸ Total nitrogen is sum of nitrite-N, nitrate-N, NH₃-N, and organic-N.

¹⁹ 3 mg/L is allowed where 10 feet of separation is present between the groundwater and the bottom of the leach field, otherwise 1 mg/L is required beneath the leachfield.

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6. Disinfection: Recycled/reclaimed water shall be, at all times, adequately disinfected such that the number of total coliform bacteria shall not exceed any of the following, based on daily grab samples:
 - a. A 7-day median of 2.2 most probable number (MPN) per 100 milliliters;
 - b. 23 MPN per 100 milliliters in more than one sample in any 30 day period prior to delivery of recycled/reclaimed water; and,
 - c. MPN/CFU of 240 total coliform bacteria per 100 milliliters.
7. UV Equivalency: Within 6 months of adoption, the Dischargers shall send a report to the Regional Board and the CADPH that demonstrates equivalency of UV disinfection to chlorine disinfection as used in recycled/reclaimed water treatment plants. Equivalency of UV disinfection to a conventional process used in wastewater recycling and reuse/recycle/reclamation must be demonstrated by the following criteria:
 - a. Total coliform count equal to or less than 2.2/100 ml met with the sample statistical frequency as required for chlorine disinfection; and,
 - b. Virus inactivation efficiency equivalent to that achieved with chlorine disinfection 4 log of inactivation (i.e., 99.99 percent reduction), based on plaque-forming units of F-specific bacteriophage MS2 or polio virus in wastewater.
8. pH: The pH of the recycled/reclaimed water shall be, at all times, within the range of 6.5 to 8.5 pH units. Excursions from this range shall not be considered a violation provided the duration is not more than 10 minutes in a 24-hour period, and the pH shall at all times be within 6 to 9.
9. Narrative Limits: The recycled/reclaimed water shall not contain trace, toxic and other constituents in concentrations exceeding:
 - a. The current applicable Maximum Contaminant Levels (MCLs) for drinking water established by the CADPH.
 - b. Any new Federal or State MCL upon adoption; or
 - c. At levels that adversely affect the beneficial uses of receiving groundwater.
10. Uses: The treated recycled/reclaimed water may be used for the following:

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- a. Surface irrigation in the following areas: Food crops, including all edible root crops, where the recycled/reclaimed water comes into contact with the edible portion of the crop; parks and playgrounds; school yards; residential and freeway landscaping; unrestricted access golf courses; and other allowable irrigation applications specified in the Water Recycling Criteria, Chapter 3, title 22, California Code of Regulations, provided approval from CADPH and Regional Board Executive Officer are obtained prior to delivery.
 - b. Industrial or commercial cooling tower, Industrial boiler feed, and Recreational Impoundments are also allowed.
11. Additional Uses: The recycled/reclaimed water shall not be used other than as specified above unless an engineering report has been submitted for such other uses and/or requirements for these uses have been prescribed by this Regional Board, in accordance with section 13523 of the California Water Code.
 12. No Human Consumption: Recycled/reclaimed water shall not be used for direct human consumption or for the processing of food or drink intended for human consumption.
 13. Users: The delivery of recycled/reclaimed water to end-users shall be subject to CADPH approval and/or its delegated local agency.
 14. Use Area: Use area is an area of recycled/reclaimed water use with defined boundaries, which may contain one or more facilities where recycled/reclaimed water is used. The Dischargers shall be responsible to ensure that all users of recycled/reclaimed water comply with the following:
 - a. All use areas where recycled/reclaimed water is used that are accessible to the public shall be posted with signs that are visible to the public, in a size no less than 4 inches high by 8 inches wide, that include the following wording: "RECYCLED/RECLAIMED WATER – DO NOT DRINK". Each sign shall display an international symbol to alert people who do not read English.
 - b. No physical connection shall be made or allowed to exist between any recycled/reclaimed water piping and any piping conveying potable water, except as allowed under section 7604 of title 17, California Code of Regulations.
 - c. The portions of the recycled/reclaimed water piping system that are in areas subject to access by the general public shall not include any hose bibs. Only quick couplers that differ from those used on the potable water system shall be used on the portions of the recycled/reclaimed water piping system in areas subject to public access.

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15. Unstable Earth: Recycled/reclaimed water use shall not result in earth movement in geologically unstable areas.
16. Water Well Protection: No impoundment or effluent holding ponds of disinfected recycled/reclaimed water shall occur within 50 feet of any domestic water wells, potable water reservoirs, and streams used as sources of water supply.
17. Drift: Whenever a cooling system, using recycled/reclaimed water in conjunction with an air conditioning facility, utilizes a cooling tower or otherwise creates a mist that could come into contact with employees or members of the public, the cooling system shall comply with the following:
 - a. A drift eliminator shall be used whenever the cooling system is in operation.
 - b. A chlorine, or other, biocide shall be used to treat the cooling system recirculating water to minimize the growth of *Legionella* and other microorganisms.
18. Irrigation and wells: No irrigation areas with recycled/reclaimed water shall be located within 50 feet of any domestic water supply well unless all of the following conditions have been met:
 - a. A geological investigation demonstrates that an aquitard exists at the well between the uppermost aquifer being drawn from and the ground surface;
 - b. The well contains an annular seal that extends from the surface into the aquitard;
 - c. The well is housed to prevent any recycled/reclaimed water spray from coming into contact with the wellhead facilities;
 - d. The ground surface immediately around the wellhead is contoured to allow surface water to drain away from the well; and
 - e. The owner of the well approves of the elimination of the buffer zone requirement.
19. Irrigation and waterbodies: No irrigation shall take place within 50 feet of any reservoir or stream used as a source of domestic water.
20. Maintenance: Use of recycled/reclaimed water shall comply with the following:
21. Recycled/reclaimed water shall be applied at such a rate and volume as not to exceed vegetative demand and soil moisture conditions.

- a. Special precautions must be taken to: prevent clogging of spray nozzles, prevent over-watering, and minimize the production of run-off.
 - b. Pipelines shall be maintained so as to prevent leakage;
22. Irrigation Runoff: Any irrigation runoff shall be confined to the recycled/reclaimed water use area and shall not be allowed to escape as surface flow, unless the runoff does not pose a public health threat and is authorized under a National Pollutant Discharge Elimination System (NPDES) permit issued by this Regional Board. For the purpose of this requirement, however, minor amounts of irrigation return water from peripheral areas shall not be considered a violation of this Order;
 23. Spray: Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities, and shall not contact any drinking water fountain and public present. Drinking water fountains must be equipped with hoods or covers;
 24. No Rainfall Irrigation: Recycled/reclaimed water shall not be used for irrigation during periods of rainfall and/or run-off.
 25. Recreational Lakes: Recycled/reclaimed water used for irrigation shall not be allowed to run off into recreational lakes unless it meets the criteria for such lakes.
 26. Public Contact: Recycled/reclaimed water use should be limited to times when public is not present.
 27. Marking: All above ground irrigation appurtenances need to be marked appropriately.
 28. Inspection: The area using recycled/reclaimed water shall be inspected annually by the Dischargers.
 29. Oversight: Supervisors must be appointed for the recycled/reclaimed water use areas and their staff must be trained on the hazards of working with recycled/reclaimed water and periodically retrained.
 30. User Agreement: The Dischargers will develop the User Agreements and Ordinances with the potential agricultural, industrial, and recreational users of recycled/reclaimed water. Copies of the User Agreements and Ordinances shall be provided to the Regional Board and the CADPH.
 31. Adjacent Homeowners: If the recycled/reclaimed water system lateral pipelines are located along the property lines of homeowners, there may be a potential for cross connections. A buffer zone between the recycled/reclaimed water lines and the

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property owners is necessary. However, if the Dischargers cannot maintain adequate control of the recycled/reclaimed water system pipelines, the pipelines shall be relocated or a physical barrier needs to be installed to prevent this type of potential problem. The homeowners shall be educated on the use of recycled/reclaimed water in the area. The Dischargers shall specify a plan to interface with the homeowners as a part of a Rules of Service Agreement in an adjacent property awareness program. The Dischargers shall submit this plan to the Regional Board and the CADPH within 30 days of becoming informed of the potential cross connection problem.

32. Dual Plumbing: The public water supply shall not be used as a backup or supplemental source of water for a dual-plumbed recycled/reclaimed water system unless the connection between the two systems is protected by an air gap separation that complies with the requirements of sections 7602 (a) and 7603 (a) of title 17, California Code of Regulations. Air gaps shall be at least twice the pipe diameter and be located above ground.
- a. The Dischargers shall not deliver recycled/reclaimed water for any internal use to any individually-owned residential units including free-standing structure, multiplexes, or condominiums.
 - b. The Dischargers shall not deliver recycled/reclaimed water for internal use, except for fire suppression system, to any facility that produces or processes food products or beverages.
 - c. The Dischargers shall not deliver recycled/reclaimed water to a facility using a dual plumbed system unless the report required under section 13522.5 of the Water Code, which meets the requirements set forth in section IV.8 and/or IV.9., has been submitted to, and approved by, the Regional Board and CADPH.
33. Dual Plumbing Requirements: If the Dischargers choose to proceed with dual plumbing they shall submit to the CADPH pursuant to section 13522.5 of the Water Code shall contain the following information for dual plumbed systems, in addition to the information required by section 60323 of title 22 of the California Code of Regulations:
- a. A detailed description of the intended use site identifying the following:
 - 1) The number, location, and type of facilities within the use area proposing to use dual plumbed systems;
 - 2) The average number of persons estimated to be served by each facility on a daily basis;
 - 3) The specific boundaries of the proposed use site including a map showing the location of each facility to be served;

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- 4) The person or persons responsible for operation of the dual plumbed system at each facility; and
 - 5) The specific use to be made of the recycled/reclaimed water at each facility.
- b. Plans and specifications describing the following:
- 6) Proposed piping system to be used;
 - 7) Pipe locations of both recycled/reclaimed and potable systems;
 - 8) Type and location of the outlets and plumbing fixtures that will be accessible to the public; and
 - 9) The methods and devices to be used to prevent backflow of recycled/reclaimed water into the public water system.
 - 10) The methods to be used by the Dischargers to assure that the installation and operation of the dual plumbed system will not result in cross connections between the recycled/reclaimed water piping system and the potable water piping system. These shall include a description of pressure, dye or other test methods to be used to test the system every four years.
- c. Prior to the initial operation of the dual-plumbed recycled/reclaimed water system and annually thereafter, the dual plumbed system within each facility and use site shall be inspected for possible cross connections with the potable water system. The recycled/reclaimed water system shall also be tested for possible cross connections at least once every four years. The testing shall be conducted in accordance with the methods described herein. The inspections and the testing shall be performed by a cross connection control specialist certified by the California-Nevada section of the American Water Works Association or an organization with equivalent certification requirements. A written report documenting the result of the inspection and testing for the prior year shall be submitted to the CADPH within 30 days following completion of the inspection or testing.
- d. The Dischargers shall notify the CADPH of any incidence of backflow from the dual-plumbed recycled/reclaimed water system into the potable water system within 24 hours of discovery the incident.
- e. Any backflow prevention device installed to protect the public water system serving the dual-plumbed recycled/reclaimed water system shall be inspected and maintained in accordance with section 7605 of title 17, California Code of Regulations.

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F. PROHIBITIONS

1. Limited Discharge: There shall be no direct or indirect discharge of wastes to groundwater or surface water, Waters of the State, at any time other than specified by this permit.
2. Zero Discharge Conditions: There shall be no direct or indirect discharge of wastes to groundwater or surface water, Waters of the State, when the separation between the base of the leach field and the water table is less than 5 feet in the groundwater monitoring wells.
3. Waste Characteristics. Wastes discharged shall not impart tastes, odors, color, foaming or other objectionable characteristics to the receiving ground water.
4. Stormwater Protection: Adequate facilities shall be provided to divert surface and stormwater away from the treatment plant and disposal system and from areas where any potential pollutants are stored.
5. Flood: The septic tanks, treatment system, sewer collection system and the sewage disposal system, shall be protected from damage by storm flows or runoff generated by a storm up to and including the 100-year storm.
6. Sludge: There shall be no onsite disposal of sludge. Any offsite disposal of sewage or sludge shall be made only to a legal point of disposal. For purposes of this Order, a legal disposal site is one for which requirements have been established by a California Regional Water Quality Control Board, and which is in full compliance therewith. Any sewage or sludge handling shall be in such a manner as to prevent its reaching surface waters or watercourses.
7. Odors: Sewage odors shall not be detectable. The close proximity of the property to other businesses mandates mechanical movement of fumes through filters where vacuum seals are least reliable. Sufficient technological remedies exist to prevent odor discharge from the treatment and disposal system at all times. Odor complaints, even if made by the public and not detected by the operator, are considered indicative of improper operation. Multiple odor complaints are considered indicative of a preventable nuisance which has not been remedied by the Dischargers.
8. Nuisance: The discharge of waste shall not create a condition of pollution, contamination, or nuisance. It shall not be considered an excuse that the property is in close proximity to other businesses as this treatment process has been selected by the Dischargers.
9. Toxicity: Wastes discharged from the wastewater treatment plant shall at no time contain any substances in concentrations toxic to human, animal, or plant life.

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10. Biota: Nutrient materials in the waste discharged to the leachfields shall not cause objectionable growth or degrade indigenous biota.
11. Bypass: Bypass (the intentional diversion of waste stream from any portion of a treatment facility) is prohibited. The Regional Board may take enforcement action against the Dischargers for bypass unless:
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that cause them to become inoperable, or substantial and permanent loss in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production);
 - b. There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment down time. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that could occur during normal periods of equipment downtime or preventive maintenance. This condition is not satisfied because of failure to design, permit or install a recycled/reclaimed water system for operation when discharge exceeds leachfield assimilation capacity.
 - c. The Dischargers must submit written notice at least 24 hours in advance of the need for a bypass to the Regional Board Executive Officer.
 - d. Pumping waste from the treatment system for purposes other than emergencies and regularly scheduled maintenance, indicates loss of system performance, and is also prohibited, without notification of the Executive Officer.
12. Leachfield Replacement: Discharge shall be prohibited if groundwater monitoring shows that the existing leachfield has failed and a 100% replacement area has not been identified on a map and submitted before discharge begins.

G. PROVISIONS

1. Deed Restriction: Before discharge, the Dischargers City of Malibu shall file with the Regional Board a letter from ~~their~~ its attorneys stating that the deed restrictions on the Malibu Legacy Property do not conflict with their obligations under the state and non-profit grants which provided funds for the purchase, nor with their obligations to the residents of the City of Malibu and especially those of Malibu Colony.

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2. **Monitoring Reports:** The Dischargers shall file, with the Regional Board, technical reports on self-monitoring work performed according to the detailed specifications contained in Monitoring and Reporting Program No. CI-XXXX, and as directed by the Executive Officer. The results of any monitoring done more frequently than required at the location and/or times specified in the Monitoring and Reporting Program shall be reported to the Regional Board.
3. **Groundwater Monitoring:** A monitoring program for groundwater shall be submitted and approved by Regional Board Executive Officer 30 days after approval of this Order so that the groundwater can be measured, sampled, and analyzed, and to determine if discharges from the disposal system have impacted, or are impacting, water quality or water levels. The wells included in the monitoring program will include, as a minimum, groundwater monitoring wells within 5 feet of the edge of the Malibu Lumber leachfield and at the center and with adequate frequency around the edge of Legacy Park.
4. **Baseline Groundwater Elevation:** The Dischargers shall establish baseline groundwater elevations from monitoring wells installed at the leachfields or irrigation and document them in monitoring reports.
5. **Title 22 Approval:** Final approval of the a complete title 22 Engineering plan, with plumbing design, shall be approved by CADPH before recycled/reclaimed water use begins. The Recycle and Storage capacity, defined under findings in this WDR/WRR, shall be quantified and submitted in the title 22 Engineering Report.
6. **Leachfield Replacement:** A 100% replacement area for the leachfield shall be identified on a map and submitted before discharge begins., ~~unless the Dischargers increase the elevation of the leach field through soil addition, allowing the replacement of the added material when percolation rates drop.~~
7. **Water Conservation Report:** The Dischargers shall provide an annual report regarding water conservation and water recycle/reclamation measures implemented, describing the operation and maintenance of the water conservation equipment and variations in potable, influent and effluent water flows. The first report is due 30 days after approval of this Order and shall include documentation of pre-treatment education, the method of attaining the recycle and storage capacities, and the maintenance or operational protocol established to enforce additional water conservation or storage measures when discharge is not possible.
8. **Inspection:** The Discharge shall cause the treatment and disposal system to be inspected once every year during the life of the permit by an inspector to be retained by the Dischargers.

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9. Onsite Wastewater Treatment Systems Regulations: The Dischargers shall comply with all applicable requirements of Chapter 4.5 (commencing with section 13290) of the California Water Code.
10. TMDL Compliance: The Regional Board has placed a Total Maximum Daily Load (TMDL) for bacteria in the Malibu Creek and Lagoon in the Basin Plan. USEPA has completed a TMDL for nutrients in Malibu Creek and Lagoon. The Dischargers shall comply with waste load allocations developed and approved pursuant to the TMDL for the area. The Regional Board may require that the Dischargers meet pathogen or nutrient limits stricter than those imposed in this Order.
11. Reduction of Impairments: The State Water Resource Control Board (SWRCB) and the Regional Board designated Malibu Creek, Malibu Lagoon and Malibu Lagoon (Surfrider's) Beach as impaired for coliform, swimming restrictions; and beach closures on the 2002 303d list. The discharge from this facility, and resultant changes in discharge from adjacent facilities, shall not cause continuing impairment of beneficial uses in the waterbodies adjacent to the site.
12. Notification of Surfacing: The Dischargers shall notify the Regional Board within 24 hours, by telephone, of any surfacing of wastes. Written documentation of the flows shall follow within 30 days and shall include information relative to the location(s), estimated volume, date and time, duration, cause, and remedial measures taken to affect cleanup and measures taken to prevent any recurrence and long term effects. Remedial measures shall include photographic documentation, immediate containment and chlorine disinfection of the surface flows and the removal of those flows by vacuum truck for legal offsite disposal. Sampling is required and includes assessment of chemicals included in the Groundwater Monitoring portion of the Monitoring and Reporting Program, CI XXXX, with the results to be provided within 30 days. Illegal surfacing of wastes may also include fluid flows to the surface adjacent to any part of the discharge system, even if storm or irrigation flows are thought to contribute to the discharge, under conditions described in Groundwater Limits Section
13. Protection of Human Health: Any water quality impact to surface and groundwater such as, but not limited to, risks to human health from pathogens, and accelerated eutrophication of surface waters from nutrients in wastewaters, shall be reported.
14. Posting: A copy of this Order shall be maintained at the treatment plant so as to be available at all times to operating personnel.
15. Future Studies; The Dischargers shall participate in the implementation of a watershed-wide Monitoring Program if the Executive Officer determines that a groundwater monitoring program for the Civic Center area is needed to evaluate cumulative impacts from waste discharges to groundwater. The Regional Board may

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require the Dischargers to participate with the Regional Board, and other stakeholders, in the development and implementation of a watershed-wide monitoring program.

16. Treatment Plant As-Builts: The Dischargers shall submit a final engineering report for the treatment plant, collection system, discharge systems, including the 'as built' engineering diagrams, to the Executive Officer within 30 days of the beginning of discharge.
17. Material Changes: In accordance with Water Code section 13260(c), the Dischargers shall file a report of any material change or proposed change in the character, location, or volume of the discharge. A material change includes pumping of more than 90% of the effluent, consistent with National Pollutant Discharge Elimination System requirements²⁰ for treatment plants.
18. Responsible Operation: The Dischargers shall operate and maintain its wastewater collection, treatment and disposal facilities in a manner to ensure that all facilities are adequately staffed, supervised, financed, operated, maintained, repaired, and upgraded as necessary, to provide adequate and reliable transport, treatment, and disposal of all wastewater from all wastewater sources under the Dischargers' responsibilities.
19. Operator Certification: Anyone employed in the operation of the wastewater treatment plant must be certified pursuant to Water Code sections 13625-13633. Additional supervision of the waste treatment process and disposal activities is required due to evidence of groundwater discharge to surface water which is impaired for bacteria in a high use area. The treatment plant does not meet the exception in Water Code section 13625.1(a) because operator failure may lead to a violation of water quality objectives. The operator must hold a certification as required by the California Department of Public Health.
20. Operation and Maintenance Manual: The Dischargers shall submit to the Regional Board an Operations and Maintenance Manual (O&M Manual) for the treatment plant and disposal facilities at flow ranging from no-flow to the maximum flow for approval by the Executive Officer before discharge. The Dischargers shall maintain the O&M Manual in useable condition, and available for reference and use by all personnel. The Dischargers shall regularly review, and revise or update as necessary, the O&M Manual(s) in order for the document(s) to remain useful and

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²⁰ TITLE 40 - PROTECTION OF ENVIRONMENT, CHAPTER I - ENVIRONMENTAL PROTECTION AGENCY, SUBCHAPTER D - WATER PROGRAMS, PART 122 - EPA ADMINISTERED PERMIT PROGRAMS: THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM SUBPART C - PERMIT CONDITIONS 122.42(b)

relevant to current equipment and operation practices. Reviews shall be conducted annually, and revisions or updates shall be completed as necessary and submitted to the Regional Board on an annual basis.

21. Disinfection Manual: The ultra-violet disinfection system and membrane filtration system require additional operational supervision and maintenance to ensure successful operation at flow ranging from no-flow to the maximum flow. The Discharger shall submit an O&M Manual for these two systems, which the Executive Officer determines is sufficiently detailed, before discharge, and kept on site. The treatment plant maintenance and operation shall comply with the National Water Research Institute/American Water Works Association Research Foundation Ultra Violet Disinfection Guidelines.
22. Notification: For any violation of requirements in this Order, the Dischargers shall notify the Regional Board within 24 hours of knowledge of the violation either by telephone or electronic mail. The notification shall be followed by a written report within one week. The Dischargers, in their next regularly scheduled monitoring report shall also confirm this information. In addition, the report shall include the reasons for the violations or adverse conditions, the steps being taken to correct the problem (including dates thereof), and the steps being taken to prevent a recurrence.
23. Other Regulations: This Order does not relieve the Dischargers from the responsibility to obtain other necessary local, State, and federal permits to construct facilities necessary for compliance with this Order; nor does this Order prevent imposition of additional standards, requirements, or conditions by any other regulatory agency.
24. Termination or Modification: After notice and opportunity for a hearing, this Order may be terminated or modified for causes including, but not limited, to:
 - a. Violation of any term or condition contained in this Order;
 - b. Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;
OR
 - c. A change in any condition, or the discovery of any information, that requires either a temporary or permanent reduction or elimination of the authorized discharge.
25. Additional Reports: The Dischargers shall furnish, within a reasonable period of time, any information the Regional Board may request to determine whether or not cause exists for modifying, revoking and reissuing, or terminating this Order. The Dischargers shall also furnish to the Regional Board, upon request, copies of records required to be kept by this Order.

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26. Standard Provision: This Order includes the attached Standard Provisions Applicable to Waste Discharge Requirements which are incorporated herein by reference and attached. If there is any conflict between provisions stated herein and the Standard Provisions Applicable to Waste Discharge Requirements, the provisions stated herein will prevail.
27. Access: The Dischargers shall allow Regional Board staff, or an authorized representative upon the presentation of credentials and other documents as may be required by law, to:
- a. Enter upon the Dischargers' premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
 - b. Have access to and copy any records that must be kept under the conditions of this Order;
 - c. Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
 - d. Sample or monitor for the purposes of assuring compliance with this Order, or as otherwise authorized by the Water Code, any substances or parameters at any locations.
28. Term: This Order shall remain in effect for a period of 5 years. Should the Dischargers wish to continue discharging to groundwater for a period of time in excess of 5 years, the Dischargers must file a Report of Waste Discharge with the Regional Board no later than 140 days in advance of the 5th-year anniversary date of the Order for consideration of issuance of new or revised requirements. Any discharge of waste five years after the date of adoption of this Order, without filing a Report of Waste Discharge with this Regional Board, is a violation of Water Code section 13264. The Regional Board is authorized to take appropriate enforcement action for any noncompliance with this provision including assessment of penalties.
29. Discharge a Privilege: All discharges of waste into the waters of the State are privileges, not rights. In accordance with Water Code section 13263(g), these requirements shall not create a vested right to continue to discharge and are subject to rescission or modification.

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H. RESCISSION

Enrollment of Malibu Lumber in State Water Resources Control Board Quality Order No. 97-10-DWQ, Series No. 020, and Monitoring and Reporting Program CI-8695 adopted by this Board on January 15, 2004 is hereby rescinded, except for enforcement purposes.

I, Tracy J. Egoscue, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of this Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on December 11, 2008.

Tracy J. Egoscue
Executive Officer

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~~Figure 1~~

~~(Final Malibu Lumber map) map showing overlap with DEIR Construction plans for Legacy Park and cross sections showing the separation between the base of the Malibu Lumber leach field and the highest recorded water table to be provided by the Discharger)~~

~~Figure 2~~

~~(Legacy Park map Final Malibu Engineering Design including modifications made for low flow to be provided by the Discharger)~~

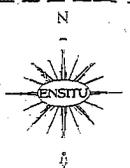
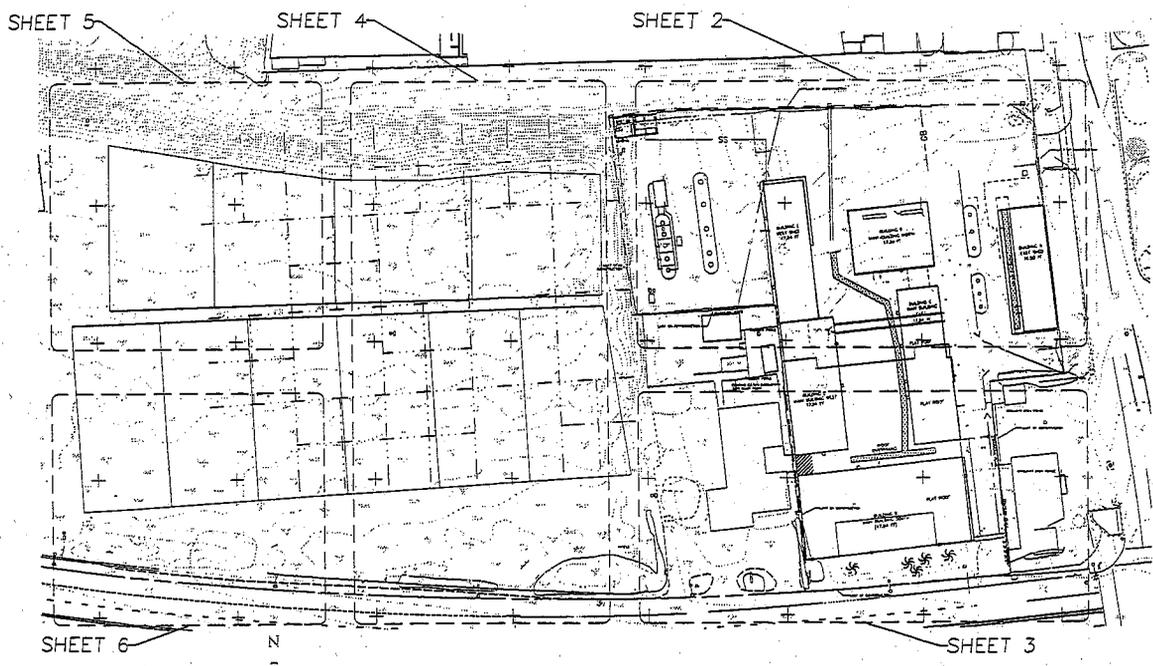
~~Figure 3~~

~~(Operation and Maintenance Manuals for the [a] treatment plant and [b] disinfection system describing daily operation of the UV and membrane systems, including operations at low flow to be provided by the Discharger)~~

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MALIBU LUMBER PACIFIC COAST HIGHWAY WATER TREATMENT SYSTEM MALIBU, CALIFORNIA


ENSITU
 ENSITU ENGINEERING, INC.
 409 MAIN ST., SUITE 4
 MALIBU, CALIF. 90263
 TEL: 310.772.0150



OVERALL SITE PLAN AND DRAWING INDEX
1" = 50'



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FIGURE 1

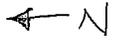
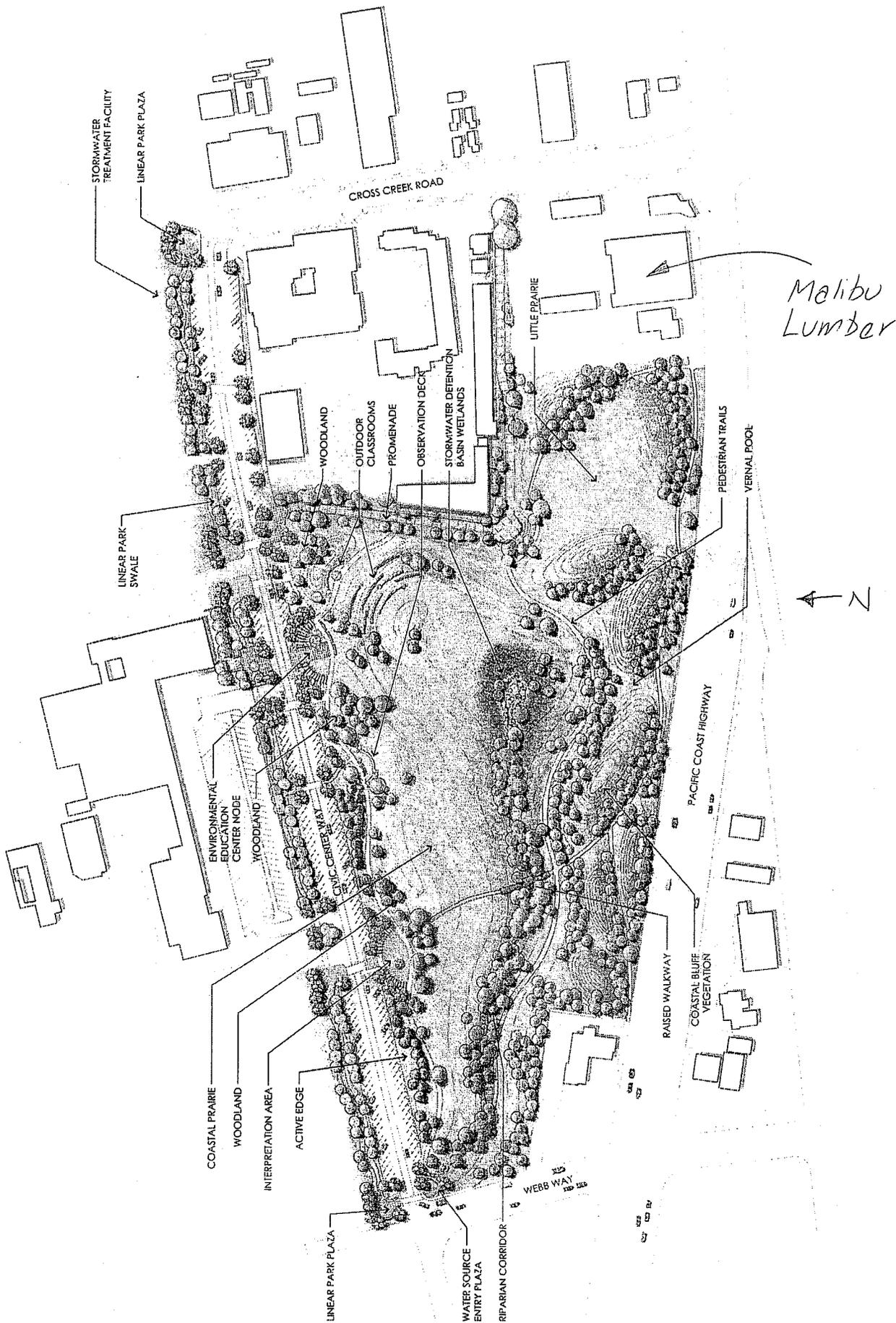
JOHN N. YAROSLASKI
 PRINCIPAL ENGINEER

NO.	REVISIONS	DATE BY

MALIBU LUMBER
 COVER SHEET
 MALIBU CALIFORNIA

REGISTERED PROFESSIONAL
 ENGINEER
 40149
 EXP. 03/01
 CIVIL
 STATE OF CALIF.

DATE: OCT 2000
 DESIGNED BY:
 DRAWN BY: E
 CHECKED BY:
 JOB N
 444-0
 SHEET
 1 of 6



Malibu Legacy Park Project
 Preferred Site Plan
 September 18, 2007

