City of Malibu

Environmental Health · Environmental and Building Safety Division
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SUBMITTAL REQUIREMENTS FOR AN ALTERNATIVE ONSITE WASTEWATER TREATMENT SYSTEM

Conformance Review (Planning Stage Review)

For development projects that include a new onsite wastewater treatment system with: (i) a beachfront property location, (ii) discharge into one or more seepage pits, and/or (iii) discharge into a non-conforming disposal field (i.e., drip dispersal; too fast/slow percolation), the following items shall be submitted for review and approval by Environmental Health prior to completion of Conformance Review:

1) **Plot Plan:** A plot plan drawn to scale shall be submitted showing an alternative onsite wastewater treatment system (AOWTS) design meeting the minimum requirements of the current City of Malibu Plumbing Code for an alternate private sewage disposal system with tertiary treatment, i.e. Title 28 of the Los Angeles County Code, incorporating the California Plumbing Code, 2007 Edition, and the City of Malibu Ordinance No. 318 Amendments (MPC), and the City of Malibu Local Coastal Plan/Local Implementation Plan (LCP/LIP). At least one copy of the plot plan showing essential features of the AOWTS must fit on an 11" x 17" sheet leaving a 5" left margin clear to provide space for a City-applied legend on approvals. If the plan scale is such that more space is needed to clearly show construction details and/or all necessary setbacks, larger sheets may also be provided (up to a maximum size of 17" x 22" for review by Environmental Health).

2) **AOWTS Preliminary Design Report:** A preliminary design report and plan drawings shall be submitted so as to demonstrate the feasibility of the proposed project with respect to conformance with the MPC and LCP/LIP. The preliminary design drawings and calculations must be signed and stamped (where applicable) by a California-registered Civil Engineer, a Registered Environmental Health Specialist, or a Professional Geologist who is responsible for the design. The report must document the conceptual design basis for conformance with the AOWTS final design requirements shown below.

3) **Soils Analysis/Percolation/Infiltration Report:** The location, and construction dimensions of any proposed subsurface sewage effluent disposal system shall be based on a percolation/infiltration test report and/or soils analysis report that is performed for the express purpose of providing information to be used for design of an onsite wastewater treatment system. Percolation or infiltration tests shall be conducted by a California Certified Engineering Geologist, a California Registered Civil Engineer, or a California Registered Environmental Health Specialist. Soils analysis shall be conducted by a California Registered Professional Geotechnical Engineer, and the results shall include descriptions of both texture (expressed in United States Department of Agriculture terminology) and structure in accordance with the United States Environmental Protection Agency (2002) *Onsite Wastewater Treatment Systems Manual*. All failed test locations must be described in the report. ***Please note only original "wet signature" documents are acceptable***

4) **Supporting Geology/Soils Report**: A report from the project geologist and/or soils engineer shall be submitted which contains the items listed below. The report must be performed for the express purpose of providing information to be used for design of an onsite wastewater treatment system. ***Please note only original "wet signature" documents are acceptable.***

   a. Geology/Soils Description. Provide an analysis as to the natural soils and/or rock material located at the proposed subsurface sewage effluent dispersal area(s). For natural soils, United States Department of Agriculture soil texture triangle terminology shall be used. For rock material, major geologic units and rock types shall be described. Provide a soil profile extending from the base of the effluent dispersal system (i.e., infiltrative surface) to either the groundwater depth, or to the depth of the design boundary for effluent migration, whichever is most restrictive. For leaching bed or drip dispersal systems, the soil profile shall be obtained from test pits/trenches (or borings) extending at least 5 feet below the base of the effluent dispersal system. Describe geological and geohydrological conditions at all effluent dispersal system design boundaries (see USEPA 2002).

   b. Groundwater Statement. The consultant shall state where (i.e., at what depth) in his/her professional opinion: (i) is the annual average groundwater level is beneath the location of the effluent dispersal system and (ii) the seasonal high groundwater level is beneath the location of the effluent dispersal system. Any indication of historical high groundwater (i.e., soil mottling, etc.) shall be noted and considered. If groundwater is found during field exploration, then the consultant shall indicate where groundwater was found. The consultant shall also consider what effect, if any, the onsite wastewater dispersal system will have on groundwater (i.e., mounding, migration, daylighting, etc.) and describe the anticipated path of effluent in the subsurface.

   c. Anticipated Path of Effluent. Geologic cross sections(s) of the most critical slope shall be provided which depict the proposed development, proposed wastewater treatment system, and anticipated paths of effluent. The project geologist and/or soils engineer shall provide sufficient geologic data to substantiate their conclusions regarding the effects of effluent on groundwater levels under the site, the potential for mounding of groundwater, and the potential for effluent to daylight on the ground surface. The supporting geologic discussion shall include interpretations of geologic structure, stratigraphy (specifically, lithologic changes across the site that could affect hydraulic conductivities across the site), and discontinuities such as fractures, faults, clay seams, and joint systems.

   d. Stability Statement. Addressing the current development proposal, the consultant shall unequivocally state that the disposal of sewage effluent in the proposed subsurface dispersal areas on subject property will not cause any instability either for the subject property or for any neighboring property.

5) **Coastal Engineer Report (Beachfront Property Only):** A Wave Uprush Report by a Coastal Engineer shall be submitted as to necessity of a bulkhead/seawall, and the location and design of any existing, or proposed bulkhead/seawall, meant to protect any existing, or new onsite wastewater treatment system. The report must describe the design

beach profile and beach scour line subject to significant storm events. Provide a cross section drawn to scale with a precise datum reference showing the design beach profile and the proposed location for a structural protection device. The beach scour line shall be clearly labeled to facilitate development of an integrated cross section drawing showing geologic units and the anticipated path of effluent (fill, bedrock, beach sand). A copy of the report shall be submitted to both Environmental Health and to the City of Malibu Coastal Engineering reviewer. ***Please note only original "wet signature" documents are acceptable***.

6) **Environmental Health Conformance Review Fee:** A fee of **$950** shall be paid to the City of Malibu for Environmental Health's Planning-stage review of the AOWTS design.

Final Approval (Plan Check Stage Review)

Prior to final approval (Building and Safety plan check stage) the following items must be submitted for Environmental Health review and approval:

7) **Final AOWTS Plot Plan:** A final plot plan shall be submitted showing an AOWTS design meeting the minimum requirements of the MPC, and the LCP/LIP, including necessary construction details, the proposed drainage plan for the developed property, and the proposed landscape plan for the developed property. The AOWTS Plot Plan shall show essential features of the AOWTS and must fit on an 11" x 17" sheet leaving a 5" left margin clear to provide space for a City-applied legend. If the plan scale is such that more space is needed to clearly show construction details and/or all necessary setbacks, larger sheets may also be provided (up to a maximum size of 18" x 22" for review by Environmental Health).

8) **AOWTS Final Design Report and System Specifications:** A final design report, plan drawings, and system specifications shall be submitted as to AOWTS design basis and all components (i.e. alarm system, pumps, timers, flow equalization devices, backflow devices, etc.) proposed for use in the construction of the proposed alternative onsite wastewater system. The AOWTS final design drawings and calculations must be signed and stamped (where applicable) by a California-registered Civil Engineer, a Registered Environmental Health Specialist, or a Professional Geologist who is responsible for the design.

   The final AOWTS design report shall contain the following information (in addition to the items listed above).

   a. Required treatment capacity for wastewater treatment and disinfection systems. The treatment capacity shall be specified in terms of flow rate, gallons per day (gpd), and shall be supported by calculations relating the treatment capacity to the number of bedroom equivalents, plumbing fixture equivalents, and/or the subsurface effluent dispersal system acceptance rate. The drainage fixture unit count must be clearly identified in association with the design treatment capacity, even if the design is based on the number of bedrooms. Average and peak rates of hydraulic loading to the treatment system shall be specified in the final design.

b. Description of proposed wastewater treatment and/or disinfection system equipment. State the proposed type of treatment system(s) (e.g., aerobic treatment, textile filter, ultraviolet disinfection, etc.); major components, manufacturers, and model numbers for "package" systems; and design basis engineered treatment systems.

c. A summary of the supporting geology information and percolation test results for the subsurface effluent dispersal portion of the onsite wastewater disposal system. Describe the proposed type of effluent dispersal system (drainfield, trench, seepage pit, subsurface drip, etc.) as well as the system's geometric dimensions and basic construction features. Supporting calculations shall be presented that relate the results of soils analysis or percolation/infiltration tests to the projected subsurface effluent acceptance rate, including any unit conversions or safety factors. Average and peak rates of hydraulic loading to the effluent dispersal system shall be specified in the final design. The projected subsurface effluent acceptance rate shall be reported in units of total gallons per day (gpd) and gallons per square foot per day (gpsf). Specifications for the subsurface effluent dispersal system shall be shown to accommodate the design hydraulic loading rate (i.e., average and peak AOWTS effluent flow, reported in units of gpd). The subsurface effluent dispersal system design must take into account the number of bedrooms, drainage fixture units, and building occupancy characteristics.

d. All design drawings shall be submitted with the wet signature and typed name of the AOWTS designer. If the plan scale is such that more space than is available on the 11" x 17" plot plan is needed to clearly show construction details, larger sheets may also be provided (up to a maximum size of 17" x 22" for review by Environmental Health). [Note: For more complicated AOWTS designs and/or large properties, full-size plans also may be required.]

9) **Proof of Ownership:** Proof of ownership of subject property shall be submitted.

10) **Operations & Maintenance Manual:** An operations and maintenance manual specified by the AOWTS designer shall be submitted. This shall be the same operations and maintenance manual proposed for later submission to the owner and/or operator of the proposed alternative onsite wastewater disposal system.

11) **Maintenance Contract:** A maintenance contract executed between the owner of subject property and an entity qualified in the opinion of the City of Malibu to maintain the proposed alternative onsite wastewater disposal system after construction shall be submitted. ***Please note only original "wet signature" documents are acceptable***.

12) **AOWTS Covenant:** A covenant running with the land shall be executed between the City of Malibu and the holder of the fee simple absolute as to subject real property and recorded with the Los Angeles County Recorder's Office. Said covenant shall serve as constructive notice to any future purchaser for value that the onsite wastewater treatment system serving subject property is an alternative method of onsite wastewater disposal pursuant to the City of Malibu Uniform Plumbing Code, Appendix K, Section K1(j). Said covenant shall be provided by the City of Malibu Environmental Health office. ***Please submit a certified copy issued by the Los Angeles County Recorder.***

13) **City of Malibu Geologist/Geotechnical Approval:** City of Malibu Geologist and Geotechnical Engineer final approval of the plans is required.

14) **Coastal Development Permit:** Contact the City of Malibu Department of Environmental and Community Development, Planning Division, and obtain a Coastal Development for subject project.

15) **Environmental Health Final Review Fee:** A final fee of **$475** shall be paid to the City of Malibu for Environmental Health's Building and Safety stage review of the AOWTS design and system specifications.

16) **Operating Permit Application and Fee:** In accordance with Section 103.5.2.1 of the MPC, an application shall be made to the Environmental and Building Safety Division for an OWTS operating permit. An operating permit fee of **$300** shall be submitted with the application.