



City of Malibu

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ONSITE WASTEWATER TREATMENT SYSTEM DESIGN REQUIREMENTS FOR BEACHFRONT PROPERTIES

This policy applies to both Environmental Health and Building Safety reviews of onsite wastewater treatment system (OWTS) plans submitted in connection with any development and wastewater system renovation projects on beachfront properties. The General Requirements apply to all projects on beachfront property. The Ocean Side Requirements also apply where OWTS components are located either on the ocean side of the dwelling or underneath the dwelling. The Land (Street) Side and Side Yard Requirements also apply where OWTS components are located on any other portion of the property.

General Requirements

1. All proposed beachfront property OWTS designs shall be reviewed and approved by the Coastal Engineer of record to verify conformance with the Wave Uprush Study recommendations. This approval shall be evidenced by the Coastal Engineering wet stamp and signature, and the City Coastal Engineering approval stamp, on the final construction drawings. Coastal Engineering approval shall be obtained prior to final Environmental Health Approval.
2. All proposed OWTS shall be designed and installed in accordance with the requirements in the Malibu Municipal Code, Local Coastal Plan/Local Implementation Plan, and any other applicable building and planning regulations.
3. The bottom of any leach trench or drainfield shall have a minimum of two (2) feet temporary (seasonal/tidal) vertical clearance and four (4) feet permanent (annual average) vertical clearance above the mean high tide elevation, the potentiometric surface of unconfined seawater intruded into the saturated zone, or impervious soil or rock as applicable. The required elevation clearance shall be established by a survey and/or excavation.
4. The existing grade shall not be excavated or lowered to create a depression for the installation of the OWTS unless prior approval has been obtained from the Environmental Health Office.
5. Reductions of the horizontal distance in clear to buildings or structures, or adjoining property lines, as set forth in Malibu Municipal Code, Chapter 15.42, for the proposed location of leach trenches or drainfields may be considered. Refer to the City of Malibu's OWTS Reduction in Setback Policy.
6. Seepage pits shall not be allowed on beachfront property unless it can be demonstrated that spatial constraints preclude other dispersal methods. Seepage pits may be considered for the repair or replacement of an OWTS when seepage pits were previously approved and permitted. Seepage pits are not considered appropriate for new or expanded development. All seepage pits must be at least eight (8) feet horizontally from any structure, including retaining

walls, seawalls, bulkheads, rock revetments, caissons, piles, and other similar structures. The seepage pit cap shall have a minimum 15 foot horizontal distance in clear to daylight and/or all hydrostatic pressure relief devices such as backdrains and subdrains. No seepage pit shall extend within ten (10) feet of the permanent groundwater elevation, or to a depth where effluent may adversely impact the groundwater stratum.

Exception: The separation to permanent groundwater may be reduced by the Building Official when sufficient evidence of groundwater elevation is provided and tertiary treatment of the wastewater is provided.

7. OWTS shall have adequate access and clearances for the purpose of system maintenance and repair without the removal of any permanent structures, landscaping or other similar obstructions to access the system.

Ocean Side Requirements

1. No portion of the OWTS shall be located under any portion of any structure, whether covered or uncovered, including porches, patios, steps, breezeways, carports, walkways, driveways and other similar structures or appurtenances.

Exception: Septic tanks and present and future dispersal areas, other than seepage pits, may be installed beneath a building which is constructed partially or totally on piles, caissons, or pilings when all of the conditions set forth in these Ocean Side Requirements have been met without exception.

- a. The area over any septic tank riser and the future or present dispersal area shall be exposed to the atmosphere without cover of any kind. Decks and walkways on grade may be considered, on a case-by-case basis, when they are completely removable and conforming to the City of Malibu's OWTS Reduction in Setback Policy.
- b. No septic tank shall be installed on the ocean side of any dispersal area unless tank hold downs are provided to counteract the buoyancy force.
- c. The space above any septic tank riser, present or future dispersal area, or other system component shall have a minimum of six (6) feet vertical clearance to the bottom of any structural element including any cover such as stucco or wood siding. Structural beams may project a maximum of two (2) feet into the required six (6) foot minimal vertical clearance provided they are spaced not less than four (4) feet on center horizontally center to center. The required six (6) foot minimum vertical clearance shall be maintained overall system components and shall extend horizontally to the open ocean side of the building with no obstructions other than a legally permitted shoreline protection device. Screening or other similar architectural coverings may be considered when such covers are readily removable and provide a minimum of 50% open space.
- d. The required space above any septic tank riser, present or future dispersal area, or other system component shall extend horizontally, unobstructed to the outside airspace and shall be provided on at least two sides above and adjacent to each portion of the OWTS in addition to the ocean side vertical clearance requirements of Section 1.c. The minimum unobstructed clearance to the outside airspace shall not be less than four (4) feet in any dimension with no encroachments. Screening or other similar architectural

coverings may be considered when such covers are readily removable and provide a minimum of 50% open space.

- e. Other configurations for the required ventilation for the area beneath buildings containing an OWTS installation, or components thereto may be considered when designed and engineered by a State of California Licensed Mechanical Engineer. Such plans must be submitted to City Building Safety for review, approval, and permitting. The approved plans shall clearly state the design intent (ventilation of a wastewater system located in an enclosed space) and must bear the license stamp of signature of the ventilation system designer.
2. For new OWTS, all system components shall be protected from tidal and wave uprush action by a shoreline protection device adequately designed and engineered by a State of California licensed Civil Engineer specializing in Coastal Engineering. Existing shoreline protection devices must provide protection greater than or equal to current coastal engineering standards or shall be modified to meet these standards. New shoreline protection devices shall be engineered and properly constructed to meet current coastal engineering standards as a minimum.
 3. The minimum horizontal distance between any portion of the OWTS and the shoreline protection device, including returns shall not be less than five (5) feet measured horizontally. Reductions of the required setback may be considered, please refer to the City of Malibu's OWTS Reduction in Setback Policy.
 4. There shall be a minimum fifteen (15) feet horizontal separation between any portion of the OWTS dispersal area and the maximum wave uprush scour line as determined by the consulting Coastal Engineer of record when a shoreline protection device is not otherwise required.
Exception: The Coastal Engineering consultant may recommend a smaller separation distance based on an analysis of the beach scour profile.
 5. Shoreline protection devices shall be made waterproof when a potential for the horizontal seepage of effluent from an OWTS dispersal area is determined by the City Coastal Engineer, City Geologist, or City Environmental Health Administrator. When weep holes are incorporated into the design of the shoreline protection device they shall be designed to retain all materials, including any effluent filter materials, behind the device. Weep holes shall be located below any known or anticipated scour elevation as determined by the consulting Coastal Engineer of record. When a shoreline protection device is required to be waterproofed, the effective path of travel of the effluent dispersal at and below the shoreline protection device shall be demonstrated by the OWTS designer in collaboration with the project Engineering Geologist.
 6. A cross section shall be drawn to-scale to show the relative locations and elevations of all OWTS components, overhanging building frame elements (beams, floor boards, and joists; per structural plans), the proposed rock scour blanket (if any), the top and bottom of the proposed drainfield, design beach profile (per the coastal engineer), groundwater and bedrock with effective path of travel of the effluent (per the supporting geology report), and the shoreline protection device. For each of these items the finished elevations with reference to architectural plans, coastal engineering report, bulkhead (or seawall) plans, and the OWTS

supporting geology report shall be provided. The reference datum for all elevations (NGVD1929 or NAVD88) shall be shown. All supporting technical reports must be referenced.

Land (Street) Side and Side Yard Requirements

1. No portion of the OWTS shall be located under any portion of any structure, whether covered or uncovered, including porches, patios, steps, breezeways, carports, walkways, driveways and other similar structures or appurtenances.

Exceptions: Septic tanks may be allowed to be sited beneath a driveway when the tank and/or a structural traffic rated slab have been engineered to support the weight of a least an H-20 axle load. The design of the traffic rated slab/tank system shall be performed by a State of California Licensed Civil or Structural Engineer. The traffic rated slab design shall be in conformance with any listing, certification, or recommendation of the septic tank manufacturer.

Placement of leaching trenches or drainfields under a driveway may be acceptable when the installation area is completely within well draining native beach sand and the driveway material allows diffusion of sufficient quantities of oxygen into the dispersal zone (e.g., paver tiles set into sand).

2. Septic tanks, leach trenches and drainfields for present and future OWTS may be allowed to encroach into the horizontal distance in clear as required by the City of Malibu Plumbing Code when the structure is supported either partially or totally on caissons, piles, or pilings. Refer to the City of Malibu's OWTS Reduction in Setback Policy.