

Requirements for Revised Filled Land Proposals

PURPOSE

To establish procedures and standards for the permitting and installation of Filled Land Onsite Waste Water Disposal systems.

AUTHORITY

- California Plumbing Code (CPC), Appendix K
- North Coast Regional Water Quality Control Board (NCRWQCB) Basin Plan Standards
- San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) Basin Plan
- Standards Regulations for Onsite Sewage Disposal in Sonoma County (Blue Book)

IMPLEMENTATION

This policy revision supercedes Permit & Resource Management Department (PRMD) Policy Number 9-2-5 dated 10/27/02. Implementation will take place on January 1, 2009 for all new filled land proposals. Filled land proposals that have an issued permit will be considered a class 1 permit for purposes of obtaining a building permit until the septic permit expires. Systems that have received a percolation testing acceptance letter prior to January 1, 2009 shall be grand fathered for a period not to exceed 6 months or June 30, 2009 for purposes of consideration as a class 1 septic permit.

Filled land proposals for subdivisions which have received tentative map approval based on the prior filled land septic system policy dated 10/27/02 shall be deemed acceptable for processing of the septic requirements for the subdivision.

PROCEDURE

- A. Plans and specifications shall be prepared by a registered civil engineer, professional engineer or registered environmental health specialist.
1. The plot plan is to be drawn to scale completely dimensioned, showing direction and approximate slope of surface, location of all present or proposed retaining walls, drainage channels, water supply lines or wells, paved areas and structures on the lot, number of bedrooms or plumbing fixtures in each structure and location of the building sewer and private sewage disposal system with relation to lot lines and structures. On slopes above 5% a topographic map of the proposed disposal area is required.
 2. Details of construction necessary to assure compliance with the requirements of Appendix K, California Plumbing Code, together with a full description of the complete installation including quality, kind and grade of all materials, equipment, construction workmanship and methods of assembly and installation shall be provided.
 3. A log of soil formations and ground water level as determined by test holes dug in close

proximity to any proposed disposal field, together with a statement of water absorption characteristics of the soil at proposed site as determined by approved percolation tests shall be included. When performing percolation testing at the proposed trench depth the rate must be 60 mpi or less. All of the test holes in the area proposed for the system and expansion area and within a 20 foot radius of the proposed perimeter of any leach field shall be evaluated per standard system percolation test criteria.

4. Soil Depth

a. **NCRWQCB**

Proof of soil below the bottom of the trench is the same as for standard systems and can be demonstrated by percolation testing, soil morphology, and texture analysis. At a minimum 3 feet of continuous acceptable soil is required below the bottom of the trench. Lesser soil depths may be approved only as a waiver or for alternative systems. A basin plan waiver to 2 feet may be approved with an NSF 40 approved pretreatment unit.

In waiver prohibition areas see specific prohibition criteria for what can be waived and what can not be waived.

b. **SFBRWQCB**

Proof of soil below the bottom of the trench is at a minimum 3 feet for standard systems. However 1 foot of this soil may be provided by use of an approved sand filter or NSF 40 approved pretreatment unit. A formal waiver of the SFBRWQCB Basin Plan standard is not required.

In waiver prohibition areas see specific prohibition criteria for what can be waived and what can not be waived.

5. Depth to Ground Water

a. **NCRWQCB Basin Plan Jurisdiction**

Separations to ground water as required for all other standard systems. Refer to Figure 4-1 in the Basin Plan.

b. **SFBRWQCB Basin Plan Jurisdiction**

The general rule is a 3 foot separation to ground water. Lesser depths to ground water may approved under the following circumstances:

- i. Up to 1 foot of required treatment media (soil) may be provided by a sand filter or an approved NSF 40 pretreatment unit within the system. At a minimum 2 feet of approved native treatment media (soil) is required for all systems. Formal waivers to the SFBRWQCB Basin Plan is not required. In waiver prohibition areas see specific prohibition areas for what can be waived and what can not be waived.

6. A site plan that meets the requirements as set forth in form WLS-008 is required.

7. Filled Land Systems are limited to areas not exceeding 20% slope.

8. All disposal trenches shall be a minimum of 12 inches in depth into native soil.
9. Gravel depth above pipe is to be 2-3 inches.
10. Gravel depth below pipe is to be not less than 12 inches per CPC Appendix K unless an administrative waiver is approved.
11. Trench width of 18-36 inches per CPC Appendix K
12. Increased trench depth and gravel depth is permissible with a subsequent reduction of fill soil. A minimum of 6 inches of fill for any trench depth is required.

Trench Depth Into Native	Gravel Depth Below Pipe	Fill Material** Needed
12 inches	9 inches *	15 inches
15 inches	12 inches	15 inches
18 inches	12 inches	12 inches
18 inches	15 inches	15 inches
21 inches	18 inches	15 inches
21 inches	12 inches	9 inches
24 inches	21 inches	15 inches
24 inches	18 inches	12 inches
24 inches	12 inches	6 inches
27 inches	24 inches	15 inches
27 inches	18 inches	9 inches
27 inches	12 inches	6 inches
30 inches	24 inches	12 inches
30 inches	18 inches	6 inches
30 inches	12 inches	No Fill. Standard System.

* Requires administrative waiver to plumbing code due to less than 12 inches of gravel under pipe per CPC Appendix K.
 ** A minimum of 15 inches of soil is **always** required above the **pipe**.

13. Use of gravel-less trench infiltration chambers are permitted.
14. The absorptive quality of imported soil for the leach field cover shall be equal to or better than

the native soil meeting percolation test requirements. Sand, gravel, rock or compost does not qualify as acceptable cover material for filled land systems.

15. Cover material for filled land systems shall be constructed in not more than 8 inch layers to approximately the same relative compaction as the upper soil horizon native to the site. Certified results of the soil density test may be required to be submitted to the Well and Septic Section by the Registered Civil Engineer or Environmental Health Specialist.

The fill is to be of uniform depth extending to a distance at least 15 feet from the center of any trench in all directions except the up slope distance may be reduced to 5 feet with additional fill to maintain a 5:1 taper for a total of 10 feet from the center of the up slope disposal trench on slopes above 5%. The down and side slope toes of the fill should be tapered at a 5:1 ratio beginning 15 feet from any leach field or proposed leach field expansion area to provide a total of 20 feet from the center of any trench.

Fill is required to be placed on the primary system. Reserve areas must be demonstrated as per other standard systems. A 100% reserve area for pre October 1971 parcels and 200% for post October is required although it need not be filled.

16. Site specifications for fill shall indicate that vegetation is to be removed and surface prepared to permit good mixing of the native soil and fill material added. Areas with closely-spaced trees in excess of 24 inches in diameter are generally not suitable for filled-land systems.

Roto-tilling to prepare the site for fill is prohibited. A single pass 6 inch rip of the surface soil to ensure a good mixing of the native soil and the fill material is required. Wheeled tractors are to be minimized in the disposal area at this time to avoid soil compaction.

17. Specifications on filled land proposals require the fill to be completed before any leaching trenches are constructed.
18. Construction of any disposal field should be avoided during the rainy season. Lines are to be back-filled as soon after final construction inspection as possible. Lines which have remained uncovered during any substantial rain may require abandonment or entire retrenching. The fill area shall be seeded or sodded with appropriate vegetation after construction of the disposal field is complete. Appropriate erosion control measures shall also be in place.

Approved by:

/s/ Pete Parkinson

Pete Parkinson, Director

Lead Author: Randy Leach, REHS

PRMD Well and Septic Division Manager

Replaces Previous Policy:

9-2-5 Rule V-1. Requirements for Filled Land Proposals for Leachfields and Leachfield Expansion, dated: 10/27/02

Intranet Intranet and Internet

