

Large On-site Sewage Systems

Glossary of Terms

March 2009



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DOH Publication #337-036

Alternative On-Site Sewage System

An on-site sewage system, other than a conventional gravity system or conventional pressure distribution system, for which the Department has developed and published standards and guidance. Local health officers may only permit alternative systems.

Annual Report

A report which must be submitted annually to the Department by the owner of a LOSS, demonstrating that the LOSS is being operated and maintained in accordance with the approved operation and maintenance manual

As-built Drawing(s)

A “record” drawing of an on-site sewage system, prepared and stamped by the design engineer and specifically labeled “as-built”, showing the on-site system exactly as it was constructed, including any changes that were made after the plans and specifications were approved by DOH. A copy of the as-built drawing(s) should be included with the systems O&M Manual.

Construction Report

A document which must be signed and stamped by the design engineer and submitted to DOH within 60 days of a projects completion, which certifies that the on-site system has been completed in accordance with the approved plans and specifications, or noting any significant changes that were made. Upon receipt of the construction report , DOH will issue an operating permit to the system’s owner.

Department

The Washington State Department of Health

Department of Ecology

The Washington State Department of Ecology

Design flow

The anticipated (peak) daily wastewater flow that will be generated by a facility. This peak daily flow is determined by the system designer and must be concurred with by the appropriate regulatory agency of jurisdiction. (Jurisdiction will be determined by the design flow - see Regulatory Jurisdictions/General Information in “LOSS Frequently Asked Questions).

DOH

The Washington State Department of Health

Engineer

(See definition of “professional engineer” below.)

Engineering Report

One of the documents required for approval of a LOSS. The engineering report must be developed and stamped by the design engineer and submitted to DOH for review. The engineering report outlines the scope of the proposed project and addresses the items listed in Chapter 246-272-08001(2)(a) WAC.

Experimental On-Site Sewage Systems

An alternative on-site sewage system without guidelines developed by the Department. Experimental on-site systems may be approved by the local health officer if the proponent meets the requirements outlined in Chapter 246-272-05001 WAC.

Final Inspection

An inspection of a nearly-completed on-site sewage system, conducted by the Department prior to covering the drainfield. This inspection must include a pressure or “squirt test” of the drainfield laterals so that uniform distribution with adequate residual pressure may be verified.

Hydrogeologic Assessment

An analysis of the geology of a proposed drainfield site and its relationship to existing groundwater and soil conditions. The hydrogeologic assessment should address items mentioned under sections 3 and 4 under “Engineering Reports” in the Department’s Design Standards for Large On-site Sewage Systems (December 1993). This assessment may be performed by the design engineer or contracted to a qualified geotechnical professional or firm.

Local Health Jurisdictions

The local county or city-county health department or health district with jurisdiction in the county where a LOSS is proposed.

LOSS

A “Large On-site Sewage System” (LOSS) is an on-site sewage system with a daily design flow greater than 3500 gallons per day (gpd) and less than 14,500 gpd.

Management Agreement

For on-site systems with single ownership, a signed agreement between the owner of the LOSS and the Department is required. The owner must agree to provide competent management of the LOSS, operate from a fixed address, keep adequate records, etc. A sample management agreement is included with the LOSS Project Submittal Information Packet. For projects proposed to serve residential subdivisions where the lots are owned individually, a signed management agreement between the owner and a public entity is required. The public entity must serve as the primary management entity or as a third party trust for a private management entity.

Operating Permit

A permit to operate is issued by DOH to the LOSS owner upon receipt by DOH of the Construction Report. The operating permit must be renewed annually and the only current requirement associated with it is that owners are required to submit to DOH an annual report, demonstrating that their system is being operated and maintained in accordance with the approved O&M manual.

Operation and Maintenance (O&M) Manual

A manual outlining basic system information and maintenance procedures that must be prepared and stamped by a licensed engineer and submitted to DOH for approval. The manual must include as-built drawings of the system and other items listed in a checklist included with this packet.

Plans and Specifications

Complete engineering drawings and specifications for a LOSS project which must be stamped by a licensed engineer and provided to DOH for review and must be approved by DOH prior to construction. The plans and specifications must meet requirements outlined in the Department's Design Standards for Large On-site Sewage Systems December 1993.

Pre-Design Document

A document that must be submitted to DOH in the early planning stages of a proposed LOSS which provides basic project information to help DOH determine whether a project is conceptually feasible. DOH must determine a project to be conceptually feasible prior to scheduling a pre-site inspection. A form that can be completed by the applicant and submitted to DOH to satisfy this requirement is provided with the LOSS Project Submittal Information Packet.

Pre-site Inspection

A soil / site inspection that must be conducted by a DOH representative before LOSS project plans and specifications can be submitted to DOH for approval. The purpose of a pre-site inspection is to determine if DOH concurs with the preliminary soil / site evaluation and loading rate proposed by the proponent's engineer or soil scientist.

Professional Engineer

A person who is licensed to practice engineering and is in good standing under Chapter 18.43 RCW.

Public Entity

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An incorporated city or town, county, government agency or municipal corporation, public utility district, water/sewer district or other government entity. A public entity is required to own, manage or act as a third party trust for LOSS projects to serve single or multi-family subdivisions where lots are individually owned.

Residential Waste Strength

Wastewater having the strength and consistency of domestic wastewater. Soil loading rates allowed for LOSS are suitable for effluent with BOD5 of 230 mg/L or less, Suspended Solids of 150 mg/L or less, and Grease and Oil concentrations of less than 50 mg/L.

Restrictive Layer

A stratum impeding the vertical movement of water, air and growth of plant roots, such as hardpan, claypan, fragipan, caliche, some compacted soils, bedrock and unstructured clay soils.

Single Ownership

Ownership of a LOSS where control and management of the system resides with a single individual, corporation, company, association, society, firm, partnership, joint stock company or any government agency, or authorized agents of any such entities.

Soil Scientist

A person qualified to evaluate soils and who is listed on the American Registry of Certified Professionals in Agronomy - Crops and Soils.

Soil Type

A numerical classification of fine earth particles and coarse fragments as described in Chapter 246-272-11001(2)(e) WAC.

“Squirt” or Pressure Test

A field test of an on-site sewage system to demonstrate that distribution to drainfield laterals is uniform at minimum required residual pressure and that dosed fields are sequencing as intended. The test must be performed before drainfield laterals are covered and witnessed by a representative from DOH. This requirement must be referenced on construction plans and it is preferred that the design engineer conduct the test and verify performance prior to calling DOH for the final inspection.

Test Pits

Excavations on the proposed site of an on-site sewage system drainfield dug for the purpose of developing soils logs (detailed descriptions of soil characteristics). Test pits should conform to Department of Labor and Industry standards (see diagram and description of test pits enclosed with the LOSS Project Submittal Information Packet).

Vertical Separation

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The depth of unsaturated, original, undisturbed soil of soil types 1B-6 (see Table II in chapter 246-272 WAC) between the bottom of a disposal component and the highest seasonal water table, restrictive layer or soil type 1A. At least 3 feet of vertical separation is required for a LOSS.