

# Guidance Document

To: Regulators & Other Members of the Public  
From: Virginia Board for Architects, Professional Engineers, Land Surveyors, Certified Interior Designers, and Landscape Architects (APELSCIDLA Board)  
Date: December 15, 2011 (Revised March 17, 2015 and June 13, 2016)  
Re: Onsite Sewage Systems Designed by PE's and Onsite Soil Evaluators

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## Purpose

The purpose of this document is to clarify the requirements for onsite sewage systems designs as completed by a licensed professional engineer (PE) or a licensed onsite soil evaluator. All systems consist of both the treatment *and* dispersal components.

## Background

§ 54.1-406 of the *Code of Virginia* requires a license for any person engaging in the practice of engineering unless otherwise exempt pursuant to §§ 54.1-401, 54.1-402, or 54.1-402.1. The full text of the statute reads as follows:

A. Unless exempted by §§ [54.1-401](#), [54.1-402](#), or [54.1-402.1](#), a person shall hold a valid license prior to engaging in the practice of architecture or engineering which includes design, consultation, evaluation or analysis and involves proposed or existing improvements to real property.

§ 54.1-402 of the *Code of Virginia* contains various exemptions from licensure for specific activities meeting specific conditions. The full text of the licensure exemption regarding onsite sewage systems is contained in § 54.1-402(A)(11) reads as follows:

§ 54.1-402 Further exemptions from license requirements for architects, professional engineers, and land surveyors.

A. No license as an architect or professional engineer shall be required pursuant to § [54.1-406](#) for persons who prepare plans, specifications, documents and designs for the following, provided any such plans, specifications, documents or designs bear the name and address of the author and his occupation:

11. Conventional and alternative onsite sewage systems receiving residential wastewater, under the authority of Chapter 6 of Title 32.1, designed by a licensed onsite soil evaluator, which utilize packaged equipment, such as equipment of catalogued standard design that has been coordinated and tested by the manufacturer, and complies with all applicable codes, provided (i) the flow is less than 1,000 gallons per day; and (ii) if a pump is included, (a) it shall not include multiple downhill runs and must terminate at a positive elevational change; (b) the discharge end is open and not pressurized; (c) the static head does not exceed 50 feet; and (d) the force main length does not exceed 500 feet.

## **SECTION A: Onsite Sewage Systems Receiving Residential Wastewater**

Normally, a PE license is required to design an onsite sewage system; however, pursuant to the exemption listed above, an onsite soil evaluator, *who holds the appropriate license issued by the Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals ("WWWOSSP Board"),* may design an *onsite sewage system receiving residential wastewater* so long as the system meets all of the following criteria:

1. Utilizes packaged equipment, such as equipment of catalogued standard design that has been coordinated and tested by the manufacturer, and complies with all applicable codes;
2. Produces a flow which is less than 1,000 gallons per day; and
3. The pump (if a pump is included) does not include multiple downhill runs, terminates at a positive elevational change; the discharge end is open and not pressurized; the static head does not exceed 50 feet; and the force main length does not exceed 500 feet.

As long as all three of the above criteria are met, a PE license is not required and *the onsite sewage system receiving residential wastewater* may be designed by an onsite soil evaluator, *who holds the appropriate license issued by the WWWOSSP Board.* However, if any of the above three conditions are not met, *the onsite sewage systems receiving residential wastewater* (and not just that component) must be designed by a licensed PE.

If the onsite sewage system that does not meet *each* of the three criteria *in Section A* the onsite system must be designed by a licensed PE. For any condition that is not met, it is not acceptable to have a PE sign and seal only that component; the PE is responsible for the entire system design. An onsite soil evaluator shall be responsible for any work he performs regarding a soil evaluation. A PE shall be responsible for the work he performs based on the soil evaluation. The PE must sign and seal the entire system because the licensed onsite soil evaluator no longer meets the exemption contained in § 54.1-402(A)(11).

An *onsite sewage system receiving residential wastewater that meets the above three criteria* may be designed by a licensed onsite soil evaluator, *who holds the appropriate license issued by the WWWOSSP Board,* in accordance with § 54.1-402(A)(11). Should a PE be involved in any design of the system, regardless if a PE license is required, the PE must sign and seal his work pursuant to Board regulations.

## **SECTION B: Residential Wastewater**

§ 54.1-400 of the Code of Virginia states, in part:

*"Residential wastewater" means sewage (i) generated by residential or accessory uses, not containing storm water or industrial influent, and having no other toxic, or hazardous constituents not routinely found in residential wastewater flows, or (ii) as certified by a professional engineer.*

*The fact that the locality has approved a use as an "accessory use" for zoning or other purposes is not dispositive to the determination that the wastewater constitutes "residential wastewater" as defined by § 54.1-400.*

*Factors to consider in determining whether the wastewater meets the definition of subsection (i) of "Residential wastewater" contained in § 54.1-400 include, but are not limited to:*

1. *Does the location/source of the wastewater come from a structure that is primarily a residence?*
2. *Is the accessory use incidental and subordinate to the primary residence?*
3. *Does the wastewater from the structure that enters the onsite sewage system not contain storm water, industrial influents, other toxics or hazardous constituents not routinely found in residential wastewater such as chemicals, increased Biochemical Oxygen Demand or Total Suspended Solids?*

*If the answer to any of the above three questions is "No" then a licensed PE must certify that the wastewater is of residential strength*

*Further, calculations to determine wastewater characterizations or to certify that the wastewater is of residential strength shall only be done by a licensed PE.*

*If the onsite system meets the criteria of Section A, and B or a PE has determined and certified the wastewater is of residential strength, then an onsite soil evaluator, who holds the appropriate license issued by the WWOSSP Board may design the system. A PE who has determined and certified the wastewater is of residential strength, shall sign and seal his work.*