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NSF/ANSI 40 - 2012

Residential Wastewater Treatment Systems



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NSF International Standard/
American National Standard
for Wastewater Technology —

Residential wastewater treatment systems

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Foreword[2]

The purpose of this Standard is to establish minimum materials, design and construction, and performance testing and evaluation requirements for residential wastewater treatment systems. This Standard specifies minimum literature requirements to be supplied by manufacturers to authorized representatives and owners. Minimum service related obligations for manufacturers to extend to owners are also specified.

This Standard (NSF/ANSI 40-2012) version includes the following changes:

Issue 20 – The purpose of this ballot was to harmonize the alkalinity parameters in NSF/ANSI 40 to that of NSF/ANSI 245 – Nitrogen Reduction. This change appears in 8.2.1.

Issue 25 – The purpose of this ballot was to make the language relating to failure sensing equipment in the wastewater standards consistent as well as update it regarding the testing procedure. This change appears in 5.8.

This Standard was developed by the NSF Joint Committee on Wastewater Technology using the consensus process described by the American National Standards Institute.

ANSI prohibits the inclusion of commercial terms and conditions, such as manufacturers' warranties and guarantees, in product standards. However, the NSF Joint Committee on Wastewater Technology has historically believed strongly that all certifiers of NSF/ANSI 40 systems should have certification program policies that contain several key elements, including requirements for warranties. It is the Joint Committee's belief that these key elements provide valuable assurance of long-term performance as well as protection of public health and the environment. To emphasize the Joint Committee's convictions on this issue, two annexes, which are not part of this Standard, are included for informational purposes and guidance. These annexes are intended to establish a uniform program by which products meeting the scope of this Standard should be certified. Annex A is a sample warranty, and Annex B provides the key elements of a certification program. At NSF, both annexes have been adopted as certification program policies.

Suggestions for improvement of this Standard are welcome. Comments should be sent to Chair, Joint Committee on Wastewater Technology, c/o NSF International, Standards Department as standards@nsf.org , or PO Box 130140, Ann Arbor, Michigan 48113-0140, USA.

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NSF/ANSI Standard
for Wastewater Treatment Systems —

Residential wastewater treatment systems

1 General

1.1 Purpose

The purpose of this Standard is to establish minimum materials, design and construction, and performance requirements for residential wastewater treatment systems. This standard also specifies the minimum literature that manufacturers shall supply to authorized representatives and owners as well as the minimum service-related obligations that manufacturers shall extend to owners.

1.2 Scope

This Standard contains minimum requirements for residential wastewater treatment systems having rated treatment capacities between 1514 L/day (400 gal/day) and 5678 L/day (1500 gal/day). Management methods for the treated effluent discharged from residential wastewater treatment systems are not addressed by this Standard.

System components covered under other NSF or NSF/ANSI standards or criteria shall also comply with the requirements therein. This Standard shall in no way restrict new system designs, provided such designs meet the minimum specifications described herein.

1.3 Alternate materials, design, and construction

While specific materials, designs, and constructions may be stipulated in this Standard, systems that incorporate alternate materials, designs, or constructions may be acceptable when it is verified that such systems meet the applicable requirements.

1.4 Performance classification

For the purpose of this Standard, systems are classified according to the chemical, biological, and physical characteristics of their effluents as determined by the performance testing and evaluations described herein.

All systems within a manufacturer's model series may be classified according to the performance testing and evaluation of the system with the smallest hydraulic capacity within the series. Performance testing and evaluation of larger systems within the series (having hydraulic treatment capacities within the scope of this Standard) may not be necessary provided that the dimensions, hydraulics, mixing and filtering capabilities, and other applicable design characteristics are proportionately equivalent to the evaluated system.