NSF International Standard /
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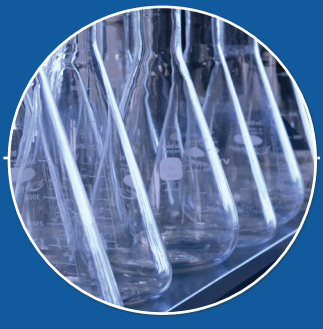
NSF/ANSI 46 - 2017

Evaluation of Components and Devices Used in Wastewater Treatment Systems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NSF International Standard/
American National Standard
for Wastewater Technology —

Evaluation of components and devices used in wastewater treatment systems

Standard Developer
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Contents

Foreword[2]

The purpose of this Standard is to establish minimum materials, design and construction, and performance testing and evaluation requirements for components and devices used in wastewater treatment systems. Minimum literature requirements to be supplied by manufacturers to authorized representatives and owners are also specified.

This edition of the Standard includes the following revisions:

Issue 28

Section 10.9 was revised to require filter manufacturers to report and publish the measured amount of cross-sectional orifice area that exists above the normal liquid operating level.

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

Suggestions for improvement of this Standard are welcome. This Standard is maintained on a Continuous Maintenance schedule and can be opened for comment at any time. Comments should be sent to Chair, Joint Committee on Wastewater Technology at standards@nsf.org, or c/o NSF International, Standards Department, P.O. Box 130140, Ann Arbor, Michigan 48113-0140, USA.

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NSF/ANSI Standard
for Wastewater Technology –

Evaluation of components and devices used in 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 components and devices used in the handling, treating, recycling, reusing, or disposal of wastewater. This Standard is intended to protect public health and the environment as well as to minimize nuisance factors.

1.2 Scope

This Standard is intended for use with components and devices not covered by other NSF wastewater standards. Components and devices covered by this Standard are intended for use with greywater or blackwater or both. Management methods for the end-products of these components and devices are not addressed in this Standard. This Standard shall in no way restrict new system designs, provided that such designs meet the minimum specifications described herein.

All devices and components meeting the scope of this Standard shall comply with all of the requirements described in 1 through 8. In addition, devices and components shall comply with the applicable subsequent section(s) contained in this Standard. Where subsequent sections of the Standard include requirements that overlap with those found in 1 through 8, the requirements of both sections shall be met unless otherwise specified in the requirements of the subsequent section.

1.3 Alternate materials, design, and construction

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

2 Normative references

The following documents contain provisions that, through reference in this text, constitute provisions of this Standard. At the time of publication, the indicated editions were valid. All standards are subject to revision, and parties are encouraged to investigate the possibility of applying the recent editions of the standards indicated herein. The most recent published edition of the document shall be used for undated references.

American Public Health Association (APHA), American Water Works Association (AWWA) & Water Environment Federation (WEF): *Standard Methods for the Examination of Water and Wastewater* (hereinafter referred to as *Standard Methods*)[3]

[3] Standard Methods for the Examination of Water and Wastewater <www.standardmethods.org>.

ANSI/HI Pump Standards[4]

ASME B40.100 – 2005. Pressure Gauges and Gauge Attachments[5]

ASTM C1227-12. Standard Specification for Precast Concrete Septic Tanks[6]

NFPA 70®. *National Electrical Code*® (NEC®), 2011[7]

NSF/ANSI 40. Residential Wastewater Treatment Systems

NSF/ANSI 55. Ultraviolet Microbiological Water Treatment Systems

3 Definitions

3.1 appurtenances: Machinery, appliances, or auxiliary structures attached to a main structure to enable it to function but not considered an integral part of it.[8]

3.2 authorized representative: An organization, group, individual, or other entity that is authorized by the manufacturer to distribute, sell, install, or service a component or device.

3.3 blackwaste: Human body waste, toilet paper, and any other material intended to be deposited in a receptacle designed to receive urine, feces, or both.

3.4 blackwater: Blackwaste and water or other medium used to flush and transport it.

3.5 components: All of the physical, mechanical, and electrical parts that comprise a system.

3.6 contact chamber: The tank in which ozone gas is diffused into treated wastewater.

3.7 contaminant: An undesirable organic or inorganic, soluble or insoluble substance in water. This definition includes microbiological organisms.

3.8 greywaste: Waste material, exclusive of urine, feces, or industrial waste, deposited in plumbing fixtures found in residences, commercial buildings, industrial plants, and institutions.

3.9 greywater: Greywaste and the water or other medium used to flush and transport it.

3.10 manufacturer: The entity that develops, designs, and produces a component or device.

3.11 mechanical component: A part of an ozonation system with an individual and distinct function intended to perform some type of work in diffusing ozone gas into wastewater in a contact chamber.

3.12 ozonation system: A device that produces ozone and introduces it into water for the purpose of disinfection.

[4] Hydraulic Institute, 6 Campus Drive, First Floor North, Parsippany, NJ 07054-4406 <www.pumps.org>.

[5] American Society of Mechanical Engineers (ASME), Three Park Avenue, New York, NY 10016-5990 <www.asme.org>.

[6] ASTM International, 100 Barr Harbor Dr., West Conshohocken, PA 19428 <www.astm.org>.

[7] National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269-7471 <www.nfpa.org>.

[8] Definition adopted from Glossary, Water and Wastewater Control Engineering, third Edition. American Public Health Association, American Society of Civil Engineers, American Water Works Association, Water Pollution Control Federation, 1981.