



*NSF International Standard /
American National Standard*

NSF/ANSI 360 - 2010

Wastewater Treatment Systems -
Field Performance Verification



NSF International, an independent, not-for-profit, non-governmental organization, is dedicated to being the leading global provider of public health and safety-based risk management solutions while serving the interests of all stakeholders.

*This Standard is subject to revision.
Contact NSF to confirm this revision is current.*

Users of this Standard may request clarifications and interpretations, or propose revisions by contacting:

Chair, Joint Committee on Wastewater Technology
c/o NSF International
789 North Dixboro Road, P.O. Box 130140
Ann Arbor, Michigan 48113-0140 USA
Phone: (734) 769-8010
Telex: 753215 NSF INTL
FAX: (734) 769-0109
E-mail: info@nsf.org
Web: <http://www.nsf.org>

NSF/ANSI 360 – 2010

NSF International Standard/
American National Standard
for Wastewater Technology —

Wastewater treatment systems – Field performance verification

Standard Developer

NSF International

NSF International Board of Directors

Designated as an ANSI Standard

November 11, 2010

American National Standards Institute

Prepared by
The NSF Joint Committee on Wastewater Technology

Recommended for Adoption by
The NSF Council of Public Health Consultants

Adopted by
The NSF Board of Directors
November 2010

Published by

NSF International
PO Box 130140, Ann Arbor, Michigan 48113-0140, USA

For ordering copies or for making inquiries with regard to this Standard, please reference the designation "NSF/ANSI 360 – 2010."

Copyright 2010 NSF International

Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from NSF International.

Printed in the United States of America.

Disclaimers¹

NSF, in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. The opinions and findings of NSF represent its professional judgment. NSF shall not be responsible to anyone for the use of or reliance upon this Standard by anyone. NSF shall not incur any obligation or liability for damages, including consequential damages, arising out of or in connection with the use, interpretation of, or reliance upon this Standard.

NSF Standards provide basic criteria to promote sanitation and protection of the public health. Provisions for mechanical and electrical safety have not been included in this Standard because governmental agencies or other national standards-setting organizations provide safety requirement.

Participation in NSF Standards development activities by regulatory agency representatives (federal, local, state) shall not constitute their agency's endorsement of NSF or any of its Standards.

Preference is given to the use of performance criteria measurable by examination or testing in NSF Standards development when such performance criteria may reasonably be used in lieu of design, materials, or construction criteria.

The illustrations, if provided, are intended to assist in understanding their adjacent standard requirements. However, the illustrations may not include **all** requirements for a specific product or unit, nor do they show the only method of fabricating such arrangements. Such partial drawings shall not be used to justify improper or incomplete design and construction.

Unless otherwise referenced, the annexes are not considered an integral part of NSF Standards. The annexes are provided as general guidelines to the manufacturer, regulatory agency, user, or certifying organization.

¹ The information contained in this Disclaimer is not part of this American National Standard (ANS) and has not been processed in accordance with ANSI's requirements for an ANS. As such, this Disclaimer may contain material that has not been subjected to public review or a consensus process. In addition, it does not contain requirements necessary for conformance to the Standard.

This page is intentionally blank.

Contents

1	General	1
1.1	Purpose	1
1.2	Scope.....	1
2	Normative references	1
3	Definitions.....	2
4	Selection of systems	3
4.1	Number of systems	3
4.2	System Requirements	3
4.3	Scope of testing.....	4
4.4	Field site screening audits	4
5	Sample collection and analysis	4
5.1	Duration of sampling	4
5.2	Sample collection	5
5.3	Sample analysis	6
6	Test Plan.....	6
7	Quality Assurance/Quality Control.....	9
7.1	Verification test data – Data Quality Indicators (DQI).....	9
8	Statistical evaluation of data	11
9	Reporting	12
Annex A	A1
A.1	Purpose/Objective.....	A1
A.2	Site Evaluation	A1
A.3	Selection of Sampling Location	A1
A.4	Selection of Sampling Method.....	A1
A.5	Other Considerations	A1
Annex B	B1
B.1	Limited warranty	B1
B.2	Service-related obligations.....	B1

This page is intentionally blank.

Foreword²

The purpose of this standard is to establish consistent site selection, sampling, laboratory analysis and data evaluation methods for obtaining field performance results for onsite wastewater treatment systems. This Standard provides site selection, field sampling, analytical, and statistical methods for evaluating the field performance of residential wastewater treatment systems capable of providing at least secondary treatment.

A number of field studies published in past years have varied significantly in methodology, quality, and performance results. Further, many state and local regulatory jurisdictions are increasingly interested in field performance data to compliment lab performance data. While NSF/ANSI 40 and 245 remain a valuable demonstration of initial product performance under defined conditions of test, the addition of field data can further demonstrate system performance when subjected to the variability of individual residences.

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

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

² The information contained in this Foreword is not part of this American National Standard (ANS) and has not been processed in accordance with ANSI's requirements for an ANS. As such, this Foreword may contain material that has not been subjected to public review or a consensus process. In addition, it does not contain requirements necessary for conformance to the Standard.

This page is intentionally blank.

NSF/ANSI Standard
for Wastewater Technology —

Wastewater treatment systems – Field performance verification

1 General

1.1 Purpose

The purpose of this standard is to establish consistent site selection, sampling, laboratory analysis and data evaluation methods for obtaining field performance results for onsite wastewater treatment systems.

1.2 Scope

This Standard provides site selection, field sampling, analytical, and statistical methods for evaluating the field performance of residential wastewater treatment systems capable of providing at least secondary treatment.

Only treatment systems that are certified in accordance with NSF/ANSI 40 or NSF/ANSI 245 as applicable may be evaluated under this Standard. A treatment system completing third-party testing in compliance with an evaluation, certification and listing protocol equivalent to NSF/ANSI 40 or NSF/ANSI 245 as applicable shall be acceptable, provided all data pursuant to the testing is published and the results verify that the device is capable of treatment as defined in NSF/ANSI 40 or NSF/ANSI 245 as applicable.

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 below.

American Public Health Association (APHA), American Water Works Association (AWWA) & Water Environment Federation (WEF): *Standard Methods for the Examination of Water and Wastewater*, 21st Edition, 2005 (hereinafter referred to as *Standard Methods*)³

NSF/ANSI 40, *Residential wastewater treatment systems*

NSF/ANSI 245, *Wastewater treatment systems – nitrogen reduction*

USEPA, *Code of Federal Regulations (CFR), Title 40: Protection of Environment, July 1, 2010*⁴

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

⁴ Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402 <www.gpo.gov>