

AWWA Standard

Online Turbidimeter Operation and Maintenance

Effective date: Aug. 1, 2021.

First edition approved by Board of Directors Jan. 16, 2016. This edition approved March 30, 2021. Approved by American National Standards Institute April 5, 2021.





This is a preview. Click here to purchase the full publication.

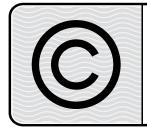
AWWA Standard

This document is an American Water Works Association (AWWA) standard. It is not a specification. AWWA standards describe minimum requirements and do not contain all of the engineering and administrative information normally contained in specifications. The AWWA standards usually contain options that must be evaluated by the user of the standard. Until each optional feature is specified by the user, the product or service is not fully defined. AWWA publication of a standard does not constitute endorsement of any product or product type, nor does AWWA test, certify, or approve any product. The use of AWWA standards is entirely voluntary. This standard does not supersede or take precedence over or displace any applicable law, regulation, or code of any governmental authority. AWWA standards are intended to represent a consensus of the water industry that the product described will provide satisfactory service. When AWWA revises or withdraws this standard, an official notice of action will be placed withdraws this standard, an official notice of action will be placed in the Official Notice section of *Journal AWWA*. The action becomes effective on the first day of the month following the month of *Journal AWWA*, publication of the official notice.

American National Standard

An American National Standard implies a consensus of those substantially concerned with its scope and provisions. An American National Standard is intended as a guide to aid the manufacturer, the consumer, and the general public. The existence of an American National Standard does not in any respect preclude anyone, whether that person has approved the standard or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standard. American National Standards are subject to periodic review, and users are cautioned to obtain the latest editions. Producers of goods made in conformity with an American National Standard are encouraged to state on their own responsibility in advertising and promotional materials or on tags or labels that the goods are produced in conformity with particular American National Standards.

CAUTION NOTICE: The American National Standards Institute (ANSI) approval date on the front cover of this standard indicates completion of the ANSI approval process. This American National Standard may be revised or withdrawn at any time. ANSI procedures require that action be taken to reaffirm, revise, or withdraw this standard no later than five years from the date of ANSI approval. Purchasers of American National Standards may receive current information on all standards by calling or writing the American National Standards Institute, 25 West 43rd Street, Fourth Floor, New York, NY 10036; 212.642.4900, or emailing info@ansi.org.



All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including scanning, recording, or any information or retrieval system. Reproduction and commercial use of this material is prohibited, except with written permission from the publisher. Please send any requests or questions to permissions@awwa.org.

ISBN-13, print: 978-1-64717-052-3

ISBN-13, electronic: 978-1-61300-589-7

DOI: http://dx.doi.org/10.12999/AWWA.C671.21

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including scanning, recording, or any information or retrieval system. Reproduction and commercial use of this material is prohibited, except with written permission from the publisher.

Copyright © 2021 by American Water Works Association Printed in USA

This is a preview. Click here to purchase the full publication.

Committee Personnel

The AWWA Standards Committee on Online Monitoring, which reviewed and approved this standard, had the following personnel at the time of approval:

Darryl Green, Chair

General Interest Members

T.L. Engelhardt, Consultant, Loveland, Colo.

T.A. Pajor, City of Wichita, Wichita, Kans.

E.S. Ralph (liaison, nonvoting), Standards Engineer Liaison, AWWA, Denver, Colo.

M.E. Richardson, North Carolina Waterworks Operators Association, Wilmington, N.C.

W.J. Soucie, Central Lake County Joint Action Water Agency, Lake Bluff, Ill.

C.D. Tona, City of Redding, Redding, Calif.

R.D. Vaidya, CDM Smith, Tampa, Fla.

Z.R. Yu, Jacobs, Kitchener, Ont.

Producer Members

J. Evans (alternate), Chemtrac Systems Inc., Norcross, Ga.

B.G. LaBelle, GF Piping Systems, Irvine, Calif.

V. Malkov, Hach Company, Loveland, Colo.

V.V. Rajasekharan (alternate), Hach Company, Fort Collins, Colo.

M. Sadar, Tintometer, Fort Collins, Colo.

M. Vandiver, Chemtrac, Inc., Norcross, Ga. (AWWA)

User Members

C.R. Dugan (*liaison, nonvoting*), Standards Council Liaison, East Lansing-Meridian Water and Sewer Authority, East Lansing, Mich.

D. Green, Henderson Utility Department, Henderson, Tenn.

A. Goodman, Lansing Board of Water & Light, Lansing, Mich.

J. Miller, American Water, Bradenton, Fla.

T.M. Scribner, City of Westminster, Broomfield, Colo.

This page intentionally blank.

This is a preview. Click here to purchase the full publication.

Contents

All AWWA standards follow the general format indicated subsequently. Some variations from this format may be found in a particular standard.

SEC.	F	AGE	SEC.
Forei	vord		4
Ι	Introduction	vii	4.1
I.A	Background	vii	4.2
I.B	History	vii	
I.C	Acceptance	vii	4.3
II	Special Issues	ix	4.4
II.A	Information on the Application of		4.5
	This Standard	ix	F
III	Use of This Standard	ix	5
III.A	Purchaser Options and		5.1
	Alternatives	ix	5.2
III.B	Modification to Standard	ix	
IV	Major Revisions	ix	App
V	Comments	х	А

Standard

1	General	
1.1	Scope	1
1.2	Purpose	1
1.3	Application	1
2	References	2
3	Definitions	2

SEC.		PAGE
4	Requirements	
4.1	Principles of Operation	4
4.2	Sensor Systems—Technical Details and Application of Online Sensors	6
4.3	Sample Collection	10
4.4	Instrument Location	12
4.5	Electrical System	13
5	Verification	
5.1	Instrument Calibration and Verification	16
5.2	Record Keeping	20
Арре А	e ndix Supplemental Information on Troubleshooting	23
Figu	res	
1	Typical Optical Geometry for a Nephelometer	5

Tables

2

A.1	Troubleshooting Process	
	Turbidimeters	23

Comparison Between an In-Situ and

a Sidestream Turbidimeter...... 7