

ANSI/AWWA G430-14 (Revision of ANSI/AWWA G430-09)

AWWA Management Standard

# Security Practices for Operation and Management

Effective date: Nov. 1, 2014.
First edition approved by AWWA Board of Directors Jan. 25, 2009.
This edition approved June 8, 2014.
Approved by American National Standards Institute July 8, 2014.
Designation by the Department of Homeland SAFETY Act on Feb. 14, 2012.







#### **AWWA Management 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 codes of any governmental authority. AWWA standards are intended to represent a consensus of the water supply industry that the product described will provide satisfactory service. When AWWA revises or withdraws this standard, an official notice of action will be placed in the Official Notice section of *Journal - American Water Works Association*. The action becomes effective on the first day of the month following the month of *Journal - American Water Works Association* 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.



This AWWA content is the product of thousands of hours of work by your fellow water professionals. Revenue from the sales of this AWWA material supports ongoing product development. Unauthorized distribution, either electronic or photocopied, is illegal and hinders AWWA's mission to support the water community.

ISBN-13, print: 978-1-62576-043-2 elSBN-13, electronic: 978-1-61300-307-7

http://dx.doi.org/10.12999/AWWA.G430.14

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information or retrieval system, except in the form of brief excerpts or quotations for review purposes, without the written permission of the publisher.

Copyright © 2014 by American Water Works Association Printed in USA

# **Committee Personnel**

The AWWA Standards Committee on Security Practices for Operation and Management, which reviewed and approved this standard, had the following personnel at the time of approval:

Clyde R. Dugan, Chair

General Interest Members

T. Allmann, US Air Force, Misawa Air Base, Japan	(AWWA)		
C.L. Bowen, Pleasant Hill, Calif.			
R. Ford,* Standards Council Liaison, CH2M HILL, Parsippany, N.J.	(AWWA)		
D.M. Flancher,* Standards Engineer Liaison, AWWA, Denver, Colo.	(AWWA)		
J. Laws, Department of Homeland Security, Washington, D.C.	(AWWA)		
J.W. McLaughlin, GHD Consulting Services Inc., Charlotte, N.C.	(AWWA)		
K. Morley, AWWA, Washington D.C.	(AWWA)		
M.C. Shadden, Crossville, Tenn.	(AWWA)		
S.D. Spence, ARCADIS, White Plains, N.Y.			
L.P. Warren, Launch! Consulting LLC, Charlottesville, Va.	(AWWA)		
Producer Members			
B. Jakubovic, VIZBEE, West Orange, N.J.	(AWWA)		
B. Jakubovic, VIZBEE, West Orange, N.J. M. Martinez, Schneider Electric, Cedar Park, Texas	(AWWA) (AWWA)		
	,		
M. Martinez, Schneider Electric, Cedar Park, Texas	,		
M. Martinez, Schneider Electric, Cedar Park, Texas  User Members	(AWWA)		
M. Martinez, Schneider Electric, Cedar Park, Texas  **User Members**  M.P. Lamb, Charlotte–Mecklenburg Utilities, Charlotte, N.C.	(AWWA)		
M. Martinez, Schneider Electric, Cedar Park, Texas  **User Members**  M.P. Lamb, Charlotte–Mecklenburg Utilities, Charlotte, N.C.  J.E. Tallent Jr., Littleton–Englewood WWTP, Englewood, Colo.	(AWWA)		

<sup>\*</sup> Liaison

This is a preview of "AWWA G430-2014". Click here to purchase the full version from the ANSI store.			
	This page intentionally blank.		
	Copyright © 2014 American Water Works Association. All Rights Reserved.		

# **Contents**

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

SEC.	PAGE	SEC.	PAGE
Foreword		4.4	Up-to-Date Assessment of Risk8
Ι	Introductionvii	4.5	Resources Dedicated to Security
I.A	Backgroundvii		and Security Implementation
I.B	Historyvii		Priorities8
I.C	Acceptancevii	4.6	Access Control and Intrusion
II	Special Issuesvii		Detection9
II.A	Advisory Information on Application	4.7	Contamination Detection, Monitoring,
	of Standardsvii		and Surveillance11
II.B	Origination of Standardviii	4.8	Information Protection and
II.C	SAFETY Act Designationviii		Continuity14
III	Use of This Standardviii	4.9	Design and Construction16
III.A	Options and Alternativesviii	4.10	Threat-Level–Based Protocols16
III.B	Modification to Standardviii	4.11	Emergency Response and Recovery
IV	Major Revisionsix		Plans and Business Continuity
V	Commentsix		Plan17
•	Comments	4.12	Internal and External
Standard		4.13	Communications18
1	General		Partnerships19
1.1	Scope1	5	Verification
1.1	Purpose1	5.1	Documentation Required19
	•	5.2	Human Resources20
1.3	Application1		Equipment23
2	References1	6	
3	Definitions2	6	<b>Delivery</b> 23
4	n	Appendix	
4	Requirements	A	Resources25
4.1	Explicit Commitment to Security6		
4.2	Security Culture	Tabl	
4.3	Defined Security Roles and Employee	1	Supporting Documentation Required
	Expectations7		by This Standard by Section21

This is a preview of "AWWA G430-2014". Click here to purchase the full version from the ANSI store.			
	This page intentionally blank.		
	Copyright © 2014 American Water Works Association. All Rights Reserved.		

# **Foreword**

This foreword is for information only and is not a part of ANSI\*/AWWA G430.

#### I. Introduction

I.A. *Background*. The AWWA Management Standards Program is designed to serve water, wastewater, and reuse utilities and their customers, owners, service providers, and government regulators. The standards developed under the program are intended to improve a utility's overall operation and service. Among these standards is this effort to establish formal management and operational guidelines. These guidelines identify appropriate practices, procedures, and behaviors, the implementation of which will provide effective and efficient utility operations and contribute to the protection of public health, public safety, and the environment.

AWWA's standards process has been used for more than 90 years to produce American National Standards Institute (ANSI)—recognized standards for materials and processes that are used by the Water Sector. These standards are recognized worldwide and have been adopted by many utilities and organizations. Likewise, this management standard is developed using the same ANSI-recognized formal process. Volunteer standards committees establish standard practices in a uniform and appropriate format.

Formal standards committees have been and continue to be formed to address the individual standard practices for the diverse areas of the Water Sector. A formal standards committee was created in 2007 to develop a standard for security. This standard is the outcome from the Security Practices for Operation and Management Committee.

- I.B. *History*. The first edition of this standard was approved by the AWWA Board of Directors on Jan. 25, 2009. This edition was approved on June 8, 2014.
  - I.C. Acceptance. No applicable information for this standard.

#### II. Special Issues.

II.A. Advisory Information on Application of Standards. This standard includes only those requirements that are limited exclusively to security practices for operation and management of a drinking water, wastewater, or reuse system. Separate standards will cover utility programs such as distribution system operation and management, emergency preparedness, financial management, water treatment, source water protection, communications and customer relations, and business systems. At the time

<sup>\*</sup> American National Standards Institute, 25 West 43rd Street, Fourth Floor, New York, NY 10036.

of issuance of this standard, neither the Department of Homeland Security\* (DHS) nor the US Environmental Protection Agency (USEPA)† has developed regulatory standards for the Water Sector.

II.B. *Origination of Standard*. This standard originates from recommendations prepared by USEPA's National Drinking Water Advisory Council<sup>‡</sup> (NDWAC) on water security practices, incentives, and measures, dated June 2005. A subsequent workgroup was convened in February 2007 by the Critical Infrastructure Partnership Advisory Council<sup>§</sup> (CIPAC) to develop a national performance measurement system and revise the NDWAC recommendations to track with the Water Sector-Specific Plan (Water SSP), which is also described in appendix A. Both sets of recommendations have informed the development of this standard.

II.C. SAFETY Act Designation. The American Water Works Association Standards G430 and J100 have been awarded SAFETY Act designation by the US Department of Homeland Security. The designation carries important liability protection for the association and for utilities that properly implement these standards.

The Support Anti-terrorism by Fostering Effective Technologies Act (SAFETY Act) of 2002 was enacted by Congress in the wake of the terrorist attacks on Sept. 11, 2001. The SAFETY Act was created in part because of the extraordinarily large liability entities might face if a terrorist attack occurs despite deployment of anti-terrorism security measures already in place. Congress designed the SAFETY Act as an incentive for the creation and deployment of technologies and services with anti-terrorism capabilities. Under the SAFETY Act designation, both the entity that creates the anti-terrorism security measure and the entity that deploys the anti-terrorism measure are eligible for certain liability protections.

**III. Use of This Standard.** It is the responsibility of the user of an AWWA standard to determine that the products described in that standard are suitable for use in the particular application being considered.

III.A. *Options and Alternatives.* There is no applicable information in this section.

III.B. Modification to Standard. No applicable information for this section.

<sup>\*</sup> US Department of Homeland Security, Washington, DC 20528.

<sup>†</sup>US Environmental Protection Agency, Ariel Rios Building, 1200 Pennsylvania Avenue, N.W., Washington, DC 20460.

<sup>‡</sup> National Drinking Water Advisory Council, Office of Ground Water and Drinking Water (4601), Ariel Rios Building, 1200 Pennsylvania Avenue, N.W., Washington, DC 20460.

<sup>§</sup>Critical Infrastructure Partnership Advisory Council, US Department of Homeland Security, Washington, DC 20528.

- **IV. Major Revisions.** The major changes made to the standard in this revision include the following:
- 1. Realignment of vulnerability assessment to risk assessment in accordance with ANSI/AWWA J100, Risk and Resilience Management of Water and Wastewater Systems
  - 2. Integration of new AWWA cybersecurity guidance and use-case tool
  - 3. Integration of ANSI/AWWA G440, Emergency Preparedness Practices
  - 4. Revision/update of federal directives
  - 5. Adjustment of reference to the ASCE materials formerly known as WISE
- **V. Comments.** If you have any comments or questions about this standard, please contact AWWA Engineering and Technical Services at 303.794.7711, FAX at 303.795.7603, write to the department at 6666 West Quincy Avenue, Denver, CO 80235-3098, or email at standards@awwa.org.

This is a preview of "AWWA G430-2014". Click here to purchase the full version from the ANSI store.			
	This page intentionally blank.		
	Copyright © 2014 American Water Works Association. All Rights Reserved.		



ANSI/AWWA G430-14 (Revision of ANSI/AWWA G430-09)

AWWA Management Standard

# Security Practices for Operation and Management

### **SECTION 1: GENERAL**

#### Sec. 1.1 Scope

This standard covers the minimum requirements for a protective security program for a water, wastewater, or reuse utility.

#### Sec. 1.2 Purpose

The purpose of this standard is to define the minimum requirements for a protective security program for a water, wastewater, or reuse utility that will promote the protection of employee safety, public health, public safety, and public confidence.

#### Sec. 1.3 Application

This standard can be referenced in the evaluation of security practices. The stipulations of this standard apply when this document has been referenced and then only to the security practices of the utility.

# **SECTION 2: REFERENCES**

This standard references the following documents. In their latest editions, or as specified, they form a part of this standard to the extent specified within