

The Authoritative Resource on Safe Water®

AWWA G430-09 (First Edition)

AWWA Standard

Security Practices for Operation and Management



Effective date: May 1, 2009. First edition approved by AWWA Board of Directors Jan. 25, 2009.

6666 West Quincy Avenue Denver, C0 80235-3098 **T** 800.926.7337 www.awwa.org Advocacy Communications Conferences Education and Training Science and Technology Sections

Copyright © 2009 American Water Works Association. All Rights Reserved.

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 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 on the first page of the classified advertising 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.

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 © 2009 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

P.F. Barron,* Standards Council Liaison, Birmingham Water Works		
& Sewer Board, Birmingham, Ala.	(AWWA)	
C.L. Bowen, California Department of Public Health, Richmond, Calif.	(AWWA)	
C.R. Dugan, Bath, Mich.	(AWWA)	
T.J. Lane, Malcolm Pirnie Inc., East Elmhurst, N.Y.	(AWWA)	
J.W. McLaughlin, Jordan Jones & Goulding, Charlotte, N.C.	(AWWA)	
D.B. Peters, MWH Americas Inc., Denver, Colo.	(AWWA)	
S.M. Passarelli, [*] Standards Engineer Liaison, AWWA, Denver, Colo.	(AWWA)	
User Members		
J.S. Brown, Water Pollution Control Authority, Stamford, Conn.	(AWWA)	
T.A. Humphrey, Portland Water Bureau, Portland, Ore.	(AWWA)	
M.P. Lamb, Charlotte–Mecklenburg Utilities, Charlotte, N.C.	(AWWA)	
T.J. Linville, Oakland, Calif.	(AWWA)	
J.E. Tallent Jr., Littleton/Englewood Wastewater Treatment Plant,		

(AWWA)

Englewood, Colo.

^{*}Liaison, nonvoting

This page intentionally blank.

Contents

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

SEC.	PAGE	
Foreword		
Ι	Introduction vii	
I.A	Background vii	
I.B	History viii	
I.C	Acceptance viii	
II	Special Issues viii	
II.A	Advisory Information on	
	Application of Standards viii	
III	Use of this Standard viii	
III.A	Options and Alternatives viii	
III.B	Modification to Standard viii	
IV	Major Revisions ix	
V	Comments ix	

Standard

1 General

1.1	Scope	1
1.2	Purpose	1
1.3	Application	1
2	References	1
3	Definitions	2
4	Requirements	
4.1	Explicit Commitment to	
	Security	5
4.2	Security Culture	6
4.3	Defined Security Roles and Employee	è
	Expectations	6

SEC.	PAGE	
4.4	Up-to-Date Assessment of Risk	
	(Vulnerability) 7	
4.5	Resources Dedicated to Security	
	and Security Implementation	
	Priorities 8	
4.6	Access Control and Intrusion	
	Detection 8	
4.7	Contamination Detection,	
	Monitoring, and Surveillance 11	
4.8	Information Protection and	
	Continuity 12	
4.9	Design and Construction 14	
4.10	Threat Level–Based Protocols 14	
4.11	Emergency Response and Recovery	
	Plans and Business Continuity	
	Plans 15	
4.12	Internal and External	
	Communications 16	
4.13	Partnerships 17	
5	Verification	
5.1	Documentation Required 17	
5.2	Human Resources 20	
5.3	Equipment 20	
6	Delivery	
Appendix		
A	Resources 21	

This page intentionally blank.

Foreword

This foreword is for information only and is not a part of AWWA G430.

I. Introduction.

I.A. *Background*. The American Water Works Association standards program is designed to serve water and wastewater utilities and their customers, owners, service providers, and government regulators. The standards developed under the program are generally intended to improve a utility's overall operations and service. One aspect of the standards program is a specific effort to establish formal management and operations guidelines. These guidelines identify the appropriate practices, procedures, and behaviors whose implementation 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 ninety years to produce American National Standards Institute (ANSI)^{*}–approved standards for materials and processes that are used by the water and wastewater utility industries. These standards are recognized worldwide and have been adopted by many utilities and organizations. Volunteer standards committees establish standard practices in a uniform and appropriate format. Likewise, this performance standard is developed using the same ANSIrecognized formal process and will be submitted to ANSI for approval as an American National Standard. This standard is made available now through AWWA to provide a version in advance.

Formal standards committees have been and continue to be formed to address the individual standard practices for the diverse areas of water and wastewater utility operation. Technical work groups began the standards development process by identifying best practices for security operation and management. This standard is the outcome of the Security Practices for Operation and Management Committee.

AWWA has developed a series of Utility Management Standards, designed to cover the principal activities of a typical water and/or wastewater utility. Some examples of the individual topics in this series include those for water treatment plants, distribution systems, source water protection, utility management system, emergency planning, security, and business practices. More topics will be added over time, including those for wastewater utilities.

^{*}American National Standards Institute, 25 West 43rd Street, Fourth Floor, New York, NY 10036.

I.B. *History.* This is the first edition of this standard. It was approved by the AWWA Board of Directors on Jan. 25, 2009.

I.C. Acceptance. There is no applicable information for this section.

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 the drinking water or wastewater 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 of issuance of this standard, neither the Department of Homeland Security^{*} (DHS) nor the US Environmental Protection Agency[†] (USEPA) have developed regulatory standards for the water sector.

II.B. This standard relies heavily on the National Drinking Water Advisory Council[‡] (NDWAC) recommendations to USEPA's Administrator on water security practices, incentives, and measures, dated June 2005. A more complete description and links to those recommendations are included in appendix A. Likewise, a workgroup was convened in February 2007 by the Critical Infrastructure Partnership Advisory Council[§] (CIPAC) to develop a national performance measurement system and revise the NDWAC recommendations to track with the Sector-Specific Plan. These recommendations were finalized in February 2008; links to the revised recommendations can also be found in appendix A.

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 for this section.

III.B. *Modification to Standard*. There is no applicable information for this section.

^{*}US Department of Homeland Security, Washington, DC 20528.

[†]US Environmental Protection Agency, Ariel Rios Building, 1200 Pennsylvania Avenue NW, Washington, DC 20460.

[‡]National Drinking Water Advisory Council, Office of Ground Water and Drinking Water (4601), Ariel Rios Building, 1200 Pennsylvania Avenue NW, Washington, DC 20460.

SCritical Infrastructure Partnership Advisory Council, US Department of Homeland Security, Washington, DC 20528.

IV. Major Revisions. This is the first edition of this standard.

V. Comments. If you have any comments or questions about this standard, please contact the AWWA Volunteer and Technical Support Group at 303.794.7711, Fax at 303.794.6303, write to the group at 6666 West Quincy Avenue, Denver CO 80235, or e-mail the group at standards@awwa.org.

This page intentionally blank.

AWWA G430-09 (First Edition)



AWWA 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 or wastewater utility.

Sec. 1.2 Purpose

The purpose of this standard is to define the minimum requirements for a protective security program for a water or wastewater 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