Dry-Barrel Fire Hydrants

Effective date: Jan. 1, 2019.
First edition approved by AWWA Board of Directors June 24, 1913.
Approved by American National Standards Institute Sept. 21, 2018.
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 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 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.

If you are interested in using any part of this publication for training, creating a derivative work, or for any commercial use, written permission from AWWA is required. Please send your request to permissions@awwa.org.
Committee Personnel

The AWWA Subcommittee for Revision of C502, Dry-Barrel Fire Hydrants, which developed this revision, had the following personnel at the time:

Theodore C. Harbour, *Chair*

T.M. Alcott, Waterous Company, South St. Paul, Minn.
D.E. Burczynski, Kennedy Valve, Elmira, N.Y.
G. Chambers, Sigelock Systems LLC, East Rockaway, N.Y.
T.C. Harbour, Mueller Co., Decatur, Ill.
K. Huelsman, Clow Valve Company, Oskaloosa, Iowa
K.S. Jeng-Bullock, City of Houston, Houston, Tex.
K. Johnson, M&H Valve Company, Anniston, Ala.
R.K. Larkin, Gardendale, Ala.
R. Looney, American AVK Company, Minden, Nev.
D.B. Scott, American Flow Control, Birmingham, Ala.
J.H. Wilber, American AVK Company, Littleton, Colo.
S. Ziobro, FM Approvals, Chepachet, R.I.

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

Sean D. Osborne, *Chair*

*General Interest Members*

R.L. Larkin, Gardendale, Ala.
E. Meek,* Standards Engineer Liaison, AWWA, Denver, Colo.
K. Oberoi,* Standards Council Liaison, Charleston, S.C.

* Liaison, nonvoting
M.D. Tennebaum,* Underwriters Laboratories Inc., Los Angeles, Calif.
S. Ziobro, FM Approvals, Chepachet, R.I.

Producer Members

T.M. Alcott,* Waterous Company, South St. Paul, Minn.
D.E. Burczynski,* Kennedy Valve, Elmira, N.Y.
P. Gifford,* Mueller Co., Chattanooga, Tenn.
T.C. Harbour, Mueller Co., Decatur, Ill.
K. Johnson, M&H Valve Co., Anniston, Ala.
R. Looney, American AVK, Minden, Nev.
A. Nelson,* Waterous Co., South St. Paul, Minn.
D.B. Scott, American Flow Control, Birmingham, Ala.
J.H. Wilber,* American AVK, Littleton, Colo.

User Members

T.P. Corrigan, Des Moines Water Works, Des Moines, Iowa
E.L. Hernandez, Denver Water, Denver, Colo.
K.S. Jeng-Bulloch, City of Houston, Houston, Tex.
B. Kellsey, EPCOR Water Services Inc., Edmonton, Alberta, Canada
D.W. Qualls, Dallas Water Utilities, Dallas, Tex.
B.A. Shelton, Montgomery Water Works and Sanitary Sewer Board, Montgomery, Ala.
L.G. Thomas, East Bay Municipal Utilities District, Oakland, Calif.

* Alternate
## Contents

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

<table>
<thead>
<tr>
<th>SEC.</th>
<th>PAGE</th>
<th>SEC.</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreword</td>
<td></td>
<td>4</td>
<td>Requirements</td>
</tr>
<tr>
<td>I</td>
<td>Introduction</td>
<td>vii</td>
<td>4.1</td>
</tr>
<tr>
<td>I.A</td>
<td>Background</td>
<td>vii</td>
<td>4.2</td>
</tr>
<tr>
<td>I.B</td>
<td>History</td>
<td>vii</td>
<td>4.3</td>
</tr>
<tr>
<td>I.C</td>
<td>Acceptance</td>
<td>vii</td>
<td>4.4</td>
</tr>
<tr>
<td>II</td>
<td>Special Issues</td>
<td>viii</td>
<td>4.5</td>
</tr>
<tr>
<td>II.A</td>
<td>Ownership, Use, and Maintenance</td>
<td>viii</td>
<td>4.6</td>
</tr>
<tr>
<td>II.B</td>
<td>Advisory Information on Product Application</td>
<td>ix</td>
<td>4.7</td>
</tr>
<tr>
<td>II.C</td>
<td>Chlorine and Chloramine Degradation of Elastomers</td>
<td>ix</td>
<td>4.8</td>
</tr>
<tr>
<td>III</td>
<td>Use of This Standard</td>
<td>x</td>
<td>4.9</td>
</tr>
<tr>
<td>III.A</td>
<td>Purchaser Options and Alternatives</td>
<td>x</td>
<td>4.10</td>
</tr>
<tr>
<td>III.B</td>
<td>Optional Information (if required by purchaser)</td>
<td>xi</td>
<td>4.11</td>
</tr>
<tr>
<td>III.C</td>
<td>Modification to Standard</td>
<td>xii</td>
<td>4.12</td>
</tr>
<tr>
<td>IV</td>
<td>Major Revisions</td>
<td>xii</td>
<td>4.13</td>
</tr>
<tr>
<td>V</td>
<td>Comments</td>
<td>xii</td>
<td></td>
</tr>
</tbody>
</table>

### Standard

1 General

1.1 Scope | 1
1.2 Purpose | 1
1.3 Application | 1

2 References | 2

3 Definitions | 4
Appendixes

A  Characteristics of National Standard Fire-Hose Coupling Screw Thread ..................................... 21
B  Uniform Color Scheme for Fire Hydrants .................................. 23
B.1 Classification ........................................ 25
B.2 Color Scheme ....................................... 26
B.3 Location Markers .................................... 26
B.4 Capacity .............................................. 26

Figures

A.1 Form of Thread of American National Fire Hose Connection Screw Thread (NH) ................. 24

A.2 Nominal Dimensions of Connections................................. 24

Tables

1 Copper Alloy Standards............................ 7
2 Hydrant Component Parts............................. 8
3 Minimum Wall Thicknesses ....................... 10
4 Maximum Permissible Loss of Head for Hydrants................. 18

A.1 Nominal Dimensions of NH (Fire-Hose) Threads ................. 22
A.2 Basic Dimensions of NH (Fire-Hose) Threads ................. 23