



**American Water Works  
Association**

The Authoritative Resource on Safe Water<sup>SM</sup>

ANSI/AWWA C800-05  
(Revision of ANSI/AWWA C800-01)

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*AWWA Standard*

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# Underground Service Line Valves and Fittings



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Approved by American National Standards Institute Apr. 14, 2005.

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\* Liaison, nonvoting

† Alternate

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## Foreword

*This Foreword is for information only and is not a part of ANSI/AWWA C800.*

### **I. Introduction.**

I.A. *History.* In 1929, the development of a standard for threads for underground service fittings was undertaken by the American Standards Association (ASA). In 1932, the subcommittee that had been appointed for the task asked to be discharged after it had submitted its proposed standards in the form of two drawings. No action was taken by ASA on these proposed standards.

The American Water Works Association (AWWA) recognized the need for standardization of these threads and appointed a committee in 1940 to prepare a standard. The New England Water Works Association (NEWWA) also appointed a committee to prepare a standard for these threads. The AWWA and NEWWA committees cooperated closely in developing a tentative standard in 1947. This was approved as a standard by AWWA on Sept. 1, 1948, and by NEWWA on Sept. 14, 1948. Revisions to the standard were made effective Jan. 17, 1955. In July 1963, a committee was formed to revise C800-55 regarding the evaluation of types K and L copper tubing for water services. In the revision, published in 1966, threads representing current practice were established for those fittings generally used in the water utility field. Sizes  $\frac{1}{2}$  in. and  $\frac{5}{8}$  in. were added for inlet and outlet threads for fittings and couplings for use with flared copper service tubing. The 1966 revision introduced an appendix that was not part of the standard, but which listed standards for water service line materials. The appendix was provided for information only because the materials were covered by other standards. The appendix also contained specifications for copper water tubing, red brass pipe, cast-iron pipe, and steel pipe.

In 1974, a standing committee was formed to revise and update C800-66. The committee recognized the need to expand the scope of this standard beyond being a standard covering only threads for underground service fittings. All previous versions of C800 described only the threads for fittings that were in common use in water distribution systems. Subsequently, the scope of the standard was changed to include performance standards for underground service line fittings as well as for the threads. The 1984 revision to C800 was approved by the AWWA Board of Directors on Jan. 29, 1984. The 1989 revision to C800 was approved by the AWWA Board of Directors on Jan. 1, 1990. The 2001 revision was approved by the AWWA Board of Directors

on Jan. 21, 2001. This revision was approved by the AWWA Board of Directors on Jan. 16, 2005.

I.B. *Acceptance.* In May 1985, the US Environmental Protection Agency (USEPA) entered into a cooperative agreement with a consortium led by NSF International (NSF) to develop voluntary third-party consensus standards and a certification program for all direct and indirect drinking water additives. Other members of the original consortium included the American Water Works Association Research Foundation (AwwaRF) and the Conference of State Health and Environmental Managers (COSHEM). The American Water Works Association (AWWA) and the Association of State Drinking Water Administrators (ASDWA) joined later.

In the United States, authority to regulate products for use in, or in contact with, drinking water rests with individual states.\* Local agencies may choose to impose requirements more stringent than those required by the state. To evaluate the health effects of products and drinking water additives from such products, state, provincial, and local agencies may use various references, including

1. An advisory program formerly administered by USEPA, Office of Drinking Water, discontinued on Apr. 7, 1990.
2. Specific policies of the state, provincial, or local agency.
3. Two standards developed under the direction of NSF, NSF<sup>†</sup>/ANSI<sup>‡</sup> 60, Drinking Water Treatment Chemicals—Health Effects, and NSF/ANSI 61, Drinking Water System Components—Health Effects.
4. Other references, including AWWA standards, *Food Chemicals Codex*, *Water Chemicals Codex*,<sup>§</sup> and other standards considered appropriate by the state, provincial, or local agency.

Various certification organizations may be involved in certifying products in accordance with NSF/ANSI 61. Individual states, provinces, or local agencies have authority to accept or accredit certification organizations within their jurisdiction. Accreditation of certification organizations may vary from jurisdiction to jurisdiction.

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\*Persons outside the US should contact the appropriate authority having jurisdiction.

†NSF International, 789 N. Dixboro Rd., Ann Arbor, MI 48105.

‡American National Standards Institute, 25 West 43rd Street, Fourth Floor, New York, NY 10036.

§Both publications available from National Academy of Sciences, 500 Fifth St., N.W., Washington, DC 20001.



Annex A, “Toxicology Review and Evaluation Procedures,” to NSF/ANSI 61 does not stipulate a maximum allowable level (MAL) of a contaminant for substances not regulated by a USEPA final maximum contaminant level (MCL). The MALs of an unspecified list of “unregulated contaminants” are based on toxicity testing guidelines (noncarcinogens) and risk characterization methodology (carcinogens). Use of Annex A procedures may not always be identical, depending on the certifier.

ANSI/AWWA C800 does not address additives requirements. Users of this standard should consult the appropriate state, provincial, or local agency having jurisdiction in order to

1. Determine additives requirements, including applicable standards.
2. Determine the status of certifications by all parties offering to certify products for contact with, or treatment of, drinking water.
3. Determine current information on product certification.

## II. Special Issues.

II.A. *Lead Fittings.* All references to lead fittings have been removed from C800 and the attached appendices. The AWWA Standards Department has available to users of C800 copies of C800-84 information that contains references to lead fittings.

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. *Purchaser Options and Alternatives.* The following items should be included in the purchaser’s specifications:

1. Standard used—that is, ANSI/AWWA C800, Standard for Underground Service Line Valves and Fittings, of latest revision.
2. The purchaser should state whether compliance with NSF/ANSI 61 Drinking Water System Components—Health Effects is to be required, in addition to the requirements of the Safe Drinking Water Act.
3. The size and type of fitting or valve.
4. Quantity required.
5. Details of other federal, state, provincial, local, and provincial requirements (Sec. 4.1.1).
6. Working pressures under which the valve or fitting will be operated after installation—normal or high pressure (Sec. 4.2).

7. Minimum inside diameter of waterway through corporation stops (Sec. 4.3.1.1).
8. If meter setter spacing is other than shown to accommodate meter lengths listed in Tables 10 or 11 (Sec. 4.3.14).
9. Type of inlet thread (Sec. 4.4).
10. Size and type of outlet thread (Sec. 4.4).
11. If meter flanges other than oval are required (Sec. 4.4.12).
12. Whether records of factory tests are to be provided (Sec. 5.2.1).
13. Description of special castings or patterns, if required. Special casting markings, if required, should be stated, including location of these markings (Sec. 6.1).
14. Whether an affidavit of compliance is to be provided (Sec. 6.3).

III.B. *Modification to Standard.* Any modification to the provisions, definitions, or terminology in this standard must be provided by the purchasers.

**IV. Major Revisions.** Major revisions made to the standard in this edition include the following:

1. The format has been changed to AWWA standard style.
2. Approved wording has been added in Sec. I, III, and V of the Foreword and Sec. 1 and Sec. 4 of the Standard.
3. Addition of meter setters to standard.

**V. Comments.** If you have any comments or questions about this standard, please call the AWWA Volunteer and Technical Support Group at (303) 794-7711, FAX (303) 795-7603, or write to the group at 6666 West Quincy Avenue, Denver, CO 80235-3098, or e-mail at [standards@awwa.org](mailto:standards@awwa.org).



American Water Works  
Association

ANSI/A WWA C800-05  
(Revision of ANSI/A WWA C800-01)

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## *AWWA Standard*

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# Underground Service Line Valves and Fittings

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## SECTION 1: GENERAL

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### Sec. 1.1 Scope

This standard covers valves, fittings, service saddles, and meter setters for use in service line from the main through the meter valve or meter setting appurtenance. Valves, fittings, and meter setters described in this standard include  $\frac{1}{2}$  in. (12.5 mm) through 2 in. (50.8 mm). Service saddles described have outlet sizes  $\frac{1}{2}$  in. (12.5 mm) through 2 in. (50.8 mm) and fit mains of 2 in. (50.8 mm) through 12 in. (304.8 mm). Valves include corporation stops and curb stops. Fittings include various types of couplings and adapters. Service saddles include various types of devices circumferentially attached to the main. Meter setters include various configurations of copper tubing, valves, and fittings for the holding of  $\frac{5}{8}$ -in. (15.875 mm) through 2-in. (50.8 mm) meters.

1.1.1 *Installation.* The performance of products depends on proper installation. The purchaser must follow instructions supplied by or available from the manufacturer. If these instructions are not available, good installation practices shall be followed.