

ANSI/APSP/ICC-5 2011

American National Standard for Residential Inground Swimming Pools

Approved April 22, 2011



This is a preview of "ANSI/APSP/ICC 5-2011". [Click here to purchase the full version from the ANSI store.](#)

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**American National Standard for
Residential Inground Swimming Pools**



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Residential Inground Swimming Pools Errata, ANSI Approved 2012-06-28

Page	Error
7	<p>6.1 Entry/exit. All pools shall have a means of entry/exit in the shallow area if water depth exceeds 24 in. (61.0 cm) at the shallowest point. The means of entry/exit shall be located on the shallow side of any first slope change. Pools having more than one shallow area, including but not limited to; center deep, play or sports pools, shall use the same means of entry/exit in all shallow areas.</p> <p>6.1.1 A secondary means of entry/exit shall be provided in the deep area of the pool if the water depth exceeds 5 ft (152.4 cm).</p> <p>EXCEPTION: In pools where a deep end egress may present a potential hazard, handholds may be substituted for a means of egress.</p>

American National Standard

Approval of an American National Standard requires verification by ANSI that the requirements for due process, consensus, and other criteria for approval have been met by the standard developer. Consensus is established when, in the judgment of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity.

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Foreword

This Foreword is not part of the American National Standard ANSI/APSP/ICC-5 2011. It is included for information only.

The ANSI/APSP/ICC-5 2011, Standard for Residential Inground Swimming Pools, was approved by ANSI on April 22, 2011.

This standard is a revision of ANSI/APSP-5 2003, American National Standard for Residential Inground Swimming Pools.

The objective of this standard is to provide recommended minimum guidelines for the design, equipment, installation, and use of residential inground swimming pools. It is also intended to assist local jurisdictions and other regulatory bodies, where necessary, in the development and promulgation of criteria for residential inground swimming pools.

The design recommendations and construction practices in this standard are based upon sound engineering principles, research and field experience which, when applied properly, contribute to the delivery and installation of a safe product.

The words "safe" and "safety" are not absolutes. While the goal of this standard is to design and construct a safe, enjoyable product, it is recognized that risk factors cannot, as a practical matter, be reduced to zero in any human activity. This standard does not replace the need for good judgment and personal responsibility. In permitting use of the pool by others, owners must consider the skill, attitude, training and experience of the expected user.

As with any product, the specific recommendations for installation and use provided by the manufacturer should be carefully observed.

This standard was prepared by the APSP-5 Residential Inground Swimming Pool Standards Writing Committee of the Association of Pool & Spa Professionals (APSP) in accordance with American National Standards Institute (ANSI) Procedures for the Development and Coordination of American National Standards utilizing the ANSI-accredited canvass method. Consensus approval was achieved by ballot of the APSP-5 canvass list.

The canvass list that approved this standard was balanced to ensure that individuals from competent and concerned interests have had an opportunity to participate. The proposed standard was made available for public review and comment, which provides an opportunity for additional input from industry, academia, regulatory agencies, and the public at large.

The organizations listed on page iv, recognized as having an interest in the standardization of residential inground swimming pools, were contacted prior to the approval of this standard. Inclusion in this list does not necessarily imply that the organization concurred with the submittal of the proposed standard to ANSI.

Consensus approval was achieved by a ballot of the ANSI Consensus Voting Body below and through an ANSI Public Review process. The ANSI Public Review provided an opportunity for additional input from industry, academia, regulatory agencies, safety experts, state code and health officials, and the public at large.

Suggestions for improvement of this standard should be sent to The Association of Pool and Spa Professionals, 2111 Eisenhower Avenue, Alexandria, VA 22314.

This standard is published in partnership with the International Code Council (ICC). ICC develops and publishes the *International Building Code (IBC)* and *International Residential Code (IRC)*, which are adopted as the basis for the building codes used in most states and jurisdictions within the United States. Both the 2009 and 2012 *IBC* and *IRC* reference the ANSI/APSP-5 Standard (2003 version). Additionally, APSP and ICC have collaborated to develop the first comprehensive model swimming pool and spa code, known as the *International Swimming Pool and Spa Code*. This landmark document incorporates and references material from ANSI/APSP standards, such as ANSI/APSP-5 and ICC's model codes, to create a stand-alone code that is consistent with codes and standards from both organizations.

These codes and standards are the result of a joint effort between ICC and APSP as a service to both the swimming pool and spa community, and building code professionals. It is the hope of both organizations that they will lead to enhanced safety for pool and spa users around the world.

Organizations Represented

Consensus approval in accordance with ANSI procedures was achieved by ballot of the following APSP Standards Consensus Committee. Inclusion in this list does not necessarily imply that the organization concurred with the submittal of the proposed standard to ANSI.

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Dal Pino Quality Pools, Inc.	Dick Dal Pino
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D&D Technologies	Maureen Williams
Foundation for Aquatic Injury Prevention.	Ron Gilbert
HEDJ Engineering, Inc.	Herman Weinberg
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National Plasterers Council	Mitch Brooks
National Swimming Pool Foundation	Don Witte
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*non-voting

In accordance with American National Standards Institute (ANSI) procedures, this document will be reviewed periodically. The Association of Pool & Spa Professionals welcomes your comments and suggestions, and continues to review all APSP standards, which include:

- ANSI/APSP-1 2003 Standard for Public Swimming Pools
- ANSI/APSP-2 1999 Standard for Public Spas
- ANSI/APSP-3 1999 Standard for Permanently Installed Residential Spas
- ANSI/APSP-4 1999 Standard for Aboveground/Onground Residential Swimming Pools
- ANSI/APSP/ICC-5 2011 Standard for Residential Inground Swimming Pools
- ANSI/APSP-6 1999 Standard for Residential Portable Spas
- ANSI/APSP-7 2006 Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins
- ANSI/APSP-8 1996 Model Barrier Code for Residential Swimming Pools, Spas and Hot Tubs
- ANSI/APSP-9 2005 Standard for Aquatic Recreation Facilities
- ANSI/APSP-11 2009 Standard for Water Quality in Public Pools and Spas
- ANSI/APSP-14 2011 Standard for Portable Electric Spa Energy Efficiency
- APSP-15 Standard for Pool and Spa Energy Efficiency (Draft)
- ANSI/APSP -16 2011 Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs
- APSP-17 Manufactured Safety Vacuum Release Systems (SVRS) for Residential and Commercial Swimming Pool, Spa, Hot Tub, and Wading Pool Suction Systems (Draft)
- APSP 2005 Workmanship Standards for Swimming Pools and Spas

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Residential Inground Swimming Pools

1 Scope

1.1 Residential pools. This standard applies to permanently installed residential inground swimming pools intended for noncommercial use as a swimming pool by not more than three owner families and their guests and exceeding 24 in. (61 cm) in water depth.

EXCEPTION. Separate ponds, fountains, decorative water features, and reflecting pools or other similar bodies of water that are not intended for bathers are outside the scope of this standard

1.2 Construction. This standard covers specifications for new construction and remodeling of residential inground swimming pools and includes design, equipment, operation, and installation.

1.3 Variation in designs. This standard permits variations in equipment, and design, including special features such as, but not limited to ledges, beach entries, waterfalls, fountains, bridges, tanning shelves, grottoes, seats, benches, in pool tables and bar stools, walls over 12 in. (305 mm) elevated or angled walls or beams, scuba pools, spas, lap pools, swim spas, spillways, slides, coves, walls, etc. to accommodate special needs consideration and advances in technology.

1.3.1 Special purpose pools. Examples of special purpose pools include, but are not limited to, training pools, island pools, scuba pools, polo pools, spas, and lap pools.

1.4 Important safety consideration. The variations in para. 1.3 shall consider safety for the intended use and the circulation of the swimming pool water.

1.5 Normative References. The following standards contain provisions that, through reference in this text, constitute provisions of this American National Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this American National Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

ACI 302.1R-04, *Guide for Concrete Floor and Slab Construction*₁

ANSI Z21.56-2006/CSA 4.7-2006, *Gas fired pool heaters*₂
ANSI Z223.1-2002, *National Fuel Gas Code* (same as NFPA 54-2009)₃

ANSI/APSP-7 *Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins*

ANSI/APSP-8 *Model Barrier Code for Residential Swimming Pools, Spas, and Hot Tubs*

ANSI/ASME A112.19.8-2007, *Suction Fittings for Swimming and Wading Pools, Spas, Hot Tubs and Whirlpool Bathtub Appliances*₄

ANSI/NEMA MG1-2009 (Rev. 1-2010), *Motors and generators*₅

ANSI/NFPA 54 (2009), *National fuel Gas Code* (same as ANSI Z223.1-2002)₆

ANSI/NFPA 58 (2004), *Liquefied Petroleum Gas Code*₇

ANSI/NSF 50 (2009), *Equipment for Swimming Pools, Spas, Hot Tubs and Other Recreational Water Facilities*₈

ANSI/ASHRAE 62.1-2007, *Ventilation for acceptable indoor air quality*₉

A112.1.2 (2004), *Air gaps in plumbing systems*₁₀

ASTM F1346-91 (2003), *Standard performance specification for safety covers and labeling requirements for all covers for swimming pools, spas, and hot tubs*₁₁

ASTM F2208 (2008), *Standard safety specification for residential pool alarms*₁₂

NFPA 70 (2011), Article 680 of the *National Electrical Code (NEC)*₁₃

OSHA Standard 29, CFR1910.1000 Table Z-1₁₄

UL 1081 (2008), *Standard for swimming pool pumps, filters, and chlorinators*₁₅

UL 1261 (2001), *Standard for electric water heaters for pools and tubs*₁₆

ANSI/UL 559, *Heat Pumps*

U.S. Code of federal regulations, 16 CFR, Part 1303.1 et seq.₁₇

U.S. Code of federal regulations, 16 CFR, Part 1207₁₈

1-4. ACI, American Concrete Institute, 3800 Country Club Drive, Farmington Hills, MI 48331, (248) 848-3800, www.concrete.org

5. National Electrical Manufacturers Association (NEMA), 1300 N. 17th Street, Suite 1847, Rosslyn VA 22209, (703) 841-3200, www.nema.org

6-7. NFPA, 1 Batterymarch Park, Quincy, MA 02269, (617) 770-3000, www.nfpa.org

8. NSF International, 789 N. Dixboro Rd, P.O. Box 130140, Ann Arbor MI 48113, (734) 769-8010, www.nsf.org

9. American Society of Heating, Refrigerating and Air Conditioning Engineers, 1791 Tullie Circle NE, Atlanta, GA 30329, (404) 636-8400, www.ashrae.org

10. American Society of Mechanical Engineers (ASME), 3 Park Avenue, 20th Floor, New York, NY 10016, (212) 591-8562, www.asme.org

11-12. ASTM International, 100 Barr Harbor Dr, West Conshohocken, PA 19428, (610) 832-9585, www.astm.org

13. National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, MA 02269 (617) 770-3000, www.nfpa.org

14. Occupational Safety and Health Administration, DOL, 200 Constitution Ave, Washington, DC 20210, www.osha.gov

15-16. Underwriters Laboratories (UL), 333 Pfingsten Road, Northbrook, IL 60062, (847) 272-8800, www.ul.com UL, previously listed

17-18. U.S. Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250; toll free (866) 512-1800; order online from <http://bookstore.gpo.gov>