

## Notice

The 2009 edition of the *Uniform Swimming Pool, Spa and Hot Tub Code* is developed through a consensus standards development process approved by the American National Standards Institute. This process brings together volunteers representing varied viewpoints and interests to achieve consensus on swimming pool, spa and hot tub issues. While the International Association of Plumbing and Mechanical Officials (IAPMO) administers the process and establishes rules to promote fairness in the development of consensus, it does not independently test, evaluate, or verify the accuracy of any information or the soundness of any judgments contained in its codes and standards.

IAPMO disclaims liability for any personal injury, property, or other damages of any nature whatsoever, whether special, indirect, consequential, or compensatory, directly or indirectly resulting from the publication, use of, or reliance on this document. IAPMO also makes no guaranty or warranty as to the accuracy or completeness of any information published herein.

In issuing and making this document available, IAPMO is not undertaking to render professional or other services for or on behalf of any person or entity. Nor is IAPMO undertaking to perform any duty owed by any person or entity to someone else. Anyone using this document should rely on his or her own independent judgment or, as appropriate, seek the advice of a competent professional in determining the exercise of reasonable care in any given circumstances.

# An American National Standard

IAPMO/ANSI USPSHTC 1-2009

# 2009 Uniform Swimming Pool, Spa and Hot Tub Code™



## REVISION MARKINGS

Code changes from the 2006 edition are marked in the margins as follows:

→ An arrow denotes a deletion.

| A vertical denotes a change.

Information on referenced publications can be found in Chapter 6.

All pressures used in this code are gauge pressures unless otherwise indicated.

Copyright © 2009  
by

International Association of Plumbing and Mechanical Officials  
All Rights Reserved

No part of this work may be reproduced or recorded in any form or by any means,  
except as may be expressly permitted in writing by the publisher.

First Printing, November 2009

ISSN 1058-3114

Published by the International Association of Plumbing and Mechanical Officials  
5001 East Philadelphia Street, Ontario, California 91761-2816 – USA  
Main Phone: (909) 472-4100 • Main Fax: (909) 472-4150

## FOREWORD

The advantages of a Uniform Swimming Pool, Spa and Hot Tub Code, acceptable in the various jurisdictions, have long been recognized. The increasing needs for such a code induced the International Association of Plumbing and Mechanical Officials to pass a resolution at its 46th Annual Business Conference, which directed the president to form a committee to develop a basic swimming pool, spa and hot tub document.

After months of concerted endeavor, this committee, composed of representatives from industry and public utility companies, inspectors, plumbers, and engineers, successfully completed the first edition of the Uniform Swimming Pool, Spa and Hot Tub Code, which was officially adopted by the International Association of Plumbing and Mechanical Officials in September 1976.

In presenting the 2009 edition, IAPMO recognizes that the ultimate code has not yet been attained. Users of this code are respectfully urged to present whatever amendments their experience may dictate to IAPMO World Headquarters in accordance with the Regulations Governing Consensus Development of the Uniform Solar Energy and Swimming Pool, Spa & Hot Tub Codes. Amendments adopted by the committee are published every three years. This process serves to keep this basic document abreast of technological development.

The use of this document is intended to provide a safe and functional swimming pool, spa and hot tub system with minimum regulations. Users of the Uniform Swimming Pool, Spa and Hot Tub Code are urged to strive for not just the minimum good swimming pool, spa and hot tub system, but to keep the consumer in mind. With the exception of "high use and wear portions" of the system, the swimming pool, spa and hot tub system should have the same life as other components of the building.

The Uniform Plumbing Code™ (UPC™) sections in this code are taken from the 2009 edition of the UPC.

The Uniform Mechanical Code™(UMC™) sections in this code are taken from the 2009 edition of the UMC.

The Uniform Swimming Pool, Spa and Hot Tub Code is dedicated to all those who have unselfishly devoted their time and effort to create and maintain it.

## COMMITTEE ON UNIFORM SWIMMING POOL, SPA AND HOT TUB CODE

*These lists represent the membership at the time the Committee was balloted on the final text of this edition. Since that time, changes in the membership may have occurred.*

### IAPMO Uniform Swimming Pool, Spa and Hot Tub Technical Committee

**Arnold Rodio**, *Chairman*  
Pace Setter Plumbing. [P]

**Courtney Arford**, Douglas County [P]

**Carvin DiGiovanni**, Association of Pool and Spa Professionals [U]

**Jim Dingman**, Underwriters Laboratories, Inc. [U]

**Mike Durfee**, County of Salt Lake [GI]

**Ronald Lacher**, Pool Engineering, Inc. [P]

**David Levanger**, Carbon County [GI]

**Alvin Rotter**, Apollo Pool Service [U]

**Mike Stinson**, Mike the Pool Man [GI]

**Drake Woods**, Addison Pools [P]

### Nonvoting

**Matt Sigler**, IAPMO Staff Liaison

### COMMITTEE MEMBERSHIP CLASSIFICATION ABBREVIATIONS

These classifications apply to Technical Committee members and represent their principal interest in the activity of a committee.

- P** *Producer* – Representatives of manufacturers, distributors, licensors, developers, contractors and sub-contractors, construction labor organizations, associations of these groups, and professional consultants to these groups.
- U** *User* – Representatives of owners, owners' organizations, designers and consultants retained by owners, testing laboratories retained by owners, and insurance companies serving owners.
- GI** *General Interest* – General Interest members are neither Producers nor Users. This category includes but is not limited to educators, researchers, representatives of regulatory agencies (including the enforcing authority), and technical societies.

# FORM FOR PROPOSALS ON IAPMO USEC/USPSHTC COMMITTEE DOCUMENTS

**NOTE: All proposals MUST be received by 5:00 PM PST/PDST on August 2, 2010.**

For further information on the standards-making process, please contact Codes and Standards Administration at 909-472-4110. For technical assistance, please call IAPMO at 909-230-5535 or 909-472-4111.	<b>FOR OFFICE USE ONLY</b> LOG # : _____ DATE REC'D: _____
---	--

## PLEASE USE SEPARATE FORM FOR EACH PROPOSAL

Please indicate in which format you wish to receive your ROP/ROC:  Download\*  CD-ROM

\*Note: In choosing the download option, you intend to view the ROP/ROC from our website. NO CD-Rom will be sent to you.

Date: \_\_\_\_\_ Name: \_\_\_\_\_ Telephone #: \_\_\_\_\_

Company: \_\_\_\_\_

Street Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Please Indicate Organization Represented (if any): \_\_\_\_\_

1. IAPMO Document Title \_\_\_\_\_ IAPMO NO. & Year \_\_\_\_\_

Section/Paragraph \_\_\_\_\_

2. Proposal Recommends (check one):  New Text  Revise Text  Delete Text

3. Proposal (Include proposed new wording, or identification of wording to be deleted): [Note: Proposed text should be in legislative format: i.e., use underscore to denote wording to be inserted (inserted wording) and strike-through to denote wording to be deleted (~~deleted wording~~).] Please note if you are referencing a standard or other publication, please provide two copies.

4. Statement of Problem and Substantiation for Proposal: [Note: State the problem that will be resolved by your recommendations; give the specific reason for your proposal, including copies of tests, research papers, etc. If more than 200 words, it may be abstracted for publication.]

5.  This proposal is original material. [Note: Original material is considered to be the submitter's own idea based on or as a result of his/her own experience, thought, or research and, to the best of his/her knowledge, is not copied from another source.]

This proposal is not original material, its source (if known) is as follows: \_\_\_\_\_

I hereby grant the IAPMO all and full rights in copyright, in this proposal, and I understand that I acquire no rights in any publication of IAPMO in which this proposal in this or another similar or analogous form is used.

Signature (Required): \_\_\_\_\_

IAPMO CODES DEPARTMENT FAX • (909) 472-4198 or (877) 852-6337  
Mail to: Code Development • IAPMO • 5001 E Philadelphia Street • Ontario • CA • 91761-2816  
Email to : codechange@iapmo.org

# INSTRUCTIONS FOR SUBMITTING PROPOSALS – PLEASE READ CAREFULLY –

1. Type or print in BLACK ink.
2. Indicate the title of the document and the document year. Also indicate the specific section or paragraph that the proposed amendment applies to.
3. Check the appropriate box to indicate whether this proposal recommends adding new text, revising existing text, or deleting text.
4. In the space identified as “Proposal”, indicate the exact wording you propose as new or revised text, or the text you propose be deleted.
5. In the space titled “Statement of Problem and Substantiation for Proposal”, state the problem that will be resolved by your recommendation and give the specific reason for your proposal. Include copies of test results, research papers, fire experience, or other materials that substantiate your recommendation. [See note below, item (f).]
6. Check the appropriate box to indicate whether or not this proposal is original material, and, if it is not, indicate the source of the material.
7. Sign the proposal.

If supplementary material (photographs, diagrams, reports, etc.) is included, you may be required to submit sufficient copies for all members and alternates of the technical committee. For publication in the *Report on Proposals*, the technical committee is authorized to abstract the “Statement of Problem and Substantiation for Proposal” if it exceeds 200 words.

**NOTE:**

The IAPMO Regulations Governing Consensus Development in Paragraph 7.0 states: Each proposal shall be submitted to the Secretariat and shall include:

- (a) identification of the submitter and his or her affiliation (i.e., technical committee, organization, company), where appropriate;
- (b) identification of the document, edition of the document, and paragraph of the document to which the proposal is directed;
- (c) the proposed text of the proposal, including the wording to be added, revised (and how revised), or deleted;
- (d) a statement of the problem and substantiation for proposal;
- (e) the signature of the submitter; and
- (f) two copies of any document(s) (other than an IAPMO document) being proposed as a reference standard or publication (see 10.1).

TABLE OF CONTENTS

<b>Chapter 1 – Administration</b> .....	1	309.0	Pool, Spa and Hot Tub Fittings .....	22	
101.0	Title, Purpose and Scope .....	1	309.2	Surface Skimmers .....	22
101.1	Title .....	1	309.3	Perimeter Overflow Systems .....	22
101.2	Purpose .....	1	309.4	Pool, Spa and Hot Tub Outlets .....	23
101.3	Plans Required .....	1	309.5	Hydrostatic Relief .....	23
101.4	Scope .....	1	310.0	Materials .....	23
101.5	Application to Existing Swimming Pool, Spa or Hot Tub System .....	1	310.11	PEX .....	23
102.0	Organization and Enforcement .....	2	Table 3-1	Materials for Building Supply and Water Distribution Piping and Fittings .....	24
102.1	Authority Having Jurisdiction .....	2	310.12	Flexible Corrugated Connectors .....	24
102.2	Duties and Powers of the Authority Having Jurisdiction .....	2	310.13	PEX-AL-PEX and PE-AL-PE .....	24
102.3	Violations and Penalties .....	3	310.14	Mechanical Joints .....	25
103.0	Permits and Inspections .....	3	310.15	Materials .....	25
103.1	Permits .....	3	310.17	Drain Piping .....	25
103.2	Application for Permit .....	3	311.0	Workmanship and Installation Practices .....	25
103.3	Permit Issuance .....	4	311.7	Screwed Fittings .....	25
103.4	Fees .....	5	312.0	Joints and Connections .....	25
103.5	Inspections .....	6	312.1	Types of Joints .....	25
103.6	Connection Approval .....	8	Table 3-2	Materials for Drain, Waste, Vent Pipe and Fittings .....	27
103.7	Unconstitutionality .....	8	312.2	Use of Joints .....	27
103.8	Validity .....	8	312.3	Special Joints .....	28
Table 1-1	Swimming Pool, Spa and Hot Tub Permit Fees .....	9	313.0	Wastewater Disposal .....	28
<b>Chapter 2 – Definitions</b> .....	11	313.7	Separation Tank .....	29	
201.0	General .....	11	314.0	Deck Drain Piping Materials .....	29
202.0	Definition of Terms .....	11	315.0	Equipment Foundations and Enclosures .....	29
<b>Chapter 3 – General Requirements</b> .....	19	316.0	Accessibility and Clearances .....	29	
301.0	General .....	19	317.0	Electrical Systems .....	29
301.1	Swimming Pool, Spa and Hot Tub .....	19	318.0	Prohibited Fittings and Practices .....	29
301.3	Sizing for Velocity .....	19	319.0	Increases and Reducers .....	29
302.0	Materials – Standards and Alternates .....	19	320.0	Protection of Piping, Materials and Structures .....	29
302.1	Minimum Standards .....	19	320.4	Protectively Coated Pipe .....	29
302.2	Alternate Materials and Methods Equivalency .....	20	320.7	Waterproofing of Openings .....	30
303.0	Turnover Time .....	20	320.9	Sleeves .....	30
304.0	Pumps .....	20	320.11	Ratproofing .....	30
305.0	Valves .....	20	321.0	Trenching, Excavation and Backfill .....	30
306.0	Water Supply Inlets and Connections .....	21	321.3	Open Trenches .....	30
307.0	Filters .....	21	322.0	Tests and Test Gauges .....	30
307.1	Rapid Sand Filters .....	21	323.0	Final Inspection .....	31
307.2	High-Rate Sand Filters .....	21	<b>Chapter 4 – Water Heaters and Vents</b> .....	33	
307.3	Diatomite Type Filters .....	21	<b>Part I</b> .....	33	
307.4	Cartridge Filters .....	21	401.0	General .....	33
308.0	Gas Chlorinators .....	21	402.0	Definitions .....	33

## UNIFORM SWIMMING POOL, SPA AND HOT TUB CODE

<p>402.1 Chimney .....33</p> <p>402.2 Chimney, Factory-Built .....33</p> <p>402.3 Chimney, Masonry .....33</p> <p>402.4 Chimney, Metal .....33</p> <p>402.5 Chimney Connector .....33</p> <p>402.6 Combustible Material .....33</p> <p>402.7 Direct Vent Appliances .....33</p> <p>402.8 Flue Collar .....33</p> <p>402.9 Gas Vent, Type B .....33</p> <p>402.10 Gas Vent, Type L .....33</p> <p>402.11 Stackless Vents .....33</p> <p>402.12 Vent .....33</p> <p>402.13 Vent Collar .....33</p> <p>402.14 Vent Connector .....33</p> <p>402.15 Venting System .....33</p> <p>402.16 Water Heater .....33</p> <p>403.0 Permits .....33</p> <p>404.0 Inspections .....33</p> <p>404.1 Inspection of Chimneys or Vents .....33</p> <p>404.2 Final Water Heater Inspection .....33</p> <p>405.0 Water Heater Requirements .....34</p> <p>405.1 Clearance .....34</p> <p>405.2 Pressure-Limiting Devices .....34</p> <p>405.3 Temperature-Limiting Devices .....34</p> <p>405.4 Temperature, Pressure and Vacuum Relief Devices .....34</p> <p>406.0 Gas-Fired Swimming Pool Heater Approval Requirements .....34</p> <p>407.0 Oil-Burning and Other Swimming Pool, Spa and Hot Tub Heaters .....34</p> <p>408.0 Installation Requirements for Water Heaters .....34</p> <p>408.5 Unions .....35</p> <p>409.0 Air for Combustion and Ventilation .....35</p> <p>409.1 General .....35</p> <p>409.2 Indoor Combustion Air .....35</p> <p>409.3 Indoor Opening Size and Location .....36</p> <p>409.4 Outdoor Combustion Air .....36</p> <p>409.5 Combination Indoor and Outdoor Combustion Air .....36</p> <p>409.6 Engineered Installations .....36</p> <p>409.7 Mechanical Combustion Air Supply .....36</p> <p>409.8 Louvers, Grilles and Screens .....37</p> <p>409.9 Combustion Air Ducts .....37</p> <p>410.0 Other Water Heater Installation Requirements .....37</p>	<p>410.5 Relief Valve Discharge .....38</p> <p>410.6 Added or Converted Appliances .....38</p> <p>410.7 Types of Gases .....38</p> <p>410.8 Flammable Vapors .....38</p> <p>410.9 Installation in Residential Garages .....38</p> <p>410.10 Installation in Parking Structures .....38</p> <p>410.11 Gas Appliance Physical Protection .....38</p> <p>410.12 Venting of Flue Gases .....38</p> <p>410.13 Extra Device or Attachment .....38</p> <p>410.14 Adequate Capacity of Piping .....38</p> <p>410.15 Avoiding Strain on Gas Piping .....38</p> <p>410.16 Gas Appliance Pressure Regulators .....39</p> <p>410.17 Venting of Gas Appliance Pressure Regulators .....39</p> <p>410.18 Bleed Lines for Diaphragm-Type Valves .....39</p> <p>410.19 Combination of Appliances .....39</p> <p>410.20 Installation Instructions .....39</p> <p>410.21 Protection of Outdoor Appliances .....39</p> <p>410.22 Accessibility and Clearance .....40</p> <p>411.0 Appliances on Roofs .....40</p> <p>411.1 General .....40</p> <p>411.2 Installation of Appliances on Roofs .....40</p> <p>411.3 Access to Appliances on Roofs .....40</p> <p>411.4 Appliances in Attics .....40</p> <p>412.0 Venting of Appliances .....41</p> <p>412.1 General .....41</p> <p>412.2 Specification for Venting .....41</p> <p>412.3 Design and Construction .....41</p> <p>412.4 Type of Venting System to Be Used .....42</p> <p>412.5 Masonry, Metal and Factory-Built Chimneys .....42</p> <p>Table 4-1 Type of Venting System to Be Used .....42</p> <p>412.6 Gas Vents .....44</p> <p>412.7 Single-Wall Metal Pipe .....45</p> <p>412.8 Through-the-Wall Vent Termination .....47</p> <p>412.9 Condensation Drain .....48</p> <p>412.10 Vent Connectors for Category I Gas Utilization Appliances .....48</p> <p>Table 4-2 Clearance for Connectors .....50</p> <p>Table 4-3 Reduction of Clearances with Specified Forms of Protection .....51</p> <p>Table 4-4 Minimum Thickness for Galvanized Steel Vent Connector for Low-Heat Appliances .....52</p>
---	---

TABLE OF CONTENTS

412.11	Vent Connectors for Category II, Category III and Category IV Gas Utilization Appliances . . . . .	52	<b>Chapter 5 – Fuel Gas Piping</b> . . . . .	91	
412.12	Draft Hoods and Draft Controls . . . . .	52	501.0	General . . . . .	91
Table 4-5	Minimum Thickness for Steel Vent Connectors for Medium-Heat Appliances and Commercial and Industrial Incinerators . . . . .	53	502.0	Definitions . . . . .	91
412.13	Manually Operated Dampers . . . . .	53	502.1	Appliance Fuel Connector . . . . .	91
412.14	Automatically Operated Vent Dampers . . . . .	53	502.2	Approved . . . . .	91
412.15	Obstructions . . . . .	53	502.3	Bonding Jumper . . . . .	91
413.0	Sizing of Category I Venting Systems . . . . .	54	502.4	Fuel Gas . . . . .	91
413.1	Obstructions and Vent Dampers . . . . .	54	502.5	Gas Piping . . . . .	91
413.2	Additional Requirements to Multiple Appliance Vent Table 4-13 Through Table 4-21 . . . . .	55	502.6	Gas-Piping System . . . . .	91
414.0	Direct Vent Appliances . . . . .	58	502.7	Gas Utility . . . . .	91
Table 4-6	Vent Connector Maximum Length . . . . .	58	502.8	Grounding Electrode . . . . .	91
Table 4-7	Type B Double-Wall Gas Vent . . . . .	61	502.9	Liquified Petroleum Gas (LPG) Facilities . . . . .	91
Table 4-8	Type B Double-Wall Gas Vent . . . . .	64	502.10	Provision for Location of Point of Delivery . . . . .	91
Table 4-9	Masonry Chimney . . . . .	66	502.11	Quick-Disconnect Device . . . . .	91
Table 4-10	Masonry Chimney . . . . .	68	502.12	Service Piping . . . . .	91
Table 4-11	Single-Wall Metal Pipe or Type B Asbestos Cement Vent . . . . .	70	502.13	Transition Gas Riser . . . . .	91
Table 4-12	Exterior Masonry Chimney . . . . .	71	503.0	Plans Required . . . . .	91
Table 4-13	Type B Double-Wall Vent . . . . .	72	504.0	Workmanship and Defects . . . . .	91
Table 4-14	Type B Double-Wall Vent . . . . .	76	504.3	Protective Coating . . . . .	92
Table 4-15	Masonry Chimney . . . . .	78	505.0	Inspections . . . . .	92
Table 4-16	Masonry Chimney . . . . .	80	506.0	Certificate of Inspection . . . . .	92
Table 4-17	Single-Wall Metal Pipe or Type B Asbestos Cement Vent . . . . .	82	507.0	Authority to Render Gas Service . . . . .	92
Table 4-18	Exterior Masonry Chimney . . . . .	82	508.0	Authority to Disconnect . . . . .	92
Table 4-19	Exterior Masonry Chimney . . . . .	83	509.0	Temporary Use of Gas . . . . .	92
Table 4-20	Exterior Masonry Chimney . . . . .	84	510.0	Gas-Piping System Design, Materials and Components . . . . .	93
Table 4-21	Exterior Masonry Chimney . . . . .	85	510.1	Piping Plan . . . . .	93
<b>Part II</b>	<b>Sizing of Venting Systems Serving Appliances Equipped with Draft Hoods, Category I Appliances, and Appliances Listed for Use with Type B Vents.</b> . . . . .	86	510.2	Provision for Location of Point of Delivery . . . . .	93
G.1	Examples Using Single Appliance Venting Tables . . . . .	86	510.3	Interconnections Between Gas-Piping Systems . . . . .	93
Table G.1.0	Masonry Chimney Liner Dimensions with Circular Equivalents . . . . .	89	510.4	Sizing of Gas-Piping Systems . . . . .	93
Table G.2.0	Standard Method Volume, All Appliances . . . . .	89	510.5	Acceptable Piping Materials and Joining Methods . . . . .	94
			Table 5-1	Specifications for Threading Metallic Pipe . . . . .	95
			510.6	Gas Meters . . . . .	97
			510.7	Gas Pressure Regulators . . . . .	97
			510.8	Shutoff Valves . . . . .	97
			510.9	Excess Flow Valve . . . . .	97
			510.10	Expansion and Flexibility . . . . .	97
			511.0	Gas Piping Installation . . . . .	98
			511.1	Piping Underground . . . . .	98
			511.2	Installation of Piping . . . . .	99

UNIFORM SWIMMING POOL, SPA AND HOT TUB CODE

Table 5-2	Support of Piping . . . . .	100	Table 5-12	Semi-Rigid Copper Tubing . . . . .	115
511.3	Concealed Piping in Buildings . . . . .	100	Table 5-13	Semi-Rigid Copper Tubing . . . . .	116
511.4	Piping in Vertical Chases . . . . .	100	Table 5-14	Semi-Rigid Copper Tubing . . . . .	117
511.5	Appliance Over Pressure Protection .101		Table 5-15	Semi-Rigid Copper Tubing . . . . .	118
511.6	Gas Pipe Turns . . . . .	101	Table 5-16	Corrugated Stainless Steel Tubing (CSST) . . . . .	119
511.7	Drips and Sediment Traps . . . . .	101	Table 5-17	Corrugated Stainless Steel Tubing (CSST) . . . . .	119
511.8	Outlets . . . . .	101	Table 5-18	Corrugated Stainless Steel Tubing (CSST) . . . . .	120
511.9	Branch Pipe Connection . . . . .	102	Table 5-19	Corrugated Stainless Steel Tubing (CSST) . . . . .	120
511.10	Manual Gas Shutoff Valves . . . . .	102	Table 5-20	Corrugated Stainless Steel Tubing (CSST) . . . . .	121
511.11	Prohibited Devices . . . . .	102	Table 5-21	Polyethylene Plastic Pipe . . . . .	121
511.12	Electrical Bonding and Grounding .102		Table 5-22	Polyethylene Plastic Pipe . . . . .	122
511.13	Electrical Circuits . . . . .	102	Table 5-23	Polyethylene Plastic Pipe . . . . .	123
511.14	Electrical Connections . . . . .	102	Table 5-24	Polyethylene Plastic Tubing . . . . .	124
512.0	Appliance Connections to Building Piping . . . . .	102	Table 5-25	Polyethylene Plastic Tubing . . . . .	124
512.1	Connecting Gas Appliances . . . . .	102	Table 5-26	Schedule 40 Metallic Pipe . . . . .	125
512.2	Appliance Shutoff Valves and Connections . . . . .	103	Table 5-27	Schedule 40 Metallic Pipe . . . . .	126
512.3	Quick-Disconnect Devices . . . . .	103	Table 5-28	Schedule 40 Metallic Pipe . . . . .	127
512.4	Sediment Trap . . . . .	103	Table 5-29	Schedule 40 Metallic Pipe . . . . .	128
512.5	Installation of Piping . . . . .	103	Table 5-30	Semi-Rigid Copper Tubing . . . . .	129
513.0	Liquefied Petroleum Gas Facilities and Piping . . . . .	103	Table 5-31	Semi-Rigid Copper Tubing . . . . .	130
514.0	Pressure Testing and Inspection . . . . .	103	Table 5-32	Semi-Rigid Copper Tubing . . . . .	131
514.1	General . . . . .	103	Table 5-33	Corrugated Stainless Steel Tubing (CSST) . . . . .	132
514.2	Test Preparation . . . . .	104	Table 5-34	Corrugated Stainless Steel Tubing (CSST) . . . . .	132
514.3	Test Pressure . . . . .	104	Table 5-35	Corrugated Stainless Steel Tubing (CSST) . . . . .	133
514.4	Detection of Leaks and Defects . . . . .	104	Table 5-36	Polyethylene Plastic Pipe . . . . .	133
514.5	Piping System and Leak Check . . . . .	104	Table 5-37	Polyethylene Plastic Pipe . . . . .	134
514.6	Purging . . . . .	105	Table 5-38	Polyethylene Plastic Tubing . . . . .	135
Table 5-3	Length of Piping Requiring Purging with Inert Gas for Servicing Modification . . . . .	105	<b>Chapter 6 – Referenced Standards</b> . . . . .	137	
Table 5-4	Length of Piping Requiring Purging with Inert Gas Before Placing in Operation . . . . .	105	Table 6-1 . . . . .	137	
515.0	Required Gas Supply . . . . .	105	<b>Appendix A Conversion Table</b> . . . . .	147	
516.0	Required Gas Piping Size . . . . .	105	<b>Appendix B Metric System</b> . . . . .	149	
516.1	Pipe Sizing Methods . . . . .	105	<b>Index</b> . . . . .	151	
Table 5-5	Schedule 40 Metallic Pipe . . . . .	108			
Table 5-6	Schedule 40 Metallic Pipe . . . . .	109			
Table 5-7	Schedule 40 Metallic Pipe . . . . .	110			
Table 5-8	Schedule 40 Metallic Pipe . . . . .	111			
Table 5-9	Semi-Rigid Copper Tubing . . . . .	112			
Table 5-10	Semi-Rigid Copper Tubing . . . . .	113			
Table 5-11	Semi-Rigid Copper Tubing . . . . .	114			



# CHAPTER 1 ADMINISTRATION

## 101.0 Title, Purpose and Scope.

**101.1 Title.** This document shall be known as the "Uniform Swimming Pool, Spa and Hot Tub Code," may be cited as such, and will be referred to herein as "this code".

**101.2 Purpose.** This code is an ordinance providing minimum requirements and standards for the protection of the public health, safety, and welfare.

**101.3 Plans Required.** The Authority Having Jurisdiction shall be permitted to require the submission of plans, specifications, drawings, and such other information as required by the Authority Having Jurisdiction, prior to the commencement of, and at any time during the progress of, any work regulated by this code.

The issuance of a permit upon plans and specifications shall not prevent the Authority Having Jurisdiction from thereafter requiring the correction of errors in said plans and specifications or from preventing construction operations being carried on thereunder when in violation of this code or of any other pertinent ordinance or from revoking any certificate of approval when issued in error.

## 101.4 Scope.

**101.4.1** The provisions of this code shall apply to the erection, installation, alteration, repair, relocation, replacement, addition to, use, and maintenance of swimming pools, spas, or hot tub systems within this jurisdiction.

**101.4.1.1 Repairs and Alterations.** In existing buildings or premises in which swimming pools, spas or hot tub installations are to be altered, repaired, or renovated, deviations from the provisions of this code are permitted, provided such deviations are found to be necessary and are first approved by the Authority Having Jurisdiction.

**101.4.1.2 Maintenance.** The plumbing and drainage system of any premises under the Authority Having Jurisdiction shall be maintained in a sanitary and safe operating condition by the owner or the owner's agent. All swimming pools, spas, or hot tub equipment, structures, appurtenances, signage, safety devices, fencing and other associated components shall be maintained in a safe and functioning condition.

**101.4.1.3 Existing Construction.** No provision of this code shall be deemed to require a change in any portion of a swimming

pool, spa, or hot tub system or any other work regulated by this code in or on an existing building or lot when such work was installed and is maintained in accordance with law in effect prior to the effective date of this code, except when any such swimming pool, spa, or hot tub system or other work regulated by this code is determined by the Authority Having Jurisdiction to be in fact dangerous, unsafe, insanitary, or a nuisance and a menace to life, health, or property.

**101.4.1.4 Conflicts Between Codes.** When the requirements within the jurisdiction of this code conflict with the requirements of the plumbing or mechanical code, this code shall prevail.

**101.4.2 Additions, Alterations, Repairs, and Replacement.** Additions, alterations, repairs, and replacement of swimming pool, spa, or hot tub systems shall comply with the provisions for new systems except as otherwise provided in Section 101.5.

## 101.5 Application to Existing Swimming Pool, Spa or Hot Tub System.

**101.5.1 Additions, Alterations, or Repairs.** Additions, alterations, or repairs shall be permitted to be made to any swimming pool, spa, or hot tub system without requiring the existing swimming pool, spa, or hot tub system to comply with all the requirements of this code, provided the addition, alteration, or repair conforms to that required for a new swimming pool, spa, or hot tub system. Additions, alterations, or repairs shall not cause an existing system to become unsafe, insanitary, or overloaded.

**101.5.2 Health and Safety.** Whenever compliance with the provisions of this code fails to eliminate or alleviate a nuisance, or any other dangerous or insanitary condition that may involve health or safety hazards, the owner or the owner's agent shall install such additional swimming pool, spa, or hot tub facilities or shall make such repairs or alterations as ordered by the Authority Having Jurisdiction.

**101.5.3 Existing Installations.** Swimming pools, spas, or hot tub systems lawfully in existence at the time of the adoption of this code shall have their use, maintenance, or repair continued if the use, maintenance, or repair is in accordance with