

Work Session Room at City Hall
Monday, March 4, 2024
6 p.m.



William E. Dollar Municipal Building
200 N. Fifth St.
Garland, Texas

GARLAND

CITY OF GARLAND WORK SESSION OF THE CITY COUNCIL

The Garland City Council extends to all visitors a sincere welcome. We value your interest in our community and your participation in the meetings of this governing body. Visit GarlandTX.gov/Council for a full list of meeting dates.

The Work Session Room at Garland City Hall is wheelchair accessible, and ADA parking is available on the street as well as in the public parking garage. Persons with disabilities who may need auxiliary aids or services must contact the City Secretary's Office at 972-205-2404 at least two working days prior to the meeting so that appropriate arrangements can be made. Braille is not available.

NOTICE: Pursuant to Section 551.127 of the Texas Government Code, one or more members of the City Council may attend this meeting by internet/video remote means. A quorum of the City Council, as well as the presiding officer, will be physically present at the above identified location. Members of the public that desire to make a public comment must attend the meeting in person.

PUBLIC COMMENTS ON WORK SESSION ITEMS

Members of the audience may address the City Council on any Work Session item at the beginning of the meeting. Speakers are allowed three minutes each, grouped by agenda item and called in the order of the agenda. Anyone wishing to speak must fill out a speaker card (located at the entrance to the Council Chambers and on the visitor's side of the Work Session Room) and give it to the City Secretary before the Mayor calls the meeting to order. Speakers are limited to addressing items on the Work Session agenda only. Items on a Regular Meeting agenda should be addressed at the respective Regular Meeting. Items not currently on an agenda may be addressed during the citizen comments portion of any Regular Meeting.

CONSIDER THE CONSENT AGENDA

Council may ask for discussion or further information on any item posted in the consent agenda of the next Regular Meeting. Council may also ask that an item on the consent agenda be pulled and considered for a vote separate from the consent agenda at the next Regular Meeting. All discussions or deliberations are limited to posted agenda items and may not include new or unposted subject matter.

WRITTEN BRIEFINGS

Council may ask for discussion, further information, or give direction to staff on an item posted as a written briefing.

1. Garland Housing Finance Grant Agreement

Council is requested to allow the City Manager to execute the Grant Agreement with the Garland Housing Finance Corporation for \$540,000. The funding from the Grant will continue in supporting the GHFC Home Repair Program, aimed at assisting low-income homeowners. This initiative will cover essential repairs, offering up to \$35,000 to address exterior maintenance repairs, interior health and safety improvements, as well as plumbing and electrical fixes, and address certain code enforcement violations.

2. Ordinance Update for Public and Semipublic Swimming Pools

Council is requested to consider adopting updates to Chapter 22, Article VI of Garland City Ordinances, entitled Public and Semipublic Swimming Pools, for the purposes of becoming current and consistent with the State in regard to pool safety at public and semipublic pools and spas. It is also requested that Garland

adopts the State's Public Interactive Water Feature rules, as there are currently no regulations in the Garland ordinance pertaining to splash pads or spray parks.

3. Consideration of Fire Staffing Realignment

Council is asked to consider approving a revision to the 23-24 Civil Service Classifications & Compensation Ordinance to reflect realignment of one (1) Firefighter vacancy which will be utilized to create an additional Battalion Chief/Fire Marshal.

4. Notice of Intent to Issue Certificates of Obligation

The Issuance of Certificates of Obligation will be used to fund a portion of the Council Approved 2024 Capital Improvement Program.

5. Pavement Condition Index Survey for the Garland Street Network

Council is requested to approve the award of a contract to Roadway Asset Services, LLC in the amount of \$288,280 to provide Pavement Condition Index services. The vendor will assess the condition of all city streets and alleys in accordance with recognized industry standards and provide data that will assist city staff with enhancing its programming methodologies for street improvement projects.

VERBAL BRIEFINGS

Council may ask for discussion, further information, or give direction to staff on an item posted as a verbal briefing.

6. USDA Forest Service Urban & Community Forestry Inflation Reduction Act Grant Report

Staff is presenting Council with a verbal report regarding a multi-year grant with the National Arbor Day Foundation. Unless otherwise directed by Council, this item will be scheduled for formal consideration at a future regular meeting.

7. Captioning, Translations and Related Services for Council Meetings

Staff will discuss potential options for providing captioning, translations and other related services at City Council meetings.

ANNOUNCE FUTURE AGENDA ITEMS

A Council member, with a second by another member or the Mayor alone, may ask that an item be placed on a future agenda of the City Council or of a committee of the City Council. No substantive discussion of that item will take place at this time.

EXECUTIVE SESSION

Council will adjourn into executive session pursuant to the following sections of the Texas Government Code, Sections:

The City Council will adjourn into executive session pursuant to Sections 551.072, 551.074, 551.087m and 551.071 of the Texas Government Code to deliberate or discuss the following:

- 1. The purchase, exchange, lease or value of real property located in the vicinity of Hopkins and W Ave D (551.072), personnel matters related to the appointment, employment, evaluation, reassignment, duties, discipline, or dismissal of public employees (551.074), and attorney/client matters concerning privileged and unprivileged client information related to the same (551.071).*
- 2. Economic development matters related to commercial or financial information that the City has received from one or more business prospects that the City seeks to have locate, stay, or expand in the vicinities of (i) South Garland Avenue and I-635, and (ii) President George Bush Turnpike and Holford Road, with which the City is conducting economic development negotiations (551.087), including possible purchases of real property (551.072), and attorney/client matters concerning privileged and unprivileged client information related to the*

same (551.071).

ADJOURN

All Work Sessions of the Garland City Council are broadcast live on CGTV, Time Warner Cable Channel 16 and Frontier FIOS TV 44. Meetings are rebroadcast at 9 a.m. and 7 p.m. Tuesdays - Sundays. Live streaming and on-demand videos of the meetings are also available online at GarlandTX.tv. Copies of the meetings can be purchased through the City Secretary's Office (audio CDs are \$1 each and DVDs are \$3 each).

NOTICE: *The City Council may recess from the open session and convene in a closed executive session if the discussion of any of the listed agenda items concerns one or more of the following matters:*

1. *Pending/contemplated litigation, settlement offer(s), and matters concerning privileged and unprivileged client information deemed confidential by Rule 1.05 of the Texas Disciplinary Rules of Professional Conduct. Sec. 551.071, Tex. Gov't Code.*
2. *The purchase, exchange, lease or value of real property, if the deliberation in an open meeting would have a detrimental effect on the position of the City in negotiations with a third person. Sec. 551.072, Tex. Gov't Code.*
3. *A contract for a prospective gift or donation to the City, if the deliberation in an open meeting would have a detrimental effect on the position of the City in negotiations with a third person. Sec. 551.073, Tex. Gov't Code.*
4. *Personnel matters involving the appointment, employment, evaluation, reassignment, duties, discipline or dismissal of a public officer or employee or to hear a complaint against an officer or employee. Sec. 551.074, Tex. Gov't Code.*
5. *The deployment, or specific occasions for implementation of security personnel or devices. Sec. 551.076, Tex. Gov't Code.*
6. *Discussions or deliberations regarding commercial or financial information that the City has received from a business prospect that the City seeks to have to locate, stay, or expand in or near the territory of the City and with which the City is conducting economic development negotiations; or to deliberate the offer of a financial or other incentive to a business prospect of the sort described in this provision. Sec. 551.087, Tex. Gov't Code.*
7. *Discussions, deliberations, votes, or other final action on matters related to the City's competitive activity, including information that would, if disclosed, give advantage to competitors or prospective competitors and is reasonably related to one or more of the following categories of information:*
 - *generation unit specific and portfolio fixed and variable costs, including forecasts of those costs, capital improvement plans for generation units, and generation unit operating characteristics and outage scheduling;*
 - *bidding and pricing information for purchased power, generation, and fuel, and Electric Reliability Council of Texas bids, prices, offers, and related services and strategies;*
 - *effective fuel and purchased power agreements and fuel transportation arrangements and contracts;*
 - *risk management information, contracts, and strategies, including fuel hedging and storage;*
 - *plans, studies, proposals, and analyses for system improvements, additions, or sales, other than transmission and distribution system improvements inside the service area for which the public power utility is the sole certificated retail provider; and*
 - *customer billing, contract, and usage information, electric power pricing information, system load characteristics, and electric power marketing analyses and strategies. Sec. 551.086; Tex. Gov't Code; Sec. 552.133, Tex. Gov't Code]*



Each year, the City Council reviews and updates its goals for the Garland community and City operations. City management uses these goals to guide operational priorities, decision-making and resource allocation.



GARLAND
CITY COUNCIL STAFF REPORT

City Council Work Session

1.

Meeting Date: 03/04/2024

Grant Disbursement Agreement - Garland Housing Finance Corporation

Submitted By: Mona Woodard, Neighborhood Services Administrator

Strategic Focus Area: Vibrant Neighborhoods and
Commercial Centers

Issue/Summary

Council is requested to consider accepting a \$540,000 grant from the Garland Housing Finance Corporation (GHFC) to continue the Garland Partnership Program with the City of Garland and authorize the City Manager to sign and execute a disbursement agreement for deployment of these funds.

Background

The City of Garland has partnered with Garland Housing Finance Corporation for the previous 3 years to offer homeowner assistance to low-income Garland residents. The purpose of the 2024 grant is to provide funding and support for emergency home repairs, substantial home repairs and qualified exterior repairs. Fifteen percent of the total grant is allocated to cover salary and administrative expenses. The GHFC Garland Partnership Program augments the City of Garland's existing Home Repair Program, which is funded annually by HUD for home repairs.

The GHFC grant programs are administered by the Community Development Department, with support from the Office of Neighborhood Vitality and Code Compliance departments. In 2023, the GHFC offered \$400,000 through a Garland Partnership Program grant to the City of Garland. To date, 100% of these funds have been spent or committed to projects.

Consideration / Recommendation

Unless otherwise directed by the Council, this item will be scheduled for formal consideration at the March 19, 2024, Regular Meeting. Staff recommends acceptance of the 2024 Garland Partnership grant funds to enable the continuation of the Program.

Attachments

GHFC 2024 Grant Agreement

**GARLAND HOUSING FINANCE CORPORATION
ADDRESSING GARLAND PARTNERSHIP PROGRAM
DISBURSEMENT AGREEMENT**

THIS AGREEMENT is made and entered into on this the ____ day of _____, 2024, by and between the Garland Housing Finance Corporation (the “GHFC”), a Texas public instrumentality and nonprofit corporation, and the City of Garland, Texas (“City”), a Texas home-rule municipality (collectively, the “Parties”).

WITNESSETH:

WHEREAS, the Garland Housing Finance Corporation is a Texas public instrumentality and nonprofit corporation organized and operating pursuant to the Texas Housing Finance Corporations Act, Tex., Loc. Gov’t Code §§ 394.001 et seq.; and

WHEREAS, the GHFC was created to provide quality affordable housing for the residents of Garland, Texas; and

WHEREAS, the GHFC’s mission is to provide affordable housing in Garland through down payment and closing cost assistance, neighborhood awards, affordable senior & multifamily housing, issuance of bonds, and direct ownership opportunities; and

WHEREAS, the GHFC also administers grant programs designed to enhance the quality of life for residents of Garland; and

WHEREAS, the GHFC desires to partner with the City to fund the GHFC Addressing Garland Partnership Program (“Program”); and

WHEREAS, the Program will help eligible low-income persons, elderly, veteran, or disabled homeowners in Garland or to homeowners residing in a low-income area by providing funds for emergency and other repairs to homes; and

WHEREAS, the GHFC agrees to periodically fund the Program and monitor its application in Garland; and

WHEREAS, the City agrees to administer the Program and perform certain activities in connection with the Program.

NOW THEREFORE, in consideration of the premises and of the mutual covenants and agreements of the Parties hereto, to be by them kept and performed as hereafter set forth, the Parties do agree as follows:

AGREEMENT

Article I. Definitions

Unless context clearly suggests a different meaning, the words and phrases set forth in this Article I shall have the following meanings:

1.01 Business Day. Any day other than a Saturday, Sunday, or official City holiday in which Garland's City Hall offices are closed for business.

1.02 Disabled Homeowner. For the purposes of this Agreement, a homeowner who receives monthly disability insurance payments from the United States Social Security Administration and who owns their primary residence.

1.03 Elderly Homeowner. For the purpose of this Agreement, a homeowner who is at or above the age of 62 and owns their primary residence.

1.04 Family Income. The calculated income for a Participant's household as determined by 24 C.F.R. § 5.609.

1.05 Low Income Homeowner. A homeowner whose calculated monthly income meets the definition of low income as specified by then current United States Department of Housing & Urban Development regulations. This definition is subject to change.

1.06 Participant. An eligible homeowner receiving funds administered by this Agreement for making repairs to the homeowner's primary residence.

1.07 Participant Data. Documents and data reflecting a Participant's eligibility for services funded by a Partnership Program, including, but not limited to, the participant's name, address, age, sex, ethnic background, size of household, income level or other basis for determining eligibility, and description of the services funded by a Partnership Program.

1.08 Partnership Program. One of the two Partnership Programs funded by the GHFC and administered by the City pursuant to this Agreement.

1.09 Veteran Homeowner. A homeowner who has served in and was honorably discharged by any branch of the United States military.

Article II. Partnership Programs

2.01 The two categories of Partnership Programs governed by this Agreement are:

(a) The GHFC Repair Partnership Program. This Partnership Program shall provide the Program money to help Participants with home repairs. Repairs shall be classified as

either Minor Repairs or Substantial Repairs.

1. Minor Repairs: The Partnership Program may provide Participants repair services of up to \$10,000 per property.

2. Substantial Repairs: The Partnership Program may provide Participants funding of up to \$35,000.00 per property. If a repair requires more than \$35,000.00, the City must obtain the GHFC's approval.

2.02 Funding under any of the Partnership Programs may be combined federal grant funding accessible to the City, if eligible. In cases of combined funding sources for a single property, the City shall maintain separate contracts and invoices and files to prevent commingling of funds.

2.03 Partnership Program funds are to be used primarily to help low to moderate income homeowners within the city limits of Garland, Texas. The City shall give preference to applicants who are low income; the City shall give additional preference to low income Disabled Homeowners, Elderly Homeowners, and Veteran Homeowners. The City shall have the discretion to allow applicants who are not Participants in the Partnership Program(s).

Article III. City's Duties

3.01 The City shall administer each Partnership Program. The City's duties shall include

- (a) Client application intake and processing;
- (b) Project management of all construction activities;
- (c) Approval and payment of invoices for approved projects;
- (d) Case file management; and
- (e) Quarterly reporting the grant status to the GHFC.

3.02 The City shall maintain all records required by the GHFC that are pertinent to the projects to be funded under this Agreement. City shall establish, maintain and submit to the GHFC records acceptable to the GHFC showing the use of Partnership Program expenditures to benefit Participants. These records shall include, but are not limited to

- (a) Documents providing a full description of each project funded;
- (b) Documents necessary to determine a project's eligibility for Partnership Program funds;

- (c) Documents necessary to establish a Participant's eligibility for Partnership Program funds (applicants shall calculate income and certify that information on the application is true and correct);
- (d) Documents necessary to reflect any improvement to real property funded by Partnership Program funds;
- (e) Participant Data; and
- (f) All other documents necessary to reflect compliance with the Partnership Program.

3.03 The City shall retain all records pertinent to expenditures incurred pursuant to this Agreement for five (5) years after the termination of all activities funded under this Agreement, or after the resolution of all audit findings, whichever is later. Records relating to any Participant must be kept for five (5) years after he or she has received final payment. Notwithstanding the above, if there is litigation, claims, audits, negotiations or other actions that involve any of the records, the City must retain the records until all issues and actions are resolved, or the expiration of the five-year period, whichever occurs later.

3.04 The City shall make Participant Data available to the GHFC or its designee upon written request.

3.05 Audit.

(a) All City records with respect to any matters covered by this agreement shall, upon reasonable written notice to the City, be made available to the GHFC, the grantor agency, their designees or the United States government, at any time during normal business hours, as often as the GHFC deems necessary, to audit, examine and make excerpts or transcripts of all relevant data. Any deficiencies noted in the audit reports must be fully cleared by the City within 30 days after receipt by the City. Failure to comply with the above audit requirements will constitute a violation of this Agreement and may result in the withholding of future payments or termination.

(b) The agency or entity requesting the audit shall bear the costs of any audit activities.

3.06 Confidentiality of Participant Data. City acknowledges that Participant information collected pursuant to this contract is private and the use or disclosure of such information, when not directly connected with the administration of the City's responsibilities with respect to services provided under this contract, is prohibited unless the City obtains written consent from the Participant or the Participant's parent/guardian if the Participant is unable to consent.

3.07 Progress Reports. The City shall submit written quarterly progress reports to the GHFC in the form and content required by the GHFC. The report shall consist of the following information:

(a) A spreadsheet identifying the homeowners assisted in the preceding quarter that includes name, address, household income level, family size, whether the homeowner is a veteran, elderly or disabled, and the amount of Program funds awarded; and

(b) A spreadsheet identifying all administrative expenses.

The GHFC may require additional relevant information, which the City shall also provide.

3.08 Equal Opportunity and Affirmative Action. City agrees that in performing under this Agreement, it shall not discriminate against any worker, employee or applicant for employment, on the basis of race, color, creed, religion, age, sex, national origin, disability status nor otherwise commit an unfair employment practice.

3.09 Nondiscrimination Clause. The City shall administer the Partnership Programs without regard to an applicant's race, color, creed, religion, age, sex, national origin or disability status.

3.10 The City may use fifteen percent (15%) of the funds expended for administrative purposes related to program operations. The City may earmark fifteen percent of the GHFC funds for administrative purposes; however, at the end of the Term, the Parties shall reconcile the amount of earmarked funds against fifteen percent of sum of GHFC money actually expended plus any monies necessary to fund any Project approved but not yet funded. Any positive difference shall be refunded to the GHFC in accordance with Section 5.05 of this Agreement.

Article IV The GHFC's Duties

4.01 In consideration for the City's duties, the GHFC agrees to disburse up to \$540,000.00 during the Term of this Agreement for the Partnership Programs.

4.02 The GHFC shall disburse funds for the Partnership Programs as follows:

a. The GHFC shall disburse \$180,000.00 to the City within ten (10) days of final execution of this Agreement.

b. The GHFC shall distribute the remaining \$360,000.00 in two additional installments of \$180,000.00, payable on June 1, 2024, and September 1, 2024. These disbursements shall take place regardless of whether the Partnership Program projects have exhausted funds for any or all of the Partnership Programs.

4.03 The GHFC shall cooperate with the City in providing any information the City requires to obtain additional funding from any other source to help Partnership Program Participants.

Article V Partnership Program budgets

5.01 Each Partnership Program's initial annual budget is as follows:

- a. the GHFC Repair Partnership Program\$540,000.00

5.02 The GHFC reserves the right to adjust budget categories as necessary. Any such adjustment must be presented as an Addendum to this Agreement and must be both in writing and executed by both Parties. The Parties may not reduce Partnership Program's budget below the amount of funds already disbursed or earmarked for existing projects at the time of the adjustment.

5.03 The City may use funds allocated to the GHFC Repair Partnership Program for either Minor Repairs or Substantial Repairs at the City's discretion, within the limits set forth herein above.

5.04 Any Partnership Program funds allocated by the GHFC pursuant to this Agreement which the City has not awarded by the end of the Term shall revert back to the GHFC.

5.05 Upon the termination or expiration of this Agreement, City shall transfer to the GHFC any GHFC Program funds then on hand, less any monies necessary to fund any Project approved but not yet funded, and any accounts receivable attributable to the use of the GHFC Program funds. In addition, the City shall refund to the GHFC any administrative funds due and owing after the reconciliation process set forth in Section 3.10 of this Agreement.

5.06 The sole source of funds for this Agreement is the GHFC Addressing Garland Partnership Program. This Agreement shall not obligate or encumber any other funds of the GHFC.

5.07 Any Partnership Program funds the City has not awarded by the end of a given quarter shall be carried over to the next quarter.

Article VI Term; Quarter

6.01 The Term of the Agreement shall begin upon execution by both parties and shall run until the 31st day of December, 2024.

6.02 A Quarter begins on the first day of January, April, July, and October.

Article VII Nonperformance, Suspension, and Termination

7.01 Termination for nonperformance. This Agreement may be terminated by either party if it determines the other party has not met the obligations imposed by this Agreement. The party seeking termination must provide written notice of termination stating what obligations have not been met. The nonperforming party shall have thirty (30) days to perform the duties described in the notice. If it fails to do so, this Agreement is terminated.

7.02 Termination for convenience. Either party may terminate this contract at any time by giving written notice to the other party of such termination and specifying the effective date thereof at least 30 days before the effective date of such termination. In the event of any termination for convenience, all finished or unfinished documents, data, reports or other material prepared by the City under this agreement shall, at the option of the GHFC, become the property of the GHFC, and the City shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents or materials prior to the termination.

Article VIII Miscellaneous Provisions

8.01 No Assignment. Neither party shall have the right to assign that party's interest in this Agreement without the prior written consent of the other party.

8.02 Severability. If any term or provision of this Agreement is held to be illegal, invalid or unenforceable, the legality, validity or enforceability of the remaining terms or provisions of this Agreement shall not be affected thereby, and in lieu of each such illegal, invalid or unenforceable term or provision, there shall be added automatically to this Agreement a legal, valid or enforceable term or provision as similar as possible to the term or provision declared illegal, invalid or unenforceable.

8.03 Waiver. Either the GHFC or City shall have the right to waive any requirement contained in this Agreement, which is intended for the waiving party's benefit, but, except as otherwise provided herein, such waiver shall be effective only if in writing executed by the party for whose benefit such requirement is intended.

8.04 Governing Law. This Agreement and all of the transactions contemplated herein shall be governed by and construed in accordance with the laws of the State of Texas. Exclusive venue for any action arising out of this Agreement shall be in Dallas County, Texas.

8.05 Paragraph Headings. The paragraph headings contained in this Agreement are for convenience only and shall in no way enlarge or limit the scope or meaning of the various and several paragraphs hereof.

8.06 Binding Effect. Except as limited herein, the terms and provisions of this Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, devisees, personal and legal representatives, successors and assigns.

8.07 Interpretation of terms. Within this Agreement, words of any gender shall be held and construed to include any other gender, and words in the singular number shall be held and construed to include the plural, unless the context otherwise requires.

8.08 Counterparts. This Agreement has been executed in multiple counterparts, each of which shall be deemed an original, and all of which shall constitute but one and the same instrument.

8.09 Exhibits. All exhibits and amendments to this Agreement are incorporated herein by reference for all purposes wherever reference is made to the same.

8.10 Entire Agreement. It is understood and agreed that this Agreement contains the entire agreement between the parties and supersedes any and all prior agreements, arrangements or understandings between the parties relating to the subject matter. No oral understandings, statements, promises or inducements contrary to the terms of this Agreement exist. This Agreement cannot be changed or terminated orally.

8.11 Amendments. The Parties may amend this Agreement at any time provided the amendment is made in writing and signed by both Parties.

8.12 Relationship of Parties. Nothing contained in this Contract shall be deemed or construed by the parties hereto or by any third party to create the relationship of principal and agent or of partnership or of joint venture or of any association whatsoever between the parties, it being expressly understood and agreed that no provision contained in this Contract nor any act or acts of the parties hereto shall be deemed to create any relationship between the parties other than the relationship of independent parties contracting with each other solely for the purpose of effecting the provisions of this Contract.

8.13 Notices. Communications and details concerning this contract shall be directed to the following contact representatives:

City of Garland:

Ms. Mona Woodard
City of Garland
Department of Housing and Community Services
800 Main Street
Garland, TX 75040

Garland Housing Finance Corporation:

Mr. David W. Gibbons
Garland Housing Finance Corporation
1675 West Campbell Rd.
Garland, TX 75044

EXECUTED this ____ day of _____, 2024.

CITY OF GARLAND, TEXAS

By:

Judson Rex
City Manager

Approved as to form:

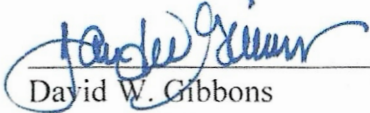


Stephen M. Hines
Sr. Asst. City Attorney

EXECUTED this ____ day of _____, 2024.

**GARLAND HOUSING
FINANCE CORPORATION**

By:



David W. Gibbons
Executive Director



GARLAND
CITY COUNCIL STAFF REPORT

City Council Work Session

2.

Meeting Date: 03/04/2024

Pool Ordinance Update

Submitted By: Mandy Pippen, Director

Strategic Focus Area: Safe Community

Issue/Summary

Council is requested to consider adopting updates to Chapter 22, Article VI of Garland City Ordinances, entitled Public and Semipublic Swimming Pools, for the purposes of becoming current and consistent with the State in regard to pool safety at public and semipublic pools and spas. It is also requested that Garland adopts the State's Public Interactive Water Feature rules, as there are currently no regulations in the Garland ordinance pertaining to splash pads or spray parks.

Background

Chapter 22, Article VI of Garland City Ordinance, entitled Public and Semipublic Swimming Pools, has not had a major update since 2007. The Texas Department of State Health Services has updated their rules for Public Swimming Pools and Spas multiple times, most recently in January 2023. Adopting these rules by reference, with amendments, as well as the state's rules on Public Interactive Water Features (splash pads) (Texas Administrative Code Title 25, Chapter 265, Subchapters L and M), will bring Garland up to date with pool safety regulations.

Consideration / Recommendation

Unless otherwise directed by Council, this item will be scheduled for formal consideration at the March 19, 2024 Regular Meeting.

Attachments

Current GCO-Chapter 22, Article VI
Pool Spa and PIWF Code Ord
Pool Spa and PIWF Code Ord_Redline
25 TAC Chapter 265 Subchapter L
25 TAC Chapter 265 Subchapter M
2021 ISPSC

ARTICLE VI PUBLIC AND SEMIPUBLIC SWIMMING POOLS

§ 22.85. Definitions.

As used in this article, the following terms shall have the definitions given them in this section:

- (1) Abandoned shall mean a public or semipublic swimming pool or spa that has not possessed a valid permit to operate issued by the Health Department for a period of three hundred sixty-five (365) days or more.
- (2) AVS shall mean an atmospheric vent system. An AVS is described in the United States Consumer Product Safety Commission “Guideline for Addressing Potential Entrapment Hazards Associated with Pools and Spas,” Publication Number 363-009801.
- (3) Break point depth shall mean the vertical plane(s) where the depth of a pool changes markedly over a short distance. The break point depth separates areas in a pool which are less than five (5) feet from areas in a pool that are greater than five (5) feet.
- (4) Existing pool shall mean a pool or spa that was constructed prior to October 1, 1999.
- (5) Fecal coliform organism shall mean bacteria, through lab analysis, that are indicative of fecal pollution.
- (6) Free chlorine residual shall mean the chlorine concentration, in parts per million (ppm) of water, available for rapid and effective biocidal action. This is the chlorine, which remains uncombined with nitrogenous compounds after the initial chlorine demand of the water has been satisfied.
- (7) Director shall mean the Director of the Health Department of the City or his designated representative.
- (8) Lifeguard shall mean an individual certified in an approved course of instruction in life saving and water safety offered by the American Red Cross or its equivalent.
- (9) Neglected shall mean a public or semipublic pool or spa that has constituted a swimming pool nuisance for more than thirty (30) days.
- (10) Operator shall mean the person who is in control of the property upon which a public or semipublic swimming pool is located.
- (11) Person shall mean an individual, partnership, company, corporation, association, firm, or organization, institution, or similar entity.
- (12) Pool enclosure shall mean the area immediately around a pool enclosed by a fence, wall, or other solid structure which is in compliance with section 30.143 [sections 30.200 through 30.209] of this Code and the Texas Health and Safety Code, chapter 757.

- (13) Public pool shall mean a pool to which the general public has access, which may also be referred to as a class B pool.
- (14) Pool shall mean any manmade permanently installed or nonportable structure, basin, chamber, or tank containing an artificial body of water that is used for swimming, diving, aquatic sports, or other aquatic activity other than a residential pool. The term does not include a spa or a decorative fountain that is not used as a pool. References within the standard to various types of pools are defined by the following categories:
- (a) Class A pool. Any pool used, with or without a fee, for accredited competitive aquatic events. A class A pool may also be used for recreation.
 - (b) Class B pool. Any pool used for public recreation and open to the general public with or without a fee.
 - (c) Class C pool. Any pool operated for and in conjunction with:
 - (i) Lodging such as hotels, motels, apartments, condominiums, or mobile home parks;
 - (ii) Property owner associations, private organizations, or clubs; or
 - (iii) A school, college or university while being operated for academic or continuing education classes. The use of such a pool would be open to occupants, members or students, etc., and their guests but not open to the general public.
 - (d) Class D pool. A wading pool with a maximum water depth of 24 inches at any point.
- (15) Semipublic pool shall mean a pool that is privately owned and open only to an identifiable class of persons, including, but not limited to, motel guests, apartment residents, and club members, which may also be referred to as a class C pool.
- (16) Spa shall mean a constructed permanent or portable structure that is 2 feet or more in depth and that has a surface area of 250 square feet or less or a volume of 3,250 gallons or less and that is intended to be used for bathing or other recreational uses and is not drained and refilled after each use.
- (17) SVRD shall mean a safety vacuum release device.
- (18) Swimming pool nuisance shall mean a public or semipublic pool or spa with one or more of the following conditions: insufficient water clarity, improperly maintained pool enclosure, source of mosquito breeding, or failure to comply with the safety provisions of section 22.88.
- (Ordinance 6125, sec. 3, adopted 5/1/07)

§ 22.86. Evaluations.

The director may evaluate a public or semipublic pool at any reasonable time and has

authority to enter upon the premises where a pool is located to the extent necessary to make a full evaluation. The director shall have the authority to collect water samples for the purpose of determining water quality. The operator of a semipublic pool shall provide a key or lock combination to provide complete access to all pool enclosures and equipment to the director if a self-locking gate is installed.

(Ordinance 6125, sec. 3, adopted 5/1/07)

§ 22.87. Maintenance and operation.

All public and semipublic pools and spas shall be chemically treated and maintained in accordance with the following standards by the operator:

- (1) Free residual chlorine shall be maintained between 1.0 part per million and 8.0 parts per million (ppm) by a continuous chlorine feeder. Free residual chlorine in spas shall be maintained between 2.0 and 8.0 parts per million (ppm) by a continuous feeder. Residual levels of bromine in pools shall be maintained between 2.5 parts per million (ppm) and 12.0 parts per million (ppm) by a continuous feeder. Residual levels of bromine in spas shall be maintained between 4.5 and 12.0 parts per million (ppm) by a continuous feeder. The use of any disinfectant other than chlorine or bromine must be approved in writing by the director. When the pool is in operation, the free residual level of chlorine or bromine shall be tested once a day and recorded. These records must be maintained on site for one year and shall be made available for inspection by the director at all times.
- (2) Pool and spa water must be maintained so that the pH of the water is not less than 7.0 and not more than 7.8. When the pool is in operation, the pH shall be tested once a day and recorded. These records must be maintained on site for one year and shall be made available for inspection by the director at all times.
- (3) Pool and spa water must be maintained so that the total alkalinity levels are above 60 parts per million (ppm) of carbonate species. When the pool is in operation, the total alkalinity shall be tested once every seven (7) days and recorded. These records must be maintained on site for one year and shall be made available for inspection by the director at all times.
- (4) Pool and spa water must be maintained so that cyanuric acid levels do not exceed 100 parts per million (ppm). When the pool is in operation, the cyanuric acid levels shall be tested once every fourteen (14) days and recorded. These records must be maintained on site for one year and shall be made available for inspection by the director at all times.
 - (a) The operator of a pool or spa shall maintain a test kit capable of measuring chemical ranges as required in subsections (1), (2), (3) and (4) of this section.
- (5) No pool or spa water sample shall show a positive test confirmed test for fecal coliform organisms or human pathogenic bacteria.
- (6) Pool water must be maintained with sufficient clarity to permit a distinct view of the main drain from outside the pool. Spa water shall have sufficient clarity to permit a

distinct view of the bottom while the aeration is turned off.

- (7) Every pool and spa shall be kept free of scum, sediment, dirt, slime, algae, and all other foreign matter.
- (8) Pools and spas shall meet the following circulation rates.
 - (a) For pools constructed and installed after October 1, 1999, a minimum turnover rate of 6 hours, if average depth is four (4) feet or greater.
 - (b) For pools constructed and installed after October 1, 1999, whose depth is less than four (4) feet, a minimum turnover rate shall be recalculated based on the formula: average depth in feet times 1.5.
 - (c) For pools constructed and installed before October 1, 1999, a minimum turnover rate of 8 hours.
 - (d) For spas, a minimum turnover rate of 30 minutes.
 - (e) For wading pools, a minimum turnover rate of one hour or less.

(Ordinance 6125, sec. 3, adopted 5/1/07)

§ 22.88. Safety provisions.

- (A) Main drains and suction outlets, other than skimmers, shall be provided with anti-vortex approved suction outlet covers or grates as described in this section. These covers or grates shall be secured in such a way that they can be removed only with the use of a tool. The installation of all approved covers or grates must be in accordance with the manufacturer's instructions. If the manufacturer specifies fasteners, they must be stainless steel or brass.
 - (1) An approved cover is a suction outlet drain cover that:
 - (a) Is stamped showing that it has been certified by a nationally recognized testing laboratory as being in compliance with ASME/ANSI A112.19.8M;
 - (b) Is stamped showing the maximum number of gallons per minute approved for the cover under ASME/ANSI A112.19.8M testing; and
 - (c) Does not have water flow through the cover that exceeds the maximum gallons per minute approved for the drain cover under ASME/ANSI A112.19.8M testing.
 - (2) An approved grate is a suction outlet grate cover that:
 - (a) Has a minimum diagonal measurement of 24 inches;
 - (b) Has a flow velocity through the open area that does not exceed 1.5 feet per second.
 - (3) If an existing pool has a drain cover or grate with a minimum diagonal measurement less than 24 inches and no approved cover is manufactured and

available, a cover or grate that is not approved may be used as long as the flow velocity through the open area of the cover or grate does not exceed 1.5 feet per second.

(B) Existing pools or spas shall have an approved cover or approved grate on each suction outlet. The covers or grates shall be installed according to the manufacturer's instructions. Existing pools or spas shall comply with all provisions of subsection (B)(1) or (B)(2) of this section, as applicable.

(1) Pool or spa, suction outlets that are 4 feet deep or less, as measured from the normal water level to the suction outlet, must have for each suction system:

(a) Dual hydraulically balanced suction outlets with approved covers as described in subsection (A)(1) or approved grates as described in subsection (A)(2), with a distance between the suction outlet fittings no less than 3 feet and no more than 20 feet, and either an AVS or SVRD as described in subsections (B)(4) and (5) of this section;

(b) A single suction outlet with an approved grate as described in subsection (A)(2) and an AVS or SVRD as described in subsections (B)(4) and (5) of this section; or

(c) Dual hydraulically balanced, suction outlets with a distance between the suction outlet fittings no less than 3 feet and no more than 20 feet, each with a minimum diagonal measurement of 24 inches and a flow velocity through the open area of the grate that does not exceed 1.5 feet per second.

(2) An existing pool or spa with water 3 feet deep or less, has no main drains or other suction outlets, and the water turnover rate and the water quality required by these rules is maintained by gravity drainage from such shallow pool to another deeper pool that has a main drain, is not required to have a main drain, other suction outlet or an SVRS, provided the deeper pool complies with these rules.

(3) In an existing pool or spa, suction outlets that are more than 4 feet deep, as measured from the normal water level to the suction outlets, must have, for each suction system:

(a) Two or more hydraulically balanced suction outlets with a distance between the suction outlet fittings no less than 3 feet and no more than 20 feet, and with approved covers or grates as described in subsections (A)(1) or (A)(2) of this section; or

(b) A single suction outlet with an approved cover or approved grate as described in subsection (A)(1) or (A)(2), and either an AVS or an SVRD as described in subsections (B)(4) and (5) of this section.

(4) The AVS system shall provide indirect suction and a break to the atmosphere and is limited to 5 feet of head. The vent of the AVS system shall be at least 2 inches in diameter and if vented by pipe, it must have a vent cover that may be

removed only with a tool. Vent systems, other than surge pits that do not have direct suction between the pool drain(s) and pump and that are installed must be:

- (a) A complete assembly that is engineered and manufactured off site;
 - (b) Designed so that a 1/2-inch ball will not pass through any vent opening; and
 - (c) Installed and maintained so that the vent function will not be impaired by accumulation of vegetation or soil or by improper installation or maintenance of the vent system.
- (5) An SVRD shall be specifically designed and manufactured to help prevent entrapment hazards, according to the manufacturer's description of the device, by either cutting off electricity to the pump or allowing air to enter the main drain line, or both after the main drain or other suction line becomes blocked.
- (C) A replacement drain cover with fasteners meeting the manufacturer's specifications must be kept on site. The replacement drain cover with fasteners meeting the manufacturer's specifications shall be identical to the drain cover(s) in use or a copy of the manufacturer's specifications for the drain cover in use shall be kept on site and be available for inspection. This subsection does not apply to grates that are 24 inches or larger, measured diagonally.
- (D) The following safety equipment must be made readily available by the operator any time a public or semipublic pool is open for use. All lifesaving equipment shall be mounted in a conspicuous location within twenty (20) feet of the pool and kept in good repair and ready condition.
- (1) A nontelescopic reaching pole not less than twelve (12) feet long, including a securely attached body hook or shepherd's crook having blunted ends. This pole shall be constructed of fiberglass or some other electrically nonconducting material. The pole shall be maintained in good working order, and free from the effects of exposure to the elements. One additional device shall be provided each additional 2,000 sq. feet of water surface area. Spas are exempt from this requirement.
 - (2) A guard line rope separating the shallow portion (less than four (4) feet in depth) of the swimming pool from the deep portion of the pool at the break point depth. The floats shall be spaced at not greater than seven-foot intervals and shall be secured so they will not slide. The rope shall be securely fastened to wall anchors. The anchors shall have no projections that could constitute a hazard when the line is removed. Wave action pools, spas, and pools with a maximum depth of five (5) feet are exempt from this requirement.
 - (3) In all pools over 5 feet deep the break point depth of the pool shall be visually separated by a four-inch minimum width row of floor tile, a painted line, or similar means using a color contrasting with the bottom.
 - (4) A 1/4-inch to 3/8-inch diameter throwing rope, a length of two-thirds the

maximum width of the pool, to which has been firmly attached a United States Coast Guard approved ring buoy with an outside diameter of fifteen to twenty-four (15-24) inches. If no lifeguard is provided, one additional device shall be provided for each additional 2,000 sq. feet of water surface area. Spas are exempt from this requirement.

- (E) Depth markings in numerals and units of measurement of a minimum height of four (4) inches must be placed at or above the water surface on the vertical pool wall and on the edge of the deck, within twenty-four (24) inches of the swimming pool and positioned to be read while standing on the deck facing the water. Units of measurement shall either spell out “feet” or “inches” or abbreviate “FT” or “IN.” The numerals shall be of contrasting color to the background. The depth markers shall be placed at the maximum and minimum depth points, at points of break between deep and shallow areas, and at two-foot increments of depth around the entire perimeter of the pool. The depth markings shall be spaced at not more than twenty-five-foot (25') intervals around the entire perimeter of the pool. Adhesive depth markers shall be prohibited. Spas shall comply with section 22.91 of this article. Existing pools shall be exempt from the requirement for 4-inch units of measurement at depth markers, unless the pool is substantially replastered or the water line tile is substantially replaced.
- (F) The warning words “NO DIVING” and the international symbol for no diving shall be clearly marked on the pool deck in a contrasting color to the background and in letters of at least four (4) inches in height. The warning words and symbol shall be placed at least every twenty-five (25) feet or fraction thereof, around the pool where the water depth is six feet or less and positioned within twenty-four (24) inches of the water’s edge to be read while standing on the deck facing the water. At least one warning shall be placed per pool side, one at the minimum depth and one at the six (6) foot depth. Adhesive “NO DIVING” markers shall be prohibited. Spas are exempt from this requirement.
- (G) If a permanent structure above the pool deck (other than a diving board or diving platform) is within 5 feet of the water surface of a pool and is likely to be used for diving, the international no diving symbol and the warning “NO DIVING” (in contrasting colors and letters at least four inches high), shall be permanently affixed to the structure so that such warnings are visible to persons who may attempt to use the structure for diving.
- (H) Pools and spas shall have a land line telephone or other electronic means capable of immediately summoning emergency service readily accessible within 200 feet unimpeded distance (an unlocked door or gate shall not be considered an impediment) of the pool or spa water when the pool or spa is available for use. Cellular or mobile phones do not meet the requirements of this subsection. A telephone that connects only to a telephone answered by an on-site office does not meet the requirements of this subsection.
- (I) Pools and spas must securely post the following signs to be readily visible to the pool or spa user:

- (1) For pools and spas where no lifeguard service is provided, “WARNING–NO LIFEGUARD ON DUTY” or “NO LIFEGUARD ON DUTY” with legible letters at least four (4) inches in height.
 - (2) For pools where no lifeguard is provided, “NO DIVING” in legible letters of at least four (4) inches in height with the international symbol for no diving in legible letters of at least four (4) inches in height. Spas are exempt from this requirement.
 - (3) For pools and spas where no lifeguard is provided, “CHILDREN SHOULD NOT USE POOL WITHOUT ADULT SUPERVISION” or similar wording in legible letters of at least two inches in height.
 - (4) “IN CASE OF EMERGENCY–CALL 911” or similar wording in legible letters of at least one inch in height.
 - (5) Directions to the required telephone shall be posted if the phone is not readily visible from the pool enclosure. The sign shall include a concise description of the location of the telephone or other electronic means of communication. If other electronic means of communication are provided, clear instructions regarding their use shall be provided.
 - (6) A placard listing pool rules shall be provided.
 - (7) For all swimming pools and spas, a sign or placard informing bathers to not enter the pool or spa while experiencing diarrhea or within fourteen days of having diarrhea.
- (J) Steps or ladders shall be provided at the shallow end of pools if the vertical distance from the bottom of the swimming pool to the deck or walk is over two (2) feet. Ladders or recessed steps shall be provided in the deep portion of swimming pools over five (5) feet in depth. Swimming pools over thirty (30) feet in width shall provide steps or ladders on each side of the pool. There shall be a clearance of not more than five (5) inches nor less than three (3) inches between any ladder and the pool wall.
- (K) Pool enclosures for class C pools and spas and class D pools at a class C facility that are subject to the Texas Health and Safety Code), chapter 757 (such as pools and spas for apartments or property owners’ associations) shall have an enclosure as required in chapter 757.
- (L) Pool enclosures for class C pools or spas and class D pools at a class C facility that are not subject to Texas Health and Safety Code, chapter 757 (such as pools and spas for hotels, motels, RV parks and child-care centers) must have a pool or spa enclosure in compliance with this subsection.
- (1) The pool or spa enclosure shall consist of one or a combination of a fence, portion of a building, wall or other durable enclosure. The enclosure shall comply with the following:

- (a) The enclosure must have a minimum perpendicular height of at least 48 inches as measured from the ground surface on the outside of the fence.
 - (b) Openings in or under the enclosure shall not allow the passage of a 4-inch diameter sphere.
 - (c) Planters or other structures that might allow small children to climb over the enclosure shall not be permitted within 36 inches, measured horizontally, from the outside of the enclosure.
 - (d) Chainlink fencing may be used for the enclosure of an existing pool and spa if the chainlink fencing was installed before September 1, 2004. Chainlink fencing shall not be used for an enclosure for a pool or spa constructed on or after September 1, 2004.
 - (e) Doors, gates, or windows that open into a building are allowed as part of an existing pool or spa enclosure. Windows that are capable of being opened are not allowed as part of a pool or spa enclosure constructed and installed after October 1, 1999. Doors or gates of a building that are capable of being opened are not allowed as part of a pool or spa enclosure constructed and installed after October 1, 1999, unless:
 - (i) The doors or gates between the building and the pool yard or spa yard are for entry into a storage room, restroom, shower room, dressing room or mechanical room adjacent to the pool;
 - (ii) The room does not have any door or gate openings to the outside of the pool or spa enclosure; and
 - (iii) The room does not contain any gas chlorine containers.
- (2) Gates and doors for pool yard or spa yard enclosures for pools and spas subject to this subsection shall:
- (a) Be equipped with self-closing and self-latching devices and be latched when the pool or spa is not in use. The self-closing device shall be designed to keep the gate or door securely closed and the self-latching device shall latch when the gate is allowed to close within its range of operation;
 - (b) Open outward away from the pool or spa except for gates constructed before October 1, 1999;
 - (c) Have hand-activated door or gate opening hardware located at least 42 inches above the deck or walkway;
 - (d) Be capable of being locked.
- (3) Pool and spa enclosures for pool or spas constructed and installed after October 1, 1999 shall be constructed so that all persons will be required to pass through an enclosure gate or door in order to gain access to the pool or spa. All gates and doors exiting a pool or spa enclosure for pool or spas constructed and installed

after October 1, 1999 shall open in to a public area or walkway accessible by all users of the pool or spa.

(Ordinance 6125, sec. 3, adopted 5/1/07 ; Ordinance 6330, sec. 16, adopted 7/21/09 ; Ordinance 6534, sec. 7, adopted 4/3/12)

§ 22.89. Regulations in pool area.

- (A) An air gap or antisiphon device must be installed on any pipe or hose bib leading to the pool or within fifty (50) feet of the pool water.
- (B) There shall be no direct physical connection between a wastewater disposal system and a drain or recirculation system of a pool or spa. Backwash water or pool and spa draining water, shall be discharged into the City sanitary sewer system, or other approved sanitary sewer system, through an air gap formed by positioning the discharge pipe opening at least two (2) pipe diameters above the overflow level of any confining barriers that could cause flooding and submergence of the discharge opening in the event that the disposal system should fail. Splash screening barriers are permitted as long as they do not inhibit air gap effectiveness.
- (C) Vacuum outlets for swimming pools and spas shall be provided with covers that automatically close and automatically latch and can only be opened with the use of a tool. Such covers shall be securely closed when the pool or spa is open for use. Where a vacuum outlet is internally located in a skimmer, which is provided with a cover, a separate cover for the vacuum outlet is not required. An automatic bottom or side cleaner that could provide a means of entanglement or entrapment shall not be in the pool or spa or operated while the facility is open for use. If a vacuum outlet is provided in a pool or spa, it may be permanently sealed in lieu of having a cover.
- (D) Skimmer equalizer lines shall either be permanently sealed or fitted with an approved equalizer wall or drain cover as described in section 22.88(A).
- (E) All pools and spas shall be equipped with the following:
 - (1) A pump suction (vacuum) gauge installed as close to the suction side of the pump as possible without sacrificing efficiency.
 - (2) A filter inlet pressure gauge installed in the area of greatest pressure.
 - (3) A filter outlet gauge.
 - (4) A functional rate of flow meter, located to accurately indicate the rate of flow through the filter in gallons per minute. The flow meter shall be accurate to within ten percent (10%) of true flow and shall be easy to read.
- (F) Exposed piping in all pools and spas shall be labeled to identify the piping function and direction of flow. The name of the liquid or gas and arrows indicating direction of flow, shall be permanently indicated on the pipe.
- (G) Diving equipment and other water entry devices shall be installed according to the manufacturer's instructions and specifications and shall meet all applicable national

standards. A certification letter shall be provided from the manufacturer or an installer stating that the equipment meets all applicable standards and is suitable for the specific pool type.

- (H) Each electrical outlet in the pool or spa enclosure and in a dressing or sanitary facility shall be protected with a ground fault circuit interrupter. Each electrical line to an underwater light in a pool or spa shall be protected with a ground fault circuit interrupter that is located in the circuit breaker for the light at the breaker box, or in an outlet to which the power for the light passes.
- (I) If a switch that serves lights or equipment (other than pumps and underwater lights) in a pool or spa is between five (5) and ten (10) feet from the wall of the pool or spa, each electrical line to such switch shall be grounded and shall have a ground fault circuit interrupter located:
 - (1) In the circuit breaker for the light; or
 - (2) In the equipment circuit that powers the switch at the breaker box;
 - (3) In an outlet through which the power for the switch passes.

All ground fault circuit interrupters and circuit breakers in pool and spa yards shall comply with 2002 NEC requirements.

- (J) Electrical equipment serving a pool or spa shall be grounded according to ANSI/UL 1563-1995 "Standard for Electric Hot Tubs, Spas and Associated Equipment" and the 2002 NEC. Pumps shall be both internally and externally grounded.
- (K) Electrical disconnecting means for the protection of service personnel for pool and spa equipment shall be accessible for service personnel, located within sight from the pool or spa equipment, and located greater than 5 feet from the inside walls of the pool or spa as required by the 2002 NEC, chapter 6, section 680-12, Disconnecting Means. Each disconnecting means (i.e., turn-off switch) shall disconnect all ungrounded conductors (hot wires) to the equipment it serves.
- (L) Electrical equipment, including switches, outlets, deck lights, pumps, and other electrical equipment at pools and spas, shall be located at least 10 feet from the inside wall of a pool or spa unless:
 - (1) The electrical equipment is greater than 5 feet from the wall of the pool or spa and is separated from the pool or spa by a solid fence, wall or other permanent barrier at least 4 feet in height; or
 - (2) The electrical equipment is greater than 5 feet from the wall of the pool or spa; and:
 - (a) Consists of only one outlet for an electrical line that is grounded, has a ground fault circuit interrupter, and has a locking mechanism covering the outlet;
 - (b) Consists of one or more switches serving electrical lines that are grounded

and that have ground fault circuit interrupter protection that is located:

- (i) In the circuit breaker for the equipment at the breaker box;
- (ii) In an outlet through which the power for the equipment passes; or
- (iii) Consists of an electrical device other than an outlet or switch and complies with applicable NEC requirements at the time of installation.

(M) Spas shall have a pump shutoff switch for use by spa users. The shutoff switch shall be:

- (1) Clearly labeled as “Emergency Spa Shutoff”;
- (2) Located within sight of the spa, or if not, there shall be a sign visible from the spa, in at least one (1) inch tall letters, stating the location of the emergency shutoff switch;
- (3) Readily accessible to spa users;
- (4) Not behind a locked door or gate; and
- (5) Located no closer than 5 feet from the spa unless the switch is a nonelectrical air switch.

(N) A certification letter from a licensed electrician shall be provided annually that certifies the pool or spa meets all electrical requirements of this section.

(O) Overhead electrical service wires shall not pass within twenty (20) feet of the pool enclosure. At existing pools, where transmission wires are within twenty (20) feet of the enclosure, all pool service poles shall be constructed of fiberglass or some other electrically nonconducting material. Pools and spas built after October 1, 1999 shall comply with the requirements set forth in the 2002 NEC.

(P) A current certificate of operations from the state department of licensing and regulation shall be provided for pool and spa heaters or boilers that are designed to produce in excess of 200K BTUs.

(Q) Disinfectants or other chemicals and chemical feeding equipment shall be stored in such a manner that pool and spa users shall not have access to such chemicals. Dry chemicals, not in waterproof containers, shall be stored off the floor in a dry, above ground-level room and protected against flooding or wetting. All chemical bulk and day tanks shall be clearly labeled to indicate the tank’s contents. Solution containers shall be provided with a cover to prevent the entrance of dust, insects and other contaminants. Chlorine compounds shall not be stored in the same area as petroleum products. Goggles, rubber gloves and any other protective or safety equipment required by the chemical manufacturer shall be provided if chemicals are stored on site. A copy of the material safety data sheet (MSDS) for each chemical applied to the pool or spa shall be kept on site and made available for inspection at all times.

(R) Chemical feeders shall be installed, maintained and operated according to the

manufacturer's specifications and shall be installed so solution introduction is downstream of the filter and heater. Electric chemical feeder pumps shall be wired so operation cannot occur unless there is adequate return flow to properly disperse chemicals throughout the pool or spa. Pool or spa skimmer baskets shall not be used as chemical feeders. Supplemental hand feeding of disinfectant or other chemicals directly into the pool or spa shall not occur when users occupy the pool or spa.

- (S) An over-the-rim fill spout, if used in a pool, shall have a secure soft pliable end (for example, a short section of rubber hose) to prevent injury to patrons and shall not protrude more than two (2) inches beyond the edge of the pool. The end of the soft pliable outlet shall be separated from the maximum possible pool or spa water level by an air gap at least twice the diameter of the pipe.
- (T) A continuous deck of at least four (4) feet in width, including the coping, shall extend completely around a pool. Spas shall have a four-foot continuous deck, including the coping, around at least fifty-percent (50%) of the water body. Indoor pools and spas are exempt from this requirement.
- (U) Food and beverages shall be served only in nonbreakable containers. Glass containers shall not be allowed within a pool enclosure or in a pool or spa. Trash containers shall be provided where food or beverages are allowed.
- (V) Pools and spas shall be constructed of materials that are impervious and permanent. The surfaces shall be kept in good repair and be cleanable.
- (W) Toilet facilities, if provided, shall comply with the following:
 - (1) Handwash facilities including soap dispensers with liquid or powdered soap shall be provided at each lavatory. The dispenser shall be constructed of metal or plastic;
 - (2) If mirrors are provided, they shall be shatter resistant;
 - (3) Toilet paper holders and toilet paper shall be provided at each toilet;
 - (4) Covered waste receptacles shall be provided in toilet or dressing room areas; and
 - (5) Single-use hand-drying towels or hand-drying devices shall be provided near the lavatory.
- (X) An easily removable and cleanable basket or screen through which overflow water must pass shall be provided to trap large solids at each surface skimmer. Deck skimmers shall have protective covers that are kept in place and in good repair.
- (Y) It shall be unlawful for any person to:
 - (1) Swim or bathe in any public or semipublic pool or spa if that person has skin abrasions, open sores, or any communicable disease.
 - (2) Allow any animal to enter into the pool enclosure area of any public or semipublic pool or spa, except that service animals shall be allowed on the deck

and within enclosure but not in the pool.

(3) Remove, deface, cover, or render unreadable a pool closure sign posted by the health authority.

(4) Remove, disable, or damage any pool safety equipment required in section 22.88 while a pool or spa is open to patrons.

(Ordinance 6125, sec. 3, adopted 5/1/07)

§ 22.90. Lifeguards.

(A) Lifeguards shall be provided at class B pools and at all class C pools, if a diving board or a slide is present.

(B) All pool facilities that require a lifeguard shall comply with all department of state health services requirements related to training, placement and construction of facilities.

(C) All operators of pools that provide a lifeguard, including those required in subsection (A), shall provide to be readily available:

(1) One or more backboards with a minimum of three tie-down straps and head immobilizer for back and neck injuries.

(2) A first aid kit, which shall be kept filled and available for use.

(Ordinance 6125, sec. 3, adopted 5/1/07)

§ 22.91. Spa operation.

Spas shall meet the following additional requirements:

(1) Depth markings in numerals and units of measurement of a minimum height of four (4) inches must be placed on the edge of the deck, within twenty-four (24) inches of the spa and positioned to be read while standing on the deck facing the water. The numerals and units of measurement shall be of contrasting color to the background. The depth markings shall be spaced at not more than twenty-five-foot intervals around the entire perimeter of the spa, there shall be a minimum of two deck depth markers per spa, regardless of spa size or shape.

(a) Units of measurement shall either spell out “feet” or “inches” or abbreviate “FT” or “IN.”

(b) Deck depth markers shall indicate the spa depth from the design water level to the floor of the spa with a vertical measurement taken three (3) feet from the spa wall.

(2) The maximum temperature of the water in the spa shall not exceed 104° F. An unbreakable thermometer (plus or minus 1° F tolerance) that is designed for use in a spa environment shall be available for patrons and staff to monitor spa temperature. The control for the spa temperature shall not be accessible to the spa user.

- (3) In addition to the signs required in section 22.88(I), the following signs shall also be securely mounted to be readily visible to the spa user:
- (a) “Do not use the spa, if the water temperature is above 104 degrees Fahrenheit (40 degrees Centigrade)” in letters at least one inch high.
 - (b) “The maximum number of users for this spa is XX” or similar wording, where XX is the maximum load limit for the spa, as calculated to not exceed one person per each ten square feet of surface area of the spa.
- (Ordinance 6125, sec. 3, adopted 5/1/07)

§ 22.92. Notification of operation.

The operator of any public or semipublic pool shall notify the director of the date intended for the initial opening of the pool for the season. An evaluation will be made at that time to determine compliance with this article. The operator shall not allow operation or use of a pool prior to obtaining a valid permit.

(Ordinance 6125, sec. 3, adopted 5/1/07)

§ 22.93. Pool permits.

- (A) No person shall operate a public or semipublic pool or spa within the City, without having first obtained a permit issued by the director. Permits shall not be transferable. A valid permit shall be available for inspection by the director at all times.
- (B) A person desiring to operate a public or semipublic pool or spa shall make written application for a permit on forms provided by the director. Such application shall include: the operator’s full name and post office address and whether such operator is an individual, firm, corporation, or partnership. The application shall also include the location of the pool or spa, the size in gallons, the type of filter equipment, the type of automatic disinfectant in use, and such other information as may be required by the director.

(Ordinance 6125, sec. 3, adopted 5/1/07)

§ 22.94. Permit fees.

- (A) Each person who owns or operates a public or semipublic pool or spa shall be assessed an annual permit fee in the amount designated in the Master Fee and Rate Schedule, Article VII, Section 10.85, of Chapter 10, for each public or semipublic pool or spa.
- (B) No fee shall be charged to any pool or spa operated by a governmental agency, independent school district, institution of purely public charity, church, or homeowner association; however, such establishments shall comply with all other requirements of this article.
- (C) Each evaluation performed pursuant to section 22.86 shall result in a follow-up evaluation if any violations of this article remain uncorrected at the conclusion of the initial evaluation. The first follow-up evaluation shall be performed at no cost to the

swimming pool operator. Any subsequent follow-up evaluations shall result in the assessment of a fee in the amount designated in the Master Fee and Rate Schedule, Article VII, Section 10.85, of Chapter 10. The follow-up evaluation fee shall be paid prior to performance of the evaluation. When an initial evaluation reveals that no violations of this article exist, the person who operates the swimming pool or spa shall be credited the fee amount toward the next annual permit fee.

(Ordinance 6125, sec. 3, adopted 5/1/07 ; Ordinance 7252 adopted 9/14/21 ; Ordinance 7363 adopted 9/6/2022)

§ 22.95. Registered certified pool operator required.

(A) Registered pool operator.

- (1) Any person who operates a public or semipublic pool or spa shall employ at least one person who has a valid and current registered pool operator certification issued by the director.
- (2) A person is in compliance with the provisions of this section if there is one employee on the premises who is responsible for maintenance of any pools present on the premises who has a valid and current registered pool operator certification; provided, that semipublic pools owned by homeowner associations or maintained by off-premises management companies may utilize pool maintenance companies whose field employees are certified registered pool operators.

(B) Registration. The director shall issue a registered certified pool operator certification to any person who submits the required application, pays the required fee in the amount designated in the Master Fee and Rate Schedule, Article VII, Section 10.85, of Chapter 10, and provides evidence of completion of a pool operator training course approved by the City. An approved pool operator course shall meet the following minimum criteria:

- (1) The course must have been completed within the previous three (3) years.
- (2) The course shall be taught by a person adequately trained in swimming pool sanitation and has been approved by the director.
- (3) The course curriculum shall include the following topics:
 - (a) Pool design.
 - (b) Disinfection.
 - (c) Circulation.
 - (d) Filtration.
 - (e) Swimming pool chemistry.
 - (f) Safety procedures.

- (4) The course provider shall give persons successfully completing the course a written document of certification.

(C) Term, evidence, and transfer of registration.

- (1) Unless sooner revoked by the director, a pool operator's registration expires three (3) years from the date of issuance.
- (2) The person operating a public or semipublic pool must possess evidence that a registered pool operator is employed. Such evidence shall be available for inspection by the director at any time a pool is available for use.
- (3) A pool operator registration certificate is not transferable.

(D) Registration by challenge test.

- (1) A person may obtain a pool operator registration certificate by successfully completing a challenge test provided by the director (in lieu of attending an approved course).
- (2) The contents of the challenge test shall be sufficient to determine that an applicant has knowledge of pool chemistry, disinfection, circulation, filtration, design, and safety.
- (3) A score of seventy percent (70%) or greater shall be considered a passing grade on the test.

(Ordinance 6125, sec. 3, adopted 5/1/07 ; Ordinance 7363 adopted 9/6/2022)

§ 22.96. Suspension or denial of permit.

- (A) The director shall have the authority to temporarily suspend or deny a permit to operate a public or semipublic pool or spa for the following reasons:
- (1) The annual permit fee or follow-up evaluation fees are not paid.
 - (2) The permit holder or pool operator fails to have in his employ a registered pool operator that meets the requirements of section 22.95 of this article.
 - (3) The permit holder or pool operator fails to keep all pool and spa equipment properly maintained as to comply with the requirements of this article.
 - (4) The pool or spa does not meet the water chemistry standards set in section 22.87 of this article or the safety requirements in section 22.88 of this article or other conditions exist at the pool facility that is deemed by the director to be hazardous to the health and safety of the pool users or the general public.
 - (5) The permit holder or pool operator prohibits the director from conducting a lawful inspection.
 - (6) The permit holder or pool operator provides false information to the director or provides falsified documentation on chemical testing records to the director.

- (B) The director upon determination that the pool does not comply with the provisions of this article shall make reasonable efforts to notify the operator of the violation or violations and place on the primary gate leading to the pool a sign notifying patrons of pool closure. The director may, based on the nature and extent of the violation(s) present, affix a lock or similar closing mechanism on the gate or gates leading to the pool.
 - (C) The director will conduct a reevaluation of the pool during regular working hours of the Health Department at the request of the pool operator. If compliance has been achieved, the operator shall be notified that the pool is then opened and the director shall remove the pool closure signs, along with any locking device on gates. Follow-up evaluation fees will apply when permits are suspended.
- (Ordinance 6125, sec. 3, adopted 5/1/07)

§ 22.97. Abandoned or neglected pools.

- (A) It shall be unlawful to cause, suffer or permit an abandoned or neglected semipublic pool or spa to exist within the City.
 - (B) When the director has confirmed the existence of an abandoned or neglected semipublic pool or spa, the owner, manager or operator shall be issued, in writing, a list of control measures that will gain compliance with this article. The control measures, and the compliance period for their completion, will be contained in a written health order.
 - (C) The director may abate the nuisance of an abandoned or neglected semipublic pool or spa by draining and filling the pool or spa with inert material. All costs associated with destroying the pool or spa shall be charged to the owner of the property.
- (Ordinance 6125, sec. 3, adopted 5/1/07)

§ 22.98. New construction.

Public or semipublic pools constructed after July 1, 2004, shall comply with the construction and operational standards as set forth in the 2004 Department of State Health Services Standards for Public Swimming Pools and Spas. A registered professional engineer or architect must confirm, by letter and seal, that the pool was designed and constructed in compliance with the 2004 Department of State Health Services Standards for Public Swimming Pools and Spas.

(Ordinance 6125, sec. 3, adopted 5/1/07)

§ 22.99. Responsibility of bather.

- (A) No person shall enter a public or semipublic pool or spa within fourteen days of having diarrhea caused by infection.
 - (B) No person shall allow a minor under the custody and control of that person to enter a public or semipublic pool or spa within fourteen days of having diarrhea caused by infection.
- (Ordinance 6330, sec. 17, adopted 7/21/09)

ORDINANCE NO. _____

AN ORDINANCE AMENDING CHAPTER 22, "HEALTH" OF THE CODE OF ORDINANCES OF THE CITY OF GARLAND, TEXAS; PROVIDING A SAVINGS CLAUSE; PROVIDING A SEVERABILITY CLAUSE; AND SETTING AN EFFECTIVE DATE.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF GARLAND, TEXAS:

Section 1

That Article VI, "Public and Semipublic Swimming Pools", be renamed as "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features".

Section 2

That Section 22.85, "Definitions", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, is hereby amended in pertinent part to read as follows:

"Section 22.85 Definitions.

(A) As used in this article, the following terms shall have the definitions given them in this section:

Abandoned shall mean a public or semipublic swimming pool, spa, or PIWF that has not possessed a valid permit to operate issued by the Health Department for a period of three hundred sixty-five (365) days or more.

Director shall mean the Director of the Health Department of the City or their designated representative.

Existing pool shall mean a pool or spa that was constructed prior to March 19, 2024.

Extensively remodeled shall mean replacement of facility components or modification of the pool, spa, or PIWF so that the design, configuration, capacity, or operation differs from the original design, configuration, capacity, or operation. This term does not include the normal maintenance and repair of a pool or spa or PIWF or a water circulation system or the partial

replacement of circulation system equipment if the size, type, or operation of the equipment is not substantially different from the original equipment. This definition shall supersede the one at 25 Tex. Admi. Code § 265.302(28).

Neglected shall mean a public or semipublic pool or spa that has constituted a swimming pool nuisance for more than thirty (30) days.

Operator shall mean the person who is in control of the property upon which a public or semipublic swimming pool is located.

Person shall mean any individual, firm, partnership, association, corporation, governmental agency, club, or organization of any kind.

PIWF shall mean a Public Interactive Water Feature.

Pool enclosure shall mean the area immediately around a pool enclosed by a fence, wall, or other solid structure which complies with Article X, "Fences", of Chapter 30, "Building Inspection", of this Code, and Chapter 757, "Pool Yard Enclosures", of the Texas Health and Safety Code.

Semipublic pool shall mean a pool that is privately owned and open only to an identifiable class of persons, including, but not limited to, motel guests, apartment residents, and club members.

Spa shall mean a constructed permanent or portable structure that is 2 feet or more in depth and that has a surface area of 250 square feet or less or a volume of 3,250 gallons or less and that is intended to be used for bathing or other recreational uses and is not drained and refilled after each use.

Swimming pool nuisance shall mean a public or semipublic pool or spa with one or more of the following conditions: insufficient water clarity, improperly maintained pool enclosure, source of mosquito breeding, or failure to comply with the safety provisions of this Article.

TAC shall mean the Texas Administrative Code.

(B) The definitions set forth in 25 Tex. Admin. Code § 265.182 and 25 Tex. Admin. Code § 265.302 are incorporated herein by reference. In the event of a conflict between a definition in the TAC and a definition in this Article, the definition in this Article shall control."

Section 3

That Section 22.86, "Evaluations", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, is hereby renamed and amended to read as follows:

"Section 22.86 Enforcement of Article provisions.

(A) Evaluations. The Director may evaluate a public or semipublic pool, spa, or PIWF at any reasonable time and has authority to enter upon the premises where a pool, spa, or PIWF is located to the extent necessary to make a full evaluation. The Director shall have the authority to collect water samples for the purpose of determining water quality as described in 25 TAC Subchapter L and Subchapter M. The operator of a pool, spa, or PIWF shall provide a key or lock combination to provide complete access to all pool enclosures and equipment to the Director if there are no on-site personnel.

(B) Enforcement. Enforcement of the rules and the provisions of this article shall be by the Director, or their duly appointed representative. Any references in the rules to regulatory authority or local regulatory representative shall mean the Director, or his duly appointed representative."

Section 4

That Section 22.87, "Maintenance and operation", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, is hereby renamed and amended to read as follows:

"Section 22.87. Issuance of operating health permit.

(A) No owner, operator, or person in control of a public or semipublic swimming pool, spa, or PIWF shall allow any person to use the pool, spa, or PIWF unless a valid health permit to operate has been issued by the Health Department. Permits are not transferable. The owner, operator, or person in control of a pool, spa, or PIWF shall post the valid permit for public view and shall make the permit available for inspection by the Director at all

times. Such permit expires annually the first day of March unless suspended or revoked for cause as prescribed in this Article.

(B) Applications for a permit to operate public or semipublic swimming pool, spa, or PIWF shall be made to the Health Department on forms provided by that department. The applicant shall complete the application in its entirety.

(C) Inspections. Prior to the issuance of an annual operating health permit for a public or semipublic swimming pool, spa, or PIWF, at least one pre-opening inspection must be conducted.

(D) Time for Inspections. The operator of any public or semipublic pool, spa, or PIWF shall notify the Director of the date intended for the initial opening for the season. If operations are year-round, the operator shall request an inspection shall be made and said inspection conducted before March 1. An evaluation will be made at that time to determine compliance with this Article. The operator shall not allow operation or use of a pool, spa, or PIWF prior to obtaining a valid permit."

Section 5

That Section 22.88, "Safety Provisions", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, is hereby renamed and amended in pertinent part to read as follows:

"Section 22.88 Section Suspension or denial of permit.

(A) If it is determined by the Director that the operation or maintenance of the public or semipublic pool, spa, or PIWF facility constitutes a serious health or safety hazard for users, as specified in 25 TAC 265 Subchapter L and/or Subchapter M or herein, the Director shall have the authority to temporarily suspend or deny a permit to operate a public or semipublic pool, spa, or PIWF.

(B) A public or semipublic swimming pool, spa, or PIWF shall be temporarily closed for use whenever any of the following conditions occur and shall not be reopened for use until the condition has been brought into compliance and the appropriate reinspection fee paid, and a reinspection conducted by the Director verifies that all hazardous conditions have been eliminated, such as:

- (1) The amount of a residual disinfectant and/or pH for

a pool or spa is less than, or greater than, the minimum and/or maximum amounts specified in Figure: 25 TAC § 265.193(c));

(2) The amount of a residual disinfectant and/or PH for a PIWF is less than, or greater than, the minimum and/or maximum amounts specified in Figure: 25 TAC § 265.306(c);

(3) If any of the suction outlet covers are expired, loose, missing, damaged and/or of a nonapproved anti-vortex design;

(4) The clarity of the water does not comply with the provisions in 25 TAC § 265.193(e);

(5) The temperature of spa water is greater than 104 degrees Fahrenheit;

(6) There is malfunction or nonfunction of the recirculation system and/or the automatic disinfectant feeder(s);

(7) When no lifeguard is present, any entrance or exit gate not self-closing and self-latching, or gaps in the pool enclosure that would allow the passage of a 6-inch sphere;

(8) The swimming pool, spa, or PIWF does not conform to the construction permit plans as it pertains to life safety compliance;

(9) The presence of vomitus or fecal matter in the pool, spa, or PIWF;

(10) No operable emergency telephone;

(11) The absence of rescue equipment as specified in 25 TAC § 265.190(g);

(10) The annual permit fee or follow-up evaluation fees are not paid;

(11) The permit holder or pool operator prohibits the Director from conducting a lawful inspection; or

(12) The permit holder or pool operator provides false

information to the Director or provides falsified documentation on chemical testing records to the Director.

(C) The Director, upon determination that the public or semipublic pool, spa, or PIWF does not comply with the provisions of this article shall make reasonable efforts to notify the certified operator of the violation(s) and place, on the primary gate leading to the pool, spa, or PIWF, a sign notifying patrons of pool closure. The Director may, based on the nature and extent of the violation(s) present, affix a lock or similar closing mechanism on the gate(s) leading to the pool.

(D) The Director will conduct a reinspection of the pool during regular working hours of the Health Department at the request of the certified operator. If compliance has been achieved, the certified operator shall be notified that the pool is then reopened and the Director shall remove the closure notification and/or any closure mechanisms."

Section 6

That Section 22.89, "Regulations in pool area", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, is hereby renamed and amended in pertinent part to read as follows:

"§ 22.89 Adoption of Texas Health Services regulations.

The City adopts Title 25, "Health Services", Part I, "Department of State Health Services", Chapter 265, "General Sanitation", Subchapters L, "Public Swimming Pools and Spas", and M, "Interactive Water Features and Fountains", of the Texas Administrative Code. Unless deleted, amended, expanded, or otherwise changed herein, all provisions of these provisions of the Texas Administrative Code shall be fully applicable, binding, of full force and effect within the city."

Section 7

That Section 22.90, "Lifeguards", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, is hereby renamed and

amended in pertinent part to read as follows:

"Section 22.90 Amendments to the Texas Administrative Code.

(A) In accordance with 25 Tex. Admin. Code § 265.181(g) and 25 Tex. Admin. Code § 265.301(c), the City has adopted standards different from and equivalent to or more stringent than those set forth in the TAC. To the extent any of the amendments contained herein conflict with those of the Texas Administrative Code, the amendments shall control.

(B) The following amendments are made to the TAC:

(1) 25 Tex. Admin. Code § 265.183 is amended in pertinent part to read as follows:

"(a) No person shall hereafter construct, extensively remodel, or replace equipment for which a mechanical, plumbing, or electrical permit is required for a public or semipublic pool, spa, or PIWF without having first obtained a building permit from the City of Garland Building Inspection Department. Prior to the issuance of a building permit for the construction of a new pool, spa, or PIWF, the remodel of an existing pool, spa, or PIWF, properly prepared plans and specifications for such construction or remodeling shall be submitted to the regulatory authority for review and approval.

(1) Plans submitted for review must contain the following: Plans must be drawn to scale and include both a top view and a side cross section view. All dimensions and specifications required by code must be referenced on the plans. A registered professional engineer or architect must confirm, by letter and seal, that the pool was designed and will be constructed in compliance with Title 25, Chapter 265, subchapters L and M of the TAC .

(2) Prior to Health Department approval for a newly constructed or remodeled public or semipublic swimming pool, spa, or PIWF, the following inspections shall be conducted by the Director: (a) after plumbing is completed, but before gunite; (b) prior to filling, but

after the pool enclosure is present; and (c) a final preopening or preoperational inspection. These inspections are to verify that the pool, spa, or PIWF is constructed in accordance with all approved plans and requirements, and the water chemistry complies with the requirements set forth in this article, prior to its opening and use by the public. Prior to permit issuance, a registered professional engineer or architect must confirm, by letter and seal, that the pool was constructed in compliance with Title 25, Chapter 265, subchapters L and M of the TAC.

. . .

(c) Accepted practice for pools, spas, or PIWFs. The structural design and materials for pools, spas, or PIWFs constructed before the effective date of this subchapter must be in accordance with accepted industry engineering practices and methods prevailing at the time of original construction unless otherwise stated in this subchapter. Pools, spas, and PIWFs shall be constructed of materials that are impervious, cleanable, and permanent."

(2) 25 Tex. Admin. Code § 265.185 is amended to read as follows:

"(a) A pump for a pool or spa must not be operated if the owner or operator of the pool or spa knows or should know in the exercise of ordinary care that the drain grate, suction outlet, or any suction outlet cover is missing, broken, or loose. If such a condition exists, the pool or spa must be closed and remain closed until corrected.

(b) A replacement suction drain cover with fasteners meeting the manufacturer's specifications must be kept on site. The replacement suction drain cover with fasteners meeting the manufacturer's specifications shall be identical to the drain cover(s) in use and a copy of the manufacturer's specifications for the drain cover in use shall be kept on site and be available

for inspection. This subsection does not apply to grates that are 24 inches or larger, measured diagonally. Installation date of suction drain covers shall be maintained on site and provided to the regulatory authority upon request.

(c) All pools, spas, and PIWFS shall be equipped with the following:

(1) A pump suction (vacuum) gauge installed as close to the suction side of the pump as possible without sacrificing efficiency.

(2) A filter inlet pressure gauge installed in the area of greatest pressure.

(3) A filter outlet gauge.

(4) A functional rate of flow meter, located to accurately indicate the rate of flow through the filter in gallons per minute. The flow meter shall be accurate to within ten percent (10%) of true flow and shall be easy to read.

(d) Exposed piping in all pools and spas and PIWFs shall be labeled to identify the piping function and direction of flow. The name of the liquid or gas and arrows indicating direction of flow, shall be permanently indicated on the pipe."

(3) 25 Tex. Admin. Code § 265.186(a) is amended to read as follows:

"(a) Licensed electrician required.

(1) Installation, maintenance, repairs, and replacement of electrical systems. The electrical system of a pool or spa and structures in the pool yard or spa yard must be installed, maintained, repaired, or replaced by a licensed electrician in accordance with the Texas Electrical Safety and Licensing Act, Texas Occupations Code, Chapter 1305 and related rules. Any electrical work must be permitted as required in Chapter 30 of the Garland Code of Ordinances.

(2) Annual certification requirements. A certification letter signed by a licensed electrician in accordance with the Texas Electrical Safety and Licensing Act, Texas Occupations Code, Chapter 1305 and related rules, shall be provided annually. The letter must certify that the electrical system meets all applicable electrical requirements as of the original date of the electrical system's installation. The certification letter must be submitted with the annual application for a permit to operate the pool or spa."

(4) 25 Tex. Admin. Code § 265.189(g)(1) is amended to read as follows:

"(1) Automatic distribution of chemicals. Required ranges of disinfectant shall be maintained by an automatic continuous feeder. When using automatic feeders, automated controllers that adjust chemical feed based on demand or manually, or remotely managed controllers for pool and spa disinfection and pH control, must be installed. Automatic feeders must meet NSF Standard 50 for use in public pools and spas and must operate in a manner that does not invalidate the NSF rating for the system and equipment."

(5) 25 Tex. Admin. Code § 265.190(a)(3)(A) is amended in pertinent part to read as follows:

"(A) A rope and float line shall also be used in addition to the transition line and must be provided between 1 and 2 feet on the shallow water side of the 5-foot depth. The floats must be spaced at not greater than 7-foot intervals and secured so they will not slide or bunch up. The stretched rope and float line must be a size to offer a good handhold and strong enough to support loads normally imposed by users."

(6) 25 Tex. Admin. Code § 265.190 is amended by creating a new subsection (k) which shall read as follows:

"(k) Diving equipment and other water entry devices shall be installed according to the manufacturer's instructions and specifications and shall meet all applicable national standards. A certification letter shall be provided from the manufacturer or an installer stating that the equipment meets all applicable standards and is suitable for the specific pool type."

(7) 25 Tex. Admin. Code § 265.192 is amended by creation of a new subsection (i) which shall read as follows:

"(i) Overhead electrical service wires and other electrical wires and lighting shall not pass within twenty (20) feet of the pool enclosure."

(8) 25 Tex. Admin. Code § 265.194 is amended by creation of new subsections (u) and (v) which shall read as follows:

"(u) All surfaces within the pool, spa, or PIWF enclosure, including the pool, spa, and PIWF, the deck, and any other areas, shall be kept in good repair. All pool, spa, and PIWF surfaces shall be cleanable.

"(v) Restrooms adjacent to or within the pool or spa enclosure shall be equipped with dispensed paper towels or a hand drying device."

(9) 25 Tex. Admin. Code § 265.198 is amended by creation of a new subsection (d) which shall read as follows:

"(d) It shall be unlawful for any person to remove, deface, cover, or render unreadable a pool closure sign posted by the health authority.

(10) 25 Tex. Admin. Code 265.302(28), defining "extensively remodeled", shall be superseded by the definition set forth in this Article."

Section 8

That Section 22.91, "Spa Operation", of Article VI, "Article VI,

Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, is hereby renamed and amended to read as follows:

"Section 22.91 Abandoned public or semipublic swimming pools, spas, and PIWFs

(A) It shall be unlawful to cause, suffer or permit an abandoned semipublic or public pool, or spa to exist within the City.

(B) When the Director has confirmed the existence of an abandoned or neglected semipublic pool or spa, the owner, manager or operator shall be issued, in writing, a list of control measures that will gain compliance with this article. The control measures, and the compliance period for their completion, will be contained in a written health order."

Section 9

That Section 22.92, "Notification of Operation", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, is hereby renamed and amended to read as follows:

"Section 22.92 Responsibility of bather.

(A) It shall be unlawful for any person to enter a pool or spa or PIWF within fourteen days of having diarrhea caused by infection.

(B) It shall be unlawful for any person to allow a minor under the custody and control of that person to enter a pool or spa or PIWF within fourteen days of having diarrhea caused by infection."

Section 10

That Section 22.93, "Pool permits", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, is hereby renamed and amended to read as follows:

"Section 22.93 Interfering with or hindering the regulatory authority.

It shall be unlawful for any person to interfere with or hinder the regulatory authority in the exercise of its duties under this Article."

Section 11

That Section 22.94, "Permit Fees", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, is hereby renamed and amended to read as follows:

"Section 22.94 Adoption of International Swimming Pool and Spa Code.

(A) The International Swimming Pool and Spa Code ("ISPSC"), 2021 edition, is hereby adopted by reference, but only to the extent set forth in 25 Tex. Admin. Code § 265.181(c)-(d). A copy shall be kept on file in the office of the City Secretary. Unless deleted, amended, expanded, or otherwise changed herein, these provisions of the ISPSC shall be fully applicable, binding, of full force and effect within the city.

(B) In addition to the foregoing, the City hereby adopts the following sections of the ISPSC:

- (1) Section 109.2, "Temporary connection";
- (2) Section 109.3, "Authority to disconnect service utilities"; and
- (3) Section 114, "Stop Work Order" (in its entirety)."

Section 12

That Section 22.95, "Registered certified pool operator required", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, is hereby renamed and amended to read as follows:

"Section 22.95 Amendments to the ISPSC (2021 edition)

The following amendments are made to the ISPSC (2021 edition):

(1) Section 305.1, General, shall be amended to read as follows:

"Section 305.1 General. The provisions of this section shall apply to the design of barriers for restricting entry into areas having pools and spas."

(2) Section 305.5, Onground residential pool structure as a barrier, shall be deleted in its entirety.

(3) Section 318.3, Over-the-rim spouts, shall be amended to read as follows:

"318.3 Over-the-rim spouts. Over-the-rim spouts shall be located under a diving board, adjacent to a ladder, or otherwise shielded so as not to create a hazard. The open end of such spouts shall not have sharp edges, shall have a soft pliable end, and shall not protrude more than 2 inches (51 mm) beyond the edge of the pool. The open end shall be separated from the water by an air gap of not less than 1.5 pipe diameters measured from the pipe outlet to the rim."

Section 13

That Section 22.96, "Suspension or denial of permit", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, is hereby renamed and amended to read as follows:

"Section 22.96 Applicability of rules.

Unless contradicted elsewhere in this Article, all public and semipublic swimming pools, spas, and PIWFs shall be subject to the rules in place at the time of their original construction."

Section 14

That Section 22.97, "Abandoned or neglected pools", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, is hereby renamed and amended to read as follows:

"Section 22.97 Permit fees.

(A) Each person who owns or operates a public or semipublic pool, spa, or PIWF shall be assessed an annual permit fee in the amount designated in the Master Fee and Rate Schedule, Article VII, Section 10.85 of Chapter 10, for each public or semipublic pool, spa, or PIWF.

(B) No fee shall be charged to any public or semipublic swimming pool, spa, or PIWF operated by a governmental agency, independent school district, institution of purely public charity, church, or homeowner association; however, such establishments shall comply with all other requirements of this article.

(C) Each evaluation performed pursuant to this Article shall result in a follow-up evaluation if any violations of this article remain uncorrected at the conclusion of the initial evaluation. The first follow-up evaluation shall be performed at no cost to the swimming pool operator. Any subsequent follow-up evaluations shall result in the assessment of a fee in the amount designated in the Master Fee and Rate Schedule, Article VII, Section 10.85, of Chapter 10. The follow-up evaluation fee shall be paid prior to performance of the evaluation. When an initial evaluation reveals that no violations of this article exist, the person who operates the swimming pool, spa, or PIWF shall be credited one follow-up evaluation fee amount toward the next annual permit fee."

Section 15

That the Sections 22.98, "New Construction", and 22.99, "Responsibility of Bather", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, are hereby repealed.

Section 16

That Code of Ordinances for the City of Garland, Texas, as amended, shall be and remain in full force and effect save and except as amended by this Ordinance.

Section 17

That a violation of any provision of this Ordinance shall be a misdemeanor punishable in accordance with Section 10.05 of the Code of Ordinances of the City of Garland, Texas.

Section 18

That the terms and provisions of this Ordinance are severable and are governed by Section 10.06 of the Code of Ordinances of the City of Garland, Texas.

Section 19

That this Ordinance shall be and become effective immediately upon and after its passage and approval.

PASSED AND APPROVED this the _____ day of _____, 2024.

CITY OF GARLAND, TEXAS

Mayor

ATTEST:

City Secretary

ORDINANCE NO. _____

AN ORDINANCE AMENDING CHAPTER 22, "HEALTH" OF THE CODE OF ORDINANCES OF THE CITY OF GARLAND, TEXAS; PROVIDING A SAVINGS CLAUSE; PROVIDING A SEVERABILITY CLAUSE; AND SETTING AN EFFECTIVE DATE.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF GARLAND, TEXAS:

Section 1

That Article VI, "Public and Semipublic Swimming Pools", be renamed as "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features".

Section 2

That Section 22.85, "Definitions", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, is hereby amended in pertinent part to read as follows:

"Section 22.85 Definitions.

(A) As used in this article, the following terms shall have the definitions given them in this section:

Abandoned shall mean a public or semipublic swimming pool, spa, or PIWF that has not possessed a valid permit to operate issued by the Health Department for a period of three hundred sixty-five (365) days or more.

~~AVS shall mean an atmospheric vent system. An AVS is described in the United States Consumer Product Safety Commission "Guideline for Addressing Potential Entrapment Hazards Associated with Pools and Spas," Publication Number 363-009801.~~

~~Break point depth shall mean the vertical plane(s) where the depth of a pool changes markedly over a short distance. The break point depth separates areas in a pool which are less than five (5) feet from areas in a pool that are greater than five (5) feet.~~

Director shall mean the Director of the Health Department of the City or their designated representative.

Existing pool shall mean a pool or spa that was constructed prior to March 19, 2024.

Extensively remodeled shall mean replacement of facility components or modification of the pool, spa, or PIWF so that the design, configuration, capacity, or operation differs from the original design, configuration, capacity, or operation. This term does not include the normal maintenance and repair of a pool or spa or PIWF or a water circulation system or the partial replacement of circulation system equipment if the size, type, or operation of the equipment is not substantially different from the original equipment. This definition shall supersede the one at 25 Tex. Admi. Code § 265.302(28).

~~Fecal coliform organism shall mean bacteria, through lab analysis, that are indicative of fecal pollution.~~

~~Free chlorine residual shall mean the chlorine concentration, in parts per million (ppm) of water, available for rapid and effective biocidal action. This is the chlorine, which remains uncombined with nitrogenous compounds after the initial chlorine demand of the water has been satisfied.~~

~~Lifeguard shall mean an individual certified in an approved course of instruction in life saving and water safety offered by the American Red Cross or its equivalent.~~

Neglected shall mean a public or semipublic pool or spa that has constituted a swimming pool nuisance for more than thirty (30) days.

Operator shall mean the person who is in control of the property upon which a public or semipublic swimming pool is located.

Person shall mean any individual, firm, partnership, ~~company,~~ association, corporation, governmental agency, club, or organization, ~~institution, or similar entity of any kind.~~

PIWF shall mean a Public Interactive Water Feature.

Pool enclosure shall mean the area immediately around a pool enclosed by a fence, wall, or other solid structure which complies with Article X, "Fences", of Chapter 30, "Building Inspection", of this Code, and Chapter 757, "Pool Yard Enclosures", of the Texas Health and Safety Code ~~is in compliance with section 30.143 [sections 30.200 through 30.209] of this Code and the Texas Health~~

~~and Safety Code, chapter 757.~~

~~Public pool shall mean a pool to which the general public has access, which may also be referred to as a class B pool.~~

~~Pool shall mean any manmade permanently installed or nonportable structure, basin, chamber, or tank containing an artificial body of water that is used for swimming, diving, aquatic sports, or other aquatic activity other than a residential pool. The term does not include a spa or a decorative fountain that is not used as a pool. References within the standard to various types of pools are defined by the following categories:~~

~~(a) Class A pool. Any pool used, with or without a fee, for accredited competitive aquatic events. A class A pool may also be used for recreation.~~

~~(b) Class B pool. Any pool used for public recreation and open to the general public with or without a fee.~~

~~(c) Class C pool. Any pool operated for and in conjunction with:~~

~~(i) Lodging such as hotels, motels, apartments, condominiums, or mobile home parks;~~

~~(ii) Property owner associations, private organizations, or clubs; or~~

~~(iii) A school, college or university while being operated for academic or continuing education classes. The use of such a pool would be open to occupants, members or students, etc., and their guests but not open to the general public.~~

~~(d) Class D pool. A wading pool with a maximum water depth of 24 inches at any point.~~

~~Semipublic pool shall mean a pool that is privately owned and open only to an identifiable class of persons, including, but not limited to, motel guests, apartment residents, and club members, which also may be referred to as a class C pool.~~

Spa shall mean a constructed permanent or portable structure that is 2 feet or more in depth and that has a surface area of 250 square feet or less or a volume of 3,250 gallons or less and that is intended to be used for bathing or other recreational uses and

is not drained and refilled after each use.

Swimming pool nuisance shall mean a public or semipublic pool or spa with one or more of the following conditions: insufficient water clarity, improperly maintained pool enclosure, source of mosquito breeding, or failure to comply with the safety provisions of this Article~~section 22.88~~.

TAC shall mean the Texas Administrative Code.

(B) The definitions set forth in 25 Tex. Admin. Code § 265.182 and 25 Tex. Admin. Code § 265.302 are incorporated herein by reference. In the event of a conflict between a definition in the TAC and a definition in this Article, the definition in this Article shall control."

Section 3

That Section 22.86, "Evaluations", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, is hereby renamed and amended to read as follows:

"Section 22.86 ~~Evaluations~~ Enforcement of Article provisions.

(A) Evaluations. The Director may evaluate a public or semipublic pool, spa, or PIWF at any reasonable time and has authority to enter upon the premises where a pool, spa, or PIWF is located to the extent necessary to make a full evaluation. The Director shall have the authority to collect water samples for the purpose of determining water quality as described in 25 TAC Subchapter L and Subchapter M. The operator of a ~~semipublic~~ pool, spa, or PIWF shall provide a key or lock combination to provide complete access to all pool enclosures and equipment to the Director if there are no on-site personnel if a self-locking gate is installed.

(B) Enforcement. Enforcement of the rules and the provisions of this article shall be by the Director, or their duly appointed representative. Any references in the rules to regulatory authority or local regulatory representative shall mean the Director, or his duly appointed representative."

Section 4

That Section 22.87, "Maintenance and operation", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, is hereby renamed and amended to read as follows:

"Section 22.87. ~~Maintenance and Operation~~ Issuance of operating health permit.

(A) No owner, operator, or person in control of a public or semipublic swimming pool, spa, or PIWF shall allow any person to use the pool, spa, or PIWF unless a valid health permit to operate has been issued by the Health Department. Permits are not transferable. The owner, operator, or person in control of a pool, spa, or PIWF shall post the valid permit for public view and shall make the permit available for inspection by the Director at all times. Such permit expires annually the first day of March unless suspended or revoked for cause as prescribed in this Article.

(B) Applications for a permit to operate public or semipublic swimming pool, spa, or PIWF shall be made to the Health Department on forms provided by that department. The applicant shall complete the application in its entirety.

(C) Inspections. Prior to the issuance of an annual operating health permit for a public or semipublic swimming pool, spa, or PIWF, at least one pre-opening inspection must be conducted.

(D) Time for Inspections. The operator of any public or semipublic pool, spa, or PIWF shall notify the Director of the date intended for the initial opening for the season. If operations are year-round, the operator shall request an inspection shall be made and said inspection conducted before March 1. An evaluation will be made at that time to determine compliance with this Article. The operator shall not allow operation or use of a pool, spa, or PIWF prior to obtaining a valid permit."~~All public and semipublic pools and spas shall be chemically treated and maintained in accordance with the following standards by the operator:~~

~~(1) Free residual chlorine shall be maintained between 1.0 part per million and 8.0 parts per million (ppm) by a continuous chlorine feeder. Free residual chlorine in spas shall be maintained between 2.0 and 8.0 parts per million (ppm) by a continuous feeder. Residual levels of bromine in pools shall be maintained between 2.5 parts per million (ppm) and 12.0 parts per million (ppm) by a continuous feeder. Residual levels of bromine in spas~~

~~shall be maintained between 4.5 and 12.0 parts per million (ppm) by a continuous feeder. The use of any disinfectant other than chlorine or bromine must be approved in writing by the director. When the pool is in operation, the free residual level of chlorine or bromine shall be tested once a day and recorded. These records must be maintained on site for one year and shall be made available for inspection by the director at all times.~~

~~(2) Pool and spa water must be maintained so that the pH of the water is not less than 7.0 and not more than 7.8. When the pool is in operation, the pH shall be tested once a day and recorded. These records must be maintained on site for one year and shall be made available for inspection by the director at all times.~~

~~(3) Pool and spa water must be maintained so that the total alkalinity levels are above 60 parts per million (ppm) of carbonate species. When the pool is in operation, the total alkalinity shall be tested once every seven (7) days and recorded. These records must be maintained on site for one year and shall be made available for inspection by the director at all times.~~

~~(4) Pool and spa water must be maintained so that cyanuric acid levels do not exceed 100 parts per million (ppm). When the pool is in operation, the cyanuric acid levels shall be tested once every fourteen (14) days and recorded. These records must be maintained on site for one year and shall be made available for inspection by the director at all times.~~

~~(a) The operator of a pool or spa shall maintain a test kit capable of measuring chemical ranges as required in subsections (1), (2), (3) and (4) of this section.~~

~~(5) No pool or spa water sample shall show a positive test confirmed test for fecal coliform organisms or human pathogenic bacteria.~~

~~(6) Pool water must be maintained with sufficient clarity to permit a distinct view of the main drain from outside the pool. Spa water shall have sufficient clarity to permit a distinct view of the bottom while the aeration is turned off.~~

~~(7) Every pool and spa shall be kept free of scum, sediment, dirt, slime, algae, and all other foreign matter.~~

~~(8) Pools and spas shall meet the following circulation rates.~~

~~(a) For pools constructed and installed after October 1, 1999, a minimum turnover rate of 6 hours, if average depth is four (4) feet or greater.~~

~~(b) For pools constructed and installed after October 1, 1999, whose depth is less than four (4) feet, a minimum turnover rate shall be recalculated based on the formula: average depth in feet times 1.5.~~

~~(c) For pools constructed and installed before October 1, 1999, a minimum turnover rate of 8 hours.~~

~~(d) For spas, a minimum turnover rate of 30 minutes.~~

~~(e) For wading pools, a minimum turnover rate of one hour or less.~~

Section 5

That Section 22.88, "Safety Provisions", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, is hereby renamed and amended in pertinent part to read as follows:

"Section 22.88 Section Suspension or denial of permit.Safety Provisions

(A)

If it is determined by the Director that the operation or maintenance of the public or semipublic pool, spa, or PIWF facility constitutes a serious health or safety hazard for users, as specified in 25 TAC 265 Subchapter L and/or Subchapter M or herein, the Director shall have the authority to temporarily suspend or deny a permit to operate a public or semipublic pool, spa, or PIWF.

(B) A public or semipublic swimming pool, spa, or PIWF shall be

temporarily closed for use whenever any of the following conditions occur and shall not be reopened for use until the condition has been brought into compliance and the appropriate reinspection fee paid, and a reinspection conducted by the Director verifies that all hazardous conditions have been eliminated, such as:

(1) The amount of a residual disinfectant and/or pH for a pool or spa is less than, or greater than, the minimum and/or maximum amounts specified in Figure: 25 TAC § 265.193(c) ;

(2) The amount of a residual disinfectant and/or PH for a PIWF is less than, or greater than, the minimum and/or maximum amounts specified in Figure: 25 TAC § 265.306(c) ;

(3) If any of the suction outlet covers are expired, loose, missing, damaged and/or of a nonapproved anti-vortex design;

(4) The clarity of the water does not comply with the provisions in 25 TAC § 265.193(e) ;

(5) The temperature of spa water is greater than 104 degrees Fahrenheit;

(6) There is malfunction or nonfunction of the recirculation system and/or the automatic disinfectant feeder(s) ;

(7) When no lifeguard is present, any entrance or exit gate not self-closing and self-latching, or gaps in the pool enclosure that would allow the passage of a 6-inch sphere;

(8) The swimming pool, spa, or PIWF does not conform to the construction permit plans as it pertains to life safety compliance;

(9) The presence of vomitus or fecal matter in the pool, spa, or PIWF;

(10) No operable emergency telephone;

(11) The absence of rescue equipment as specified in 25 TAC § 265.190(g) ;

(10) The annual permit fee or follow-up evaluation fees are not paid;

(11) The permit holder or pool operator prohibits the Director from conducting a lawful inspection; or

(12) The permit holder or pool operator provides false information to the Director or provides falsified documentation on chemical testing records to the Director.

(C) The Director, upon determination that the public or semipublic pool, spa, or PIWF does not comply with the provisions of this article shall make reasonable efforts to notify the certified operator of the violation(s) and place, on the primary gate leading to the pool, spa, or PIWF, a sign notifying patrons of pool closure. The Director may, based on the nature and extent of the violation(s) present, affix a lock or similar closing mechanism on the gate(s) leading to the pool.

(D) The Director will conduct a reinspection of the pool during regular working hours of the Health Department at the request of the certified operator. If compliance has been achieved, the certified operator shall be notified that the pool is then reopened and the Director shall remove the closure notification and/or any closure mechanisms."~~Main drains and suction outlets, other than skimmers, shall be provided with anti-vortex approved suction outlet covers or grates as described in this section. These covers or grates shall be secured in such a way that they can be removed only with the use of a tool. The installation of all approved covers or grates must be in accordance with the manufacturer's instructions. If the manufacturer specifies fasteners, they must be stainless steel or brass.~~

~~(1) An approved cover is a suction outlet drain cover that:~~

~~(a) Is stamped showing that it has been certified by a nationally recognized testing laboratory as being in compliance with ASME/ANSI A112.19.8M;~~

~~(b) Is stamped showing the maximum number of gallons per minute approved for the cover under ASME/ANSI A112.19.8M testing; and~~

~~(c) Does not have water flow through the cover that exceeds the maximum gallons per minute approved for the drain cover under ASME/ANSI A112.19.8M testing.~~

~~(2) An approved grate is a suction outlet grate cover that:~~

~~(a) Has a minimum diagonal measurement of 24 inches;~~

~~(b) Has a flow velocity through the open area that does not exceed 1.5 feet per second.~~

~~(3) If an existing pool has a drain cover or grate with a minimum diagonal measurement less than 24 inches and no approved cover is manufactured and available, a cover or grate that is not approved may be used as long as the flow velocity through the open area of the cover or grate does not exceed 1.5 feet per second.~~

~~(B) Existing pools or spas shall have an approved cover or approved grate on each suction outlet. The covers or grates shall be installed according to the manufacturer's instructions. Existing pools or spas shall comply with all provisions of subsection (B) (1) or (B) (2) of this section, as applicable.~~

~~(1) Pool or spa, suction outlets that are 4 feet deep or less, as measured from the normal water level to the suction outlet, must have for each suction system:~~

~~(a) Dual hydraulically balanced suction outlets with approved covers as described in subsection (A) (1) or approved grates as described in subsection (A) (2), with a distance between the suction outlet fittings no less than 3 feet and no more than 20 feet, and either an AVS or SVRD as described in subsections (B) (4) and (5) of this section;~~

~~(b) A single suction outlet with an approved grate as described in subsection (A) (2) and an AVS or SVRD as described in subsections (B) (4) and (5) of this section; or~~

~~(c) Dual hydraulically balanced, suction outlets with a distance between the suction outlet fittings no less than 3 feet and no more than 20 feet, each with a minimum diagonal measurement of 24 inches and a flow velocity through the open area of the grate that does not exceed 1.5 feet per second.~~

~~(2) An existing pool or spa with water 3 feet deep or less, has no main drains or other suction outlets, and the water turnover rate and the water quality required by these rules is maintained by gravity drainage from such shallow pool to another deeper pool that has a main drain, is not required to have a main drain, other suction outlet or an SVRS, provided the deeper pool complies with these rules.~~

~~(3) In an existing pool or spa, suction outlets that are more than 4 feet deep, as measured from the normal water level to the suction outlets, must have, for each suction system:~~

~~(a) Two or more hydraulically balanced suction outlets with a distance between the suction outlet fittings no less than 3 feet and no more than 20 feet, and with approved covers or grates as described in subsections (A)(1) or (A)(2) of this section; or~~

~~(b) A single suction outlet with an approved cover or approved grate as described in subsection (A)(1) or (A)(2), and either an AVS or an SVRD as described in subsections (B)(4) and (5) of this section.~~

~~(4) The AVS system shall provide indirect suction and a break to the atmosphere and is limited to 5 feet of head. The vent of the AVS system shall be at least 2 inches in diameter and if vented by pipe, it must have a vent cover that may be removed only with a tool. Vent systems, other than surge pits that do not have direct suction between the pool drain(s) and pump and that are installed must be:~~

~~(a) A complete assembly that is engineered and manufactured off site;~~

~~(b) Designed so that a 1/2-inch ball will not pass through any vent opening; and~~

~~(c) Installed and maintained so that the vent function will not be impaired by accumulation of vegetation or soil or by improper installation or maintenance of the vent system.~~

~~(5) An SVRD shall be specifically designed and manufactured to help prevent entrapment hazards, according to the manufacturer's description of the device, by either cutting off electricity to the pump or allowing air to enter the main drain line, or both after the main drain or other suction line becomes blocked.~~

~~(C) A replacement drain cover with fasteners meeting the manufacturer's specifications must be kept on site. The replacement drain cover with fasteners meeting the manufacturer's specifications shall be identical to the drain cover(s) in use or a copy of the manufacturer's specifications for the drain cover in use shall be kept on site and be available for inspection. This subsection does not apply to grates that are 24 inches or larger, measured diagonally.~~

~~(D) The following safety equipment must be made readily available by the operator any time a public or semipublic pool is open for use. All lifesaving equipment shall be mounted in a conspicuous location within twenty (20) feet of the pool and kept in good repair and ready condition.~~

~~(1) A nontelescopic reaching pole not less than twelve (12) feet long, including a securely attached body hook or shepherd's crook having blunted ends. This pole shall be constructed of fiberglass or some other electrically nonconducting material. The pole shall be maintained in good working order, and free from the effects of exposure to the elements. One additional device shall be provided each additional 2,000 sq. feet of water surface area. Spas are exempt from this requirement.~~

~~(2) A guard line rope separating the shallow portion (less than four (4) feet in depth) of the swimming pool from the deep portion of the pool at the break point depth. The floats shall be spaced at not greater than seven-foot intervals and shall be secured so they will not slide. The rope shall be securely fastened to wall anchors. The anchors shall have no projections that could constitute a hazard when the line is removed. Wave action pools, spas, and pools with a maximum depth of five (5) feet are exempt from this requirement.~~

~~(3) In all pools over 5 feet deep the break point depth of the pool shall be visually separated by a four-inch minimum width row of floor tile, a painted line, or similar means using a color contrasting with the bottom.~~

~~(4) A 1/4-inch to 3/8-inch diameter throwing rope, a length of two-thirds the maximum width of the pool, to which has been firmly attached a United States Coast Guard approved ring buoy with an outside diameter of fifteen to twenty-four (15-24) inches. If no lifeguard is provided, one additional device shall be provided for each additional 2,000 sq. feet of water surface area. Spas are exempt from this requirement.~~

~~(E) Depth markings in numerals and units of measurement of a minimum height of four (4) inches must be placed at or above the water surface on the vertical pool wall and on the edge of the deck, within twenty-four (24) inches of the swimming pool and positioned to be read while standing on the deck facing the water. Units of measurement shall either spell out "feet" or "inches" or abbreviate "FT" or "IN." The numerals shall be of contrasting color to the background. The depth markers shall be placed at the maximum~~

~~and minimum depth points, at points of break between deep and shallow areas, and at two-foot increments of depth around the entire perimeter of the pool. The depth markings shall be spaced at not more than twenty-five-foot (25') intervals around the entire perimeter of the pool. Adhesive depth markers shall be prohibited. Spas shall comply with section 22.91 of this article. Existing pools shall be exempt from the requirement for 4-inch units of measurement at depth markers, unless the pool is substantially replastered or the water line tile is substantially replaced.~~

~~(F) The warning words "NO DIVING" and the international symbol for no diving shall be clearly marked on the pool deck in a contrasting color to the background and in letters of at least four (4) inches in height. The warning words and symbol shall be placed at least every twenty-five (25) feet or fraction thereof, around the pool where the water depth is six feet or less and positioned within twenty-four (24) inches of the water's edge to be read while standing on the deck facing the water. At least one warning shall be placed per pool side, one at the minimum depth and one at the six (6) foot depth. Adhesive "NO DIVING" markers shall be prohibited. Spas are exempt from this requirement.~~

~~(G) If a permanent structure above the pool deck (other than a diving board or diving platform) is within 5 feet of the water surface of a pool and is likely to be used for diving, the international no diving symbol and the warning "NO DIVING" (in contrasting colors and letters at least four inches high), shall be permanently affixed to the structure so that such warnings are visible to persons who may attempt to use the structure for diving.~~

~~(H) Pools and spas shall have a land line telephone or other electronic means capable of immediately summoning emergency service readily accessible within 200 feet unimpeded distance (an unlocked door or gate shall not be considered an impediment) of the pool or spa water when the pool or spa is available for use. Cellular or mobile phones do not meet the requirements of this subsection. A telephone that connects only to a telephone answered by an on-site office does not meet the requirements of this subsection.~~

~~(I) Pools and spas must securely post the following signs to be readily visible to the pool or spa user:~~

~~(1) For pools and spas where no lifeguard service is provided, "WARNING NO LIFEGUARD ON DUTY" or "NO LIFEGUARD ON DUTY" with legible letters at least four (4) inches in height.~~

~~(2) For pools where no lifeguard is provided, "NO DIVING" in legible letters of at least four (4) inches in height with the international symbol for no diving in legible letters of at least four (4) inches in height. Spas are exempt from this requirement.~~

~~(3) For pools and spas where no lifeguard is provided, "CHILDREN SHOULD NOT USE POOL WITHOUT ADULT SUPERVISION" or similar wording in legible letters of at least two inches in height.~~

~~(4) "IN CASE OF EMERGENCY CALL 911" or similar wording in legible letters of at least one inch in height.~~

~~(5) Directions to the required telephone shall be posted if the phone is not readily visible from the pool enclosure. The sign shall include a concise description of the location of the telephone or other electronic means of communication. If other electronic means of communication are provided, clear instructions regarding their use shall be provided.~~

~~(6) A placard listing pool rules shall be provided.~~

~~(7) For all swimming pools and spas, a sign or placard informing bathers to not enter the pool or spa while experiencing diarrhea or within fourteen days of having diarrhea.~~

~~(J) Steps or ladders shall be provided at the shallow end of pools if the vertical distance from the bottom of the swimming pool to the deck or walk is over two (2) feet. Ladders or recessed steps shall be provided in the deep portion of swimming pools over five (5) feet in depth. Swimming pools over thirty (30) feet in width shall provide steps or ladders on each side of the pool. There shall be a clearance of not more than five (5) inches nor less than three (3) inches between any ladder and the pool wall.~~

~~(K) Pool enclosures for class C pools and spas and class D pools at a class C facility that are subject to the Texas Health and Safety Code), chapter 757 (such as pools and spas for apartments or property owners' associations) shall have an enclosure as required in chapter 757.~~

~~(L) Pool enclosures for class C pools or spas and class D pools at a class C facility that are not subject to Texas Health and Safety Code, chapter 757 (such as pools and spas for hotels, motels, RV parks and child care centers) must have a pool or spa enclosure in compliance with this subsection.~~

~~(1) The pool or spa enclosure shall consist of one or a combination~~

~~of a fence, portion of a building, wall or other durable enclosure. The enclosure shall comply with the following:~~

~~(a) The enclosure must have a minimum perpendicular height of at least 48 inches as measured from the ground surface on the outside of the fence.~~

~~(b) Openings in or under the enclosure shall not allow the passage of a 4-inch diameter sphere.~~

~~(c) Planters or other structures that might allow small children to climb over the enclosure shall not be permitted within 36 inches, measured horizontally, from the outside of the enclosure.~~

~~(d) Chainlink fencing may be used for the enclosure of an existing pool and spa if the chainlink fencing was installed before September 1, 2004. Chainlink fencing shall not be used for an enclosure for a pool or spa constructed on or after September 1, 2004.~~

~~(e) Doors, gates, or windows that open into a building are allowed as part of an existing pool or spa enclosure. Windows that are capable of being opened are not allowed as part of a pool or spa enclosure constructed and installed after October 1, 1999. Doors or gates of a building that are capable of being opened are not allowed as part of a pool or spa enclosure constructed and installed after October 1, 1999, unless:~~

~~(i) The doors or gates between the building and the pool yard or spa yard are for entry into a storage room, restroom, shower room, dressing room or mechanical room adjacent to the pool;~~

~~(ii) The room does not have any door or gate openings to the outside of the pool or spa enclosure; and~~

~~(iii) The room does not contain any gas chlorine containers.~~

~~(2) Gates and doors for pool yard or spa yard enclosures for pools and spas subject to this subsection shall:~~

~~(a) Be equipped with self-closing and self-latching devices and be latched when the pool or spa is not in use. The self-closing device shall be designed to keep the gate or door securely closed and the self-latching device shall latch when the gate is allowed to close within its range of operation;~~

~~(b) Open outward away from the pool or spa except for gates~~

~~constructed before October 1, 1999;~~

~~(c) Have hand-activated door or gate opening hardware located at least 42 inches above the deck or walkway;~~

~~(d) Be capable of being locked.~~

~~(3) Pool and spa enclosures for pool or spas constructed and installed after October 1, 1999 shall be constructed so that all persons will be required to pass through an enclosure gate or door in order to gain access to the pool or spa. All gates and doors exiting a pool or spa enclosure for pool or spas constructed and installed after October 1, 1999 shall open in to a public area or walkway accessible by all users of the pool or spa.~~

Section 6

That Section 22.89, "Regulations in pool area", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, is hereby renamed and amended in pertinent part to read as follows:

"§ 22.89 Adoption of Texas Health Services regulations.Regulations in pool area"

~~The City adopts Title 25, "Health Services", Part I, "Department of State Health Services", Chapter 265, "General Sanitation", Subchapters L, "Public Swimming Pools and Spas", and M, "Interactive Water Features and Fountains", of the Texas Administrative Code. Unless deleted, amended, expanded, or otherwise changed herein, all provisions of these provisions of the Texas Administrative Code shall be fully applicable, binding, of full force and effect within the city." (A) — An air gap or antisiphon device must be installed on any pipe or hose bib leading to the pool or within fifty (50) feet of the pool water.~~

~~(B) There shall be no direct physical connection between a wastewater disposal system and a drain or recirculation system of a pool or spa. Backwash water or pool and spa draining water, shall be discharged into the City sanitary sewer system, or other approved sanitary sewer system, through an air gap formed by positioning the discharge pipe opening at least two (2) pipe diameters above the overflow level of any confining barriers that could cause flooding and submergence of the discharge opening in the event that the disposal system should fail. Splash screening~~

~~barriers are permitted as long as they do not inhibit air gap effectiveness.~~

~~(C) Vacuum outlets for swimming pools and spas shall be provided with covers that automatically close and automatically latch and can only be opened with the use of a tool. Such covers shall be securely closed when the pool or spa is open for use. Where a vacuum outlet is internally located in a skimmer, which is provided with a cover, a separate cover for the vacuum outlet is not required. An automatic bottom or side cleaner that could provide a means of entanglement or entrapment shall not be in the pool or spa or operated while the facility is open for use. If a vacuum outlet is provided in a pool or spa, it may be permanently sealed in lieu of having a cover.~~

~~(D) Skimmer equalizer lines shall either be permanently sealed or fitted with an approved equalizer wall or drain cover as described in section 22.88(A).~~

~~(E) All pools and spas shall be equipped with the following:~~

~~(1) A pump suction (vacuum) gauge installed as close to the suction side of the pump as possible without sacrificing efficiency.~~

~~(2) A filter inlet pressure gauge installed in the area of greatest pressure.~~

~~(3) A filter outlet gauge.~~

~~(4) A functional rate of flow meter, located to accurately indicate the rate of flow through the filter in gallons per minute. The flow meter shall be accurate to within ten percent (10%) of true flow and shall be easy to read.~~

~~(F) Exposed piping in all pools and spas shall be labeled to identify the piping function and direction of flow. The name of the liquid or gas and arrows indicating direction of flow, shall be permanently indicated on the pipe.~~

~~(G) Diving equipment and other water entry devices shall be installed according to the manufacturer's instructions and specifications and shall meet all applicable national standards. A certification letter shall be provided from the manufacturer or an installer stating that the equipment meets all applicable standards and is suitable for the specific pool type.~~

~~(H) Each electrical outlet in the pool or spa enclosure and in a dressing or sanitary facility shall be protected with a ground fault circuit interrupter. Each electrical line to an underwater light in a pool or spa shall be protected with a ground fault circuit interrupter that is located in the circuit breaker for the light at the breaker box, or in an outlet to which the power for the light passes.~~

~~(I) If a switch that serves lights or equipment (other than pumps and underwater lights) in a pool or spa is between five (5) and ten (10) feet from the wall of the pool or spa, each electrical line to such switch shall be grounded and shall have a ground fault circuit interrupter located:~~

~~(1) In the circuit breaker for the light; or~~

~~(2) In the equipment circuit that powers the switch at the breaker box;~~

~~(3) In an outlet through which the power for the switch passes.~~

~~All ground fault circuit interrupters and circuit breakers in pool and spa yards shall comply with 2002 NEC requirements.~~

~~(J) Electrical equipment serving a pool or spa shall be grounded according to ANSI/UL 1563-1995 "Standard for Electric Hot Tubs, Spas and Associated Equipment" and the 2002 NEC. Pumps shall be both internally and externally grounded.~~

~~(K) Electrical disconnecting means for the protection of service personnel for pool and spa equipment shall be accessible for service personnel, located within sight from the pool or spa equipment, and located greater than 5 feet from the inside walls of the pool or spa as required by the 2002 NEC, chapter 6, section 680-12, Disconnecting Means. Each disconnecting means (i.e., turn-off switch) shall disconnect all ungrounded conductors (hot wires) to the equipment it serves.~~

~~(L) Electrical equipment, including switches, outlets, deck lights, pumps, and other electrical equipment at pools and spas, shall be located at least 10 feet from the inside wall of a pool or spa unless:~~

~~(1) The electrical equipment is greater than 5 feet from the wall of the pool or spa and is separated from the~~

~~pool or spa by a solid fence, wall or other permanent barrier at least 4 feet in height; or~~

~~(2) The electrical equipment is greater than 5 feet from the wall of the pool or spa; and:~~

~~(a) Consists of only one outlet for an electrical line that is grounded, has a ground fault circuit interrupter, and has a locking mechanism covering the outlet;~~

~~(b) Consists of one or more switches serving electrical lines that are grounded and that have ground fault circuit interrupter protection that is located:~~

~~(i) In the circuit breaker for the equipment at the breaker box;~~

~~(ii) In an outlet through which the power for the equipment passes; or~~

~~(iii) Consists of an electrical device other than an outlet or switch and complies with applicable NEC requirements at the time of installation.~~

~~(M) Spas shall have a pump shutoff switch for use by spa users. The shutoff switch shall be:~~

~~(1) Clearly labeled as "Emergency Spa Shutoff";~~

~~(2) Located within sight of the spa, or if not, there shall be a sign visible from the spa, in at least one (1) inch tall letters, stating the location of the emergency shutoff switch;~~

~~(3) Readily accessible to spa users;~~

~~(4) Not behind a locked door or gate; and~~

~~(5) Located no closer than 5 feet from the spa unless the switch is a nonelectrical air switch.~~

~~(N) A certification letter from a licensed electrician shall be provided annually that certifies the pool or spa meets all electrical requirements of this section.~~

~~(O) Overhead electrical service wires shall not pass within twenty (20) feet of the pool enclosure. At existing pools, where transmission wires are within twenty (20) feet of the enclosure, all pool service poles shall be constructed of fiberglass or some other electrically nonconducting material. Pools and spas built after October 1, 1999 shall comply with the requirements set forth in the 2002 NEC.~~

~~(P) A current certificate of operations from the state department of licensing and regulation shall be provided for pool and spa heaters or boilers that are designed to produce in excess of 200K BTUs.~~

~~(Q) Disinfectants or other chemicals and chemical feeding equipment shall be stored in such a manner that pool and spa users shall not have access to such chemicals. Dry chemicals, not in waterproof containers, shall be stored off the floor in a dry, above ground-level room and protected against flooding or wetting. All chemical bulk and day tanks shall be clearly labeled to indicate the tank's contents. Solution containers shall be provided with a cover to prevent the entrance of dust, insects and other contaminants. Chlorine compounds shall not be stored in the same area as petroleum products. Goggles, rubber gloves and any other protective or safety equipment required by the chemical manufacturer shall be provided if chemicals are stored on site. A copy of the material safety data sheet (MSDS) for each chemical applied to the pool or spa shall be kept on site and made available for inspection at all times.~~

~~(R) Chemical feeders shall be installed, maintained and operated according to the manufacturer's specifications and shall be installed so solution introduction is downstream of the filter and heater. Electric chemical feeder pumps shall be wired so operation cannot occur unless there is adequate return flow to properly disperse chemicals throughout the pool or spa. Pool or spa skimmer baskets shall not be used as chemical feeders. Supplemental hand feeding of disinfectant or other chemicals directly into the pool or spa shall not occur when users occupy the pool or spa.~~

~~(S) An over-the-rim fill spout, if used in a pool, shall have a secure soft pliable end (for example, a short section of rubber hose) to prevent injury to patrons and shall not protrude more than two (2) inches beyond the edge of the pool. The end of the soft pliable outlet shall be separated from the maximum possible pool or spa water level by an air gap at least twice the diameter of the pipe.~~

~~(T) A continuous deck of at least four (4) feet in width, including the coping, shall extend completely around a pool. Spas shall have a four-foot continuous deck, including the coping, around at least fifty percent (50%) of the water body. Indoor pools and spas are exempt from this requirement.~~

~~(U) Food and beverages shall be served only in nonbreakable containers. Glass containers shall not be allowed within a pool enclosure or in a pool or spa. Trash containers shall be provided where food or beverages are allowed.~~

~~(V) Pools and spas shall be constructed of materials that are impervious and permanent. The surfaces shall be kept in good repair and be cleanable.~~

~~(W) Toilet facilities, if provided, shall comply with the following:~~

~~(1) Handwash facilities including soap dispensers with liquid or powdered soap shall be provided at each lavatory. The dispenser shall be constructed of metal or plastic;~~

~~(2) If mirrors are provided, they shall be shatter resistant;~~

~~(3) Toilet paper holders and toilet paper shall be provided at each toilet;~~

~~(4) Covered waste receptacles shall be provided in toilet or dressing room areas; and~~

~~(5) Single use hand drying towels or hand drying devices shall be provided near the lavatory.~~

~~(X) An easily removable and cleanable basket or screen through which overflow water must pass shall be provided to trap large solids at each surface skimmer. Deck skimmers shall have protective covers that are kept in place and in good repair.~~

~~(Y) It shall be unlawful for any person to:~~

~~(1) Swim or bathe in any public or semipublic pool or spa if that person has skin abrasions, open sores, or any communicable disease.~~

~~(2) Allow any animal to enter into the pool enclosure area of any public or semipublic pool or spa, except that service animals shall be allowed on the deck and within enclosure but not in the pool.~~

~~(3) Remove, deface, cover, or render unreadable a pool enclosure sign posted by the health authority.~~

~~(4) Remove, disable, or damage any pool safety equipment required in section 22.88 while a pool or spa is open to patrons.~~

Section 7

That Section 22.90, "Lifeguards", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, is hereby renamed and amended in pertinent part to read as follows:

"Section 22.90 Amendments to the Texas Administrative CodeLifeguards."

In accordance with 25 Tex. Admin. Code § 265.181(g) and 25 Tex. Admin. Code § 265.301(c), the City has adopted standards different from and equivalent to or more stringent than those set forth in the TAC. To the extent any of the amendments contained herein conflict with those of the Texas Administrative Code, the amendments shall control.

(B) The following amendments are made to the TAC:

(1) 25 Tex. Admin. Code § 265.183 is amended in pertinent part to read as follows:

"(a) No person shall hereafter construct, extensively remodel, or replace equipment for which a mechanical, plumbing, or electrical permit is required for a public or semipublic pool, spa, or PIWF without having first obtained a building permit from the City of Garland Building Inspection Department. Prior to the issuance of a building permit for the construction of a new pool, spa, or PIWF, the remodel of an existing pool, spa, or PIWF, properly prepared plans and specifications for such construction or remodeling shall be submitted to

the regulatory authority for review and approval.

(1) Plans submitted for review must contain the following: Plans must be drawn to scale and include both a top view and a side cross section view. All dimensions and specifications required by code must be referenced on the plans. A registered professional engineer or architect must confirm, by letter and seal, that the pool was designed and will be constructed in compliance with Title 25, Chapter 265, subchapters L and M of the TAC .

(2) Prior to Health Department approval for a newly constructed or remodeled public or semipublic swimming pool, spa, or PIWF, the following inspections shall be conducted by the Director: (a) after plumbing is completed, but before gunite; (b) prior to filling, but after the pool enclosure is present; and (c) a final preopening or preoperational inspection. These inspections are to verify that the pool, spa, or PIWF is constructed in accordance with all approved plans and requirements, and the water chemistry complies with the requirements set forth in this article, prior to its opening and use by the public. Prior to permit issuance, a registered professional engineer or architect must confirm, by letter and seal, that the pool was constructed in compliance with Title 25, Chapter 265, subchapters L and M of the TAC.

. . .

(c) Accepted practice for pools, spas, or PIWFs. The structural design and materials for pools, spas, or PIWFs constructed before the effective date of this subchapter must be in accordance with accepted industry engineering practices and methods prevailing at the time of original construction unless otherwise stated in this subchapter. Pools, spas, and PIWFs shall be constructed of materials that are impervious, cleanable, and permanent."

(2) 25 Tex. Admin. Code § 265.185 is amended to read as follows:

“(a) A pump for a pool or spa must not be operated if the owner or operator of the pool or spa knows or should know in the exercise of ordinary care that the drain grate, suction outlet, or any suction outlet cover is missing, broken, or loose. If such a condition exists, the pool or spa must be closed and remain closed until corrected.

“(b) A replacement suction drain cover with fasteners meeting the manufacturer’s specifications must be kept on site. The replacement suction drain cover with fasteners meeting the manufacturer’s specifications shall be identical to the drain cover(s) in use and a copy of the manufacturer’s specifications for the drain cover in use shall be kept on site and be available for inspection. This subsection does not apply to grates that are 24 inches or larger, measured diagonally. Installation date of suction drain covers shall be maintained on site and provided to the regulatory authority upon request.

“(c) All pools, spas, and PIWFS shall be equipped with the following:

(1) A pump suction (vacuum) gauge installed as close to the suction side of the pump as possible without sacrificing efficiency.

(2) A filter inlet pressure gauge installed in the area of greatest pressure.

(3) A filter outlet gauge.

(4) A functional rate of flow meter, located to accurately indicate the rate of flow through the filter in gallons per minute. The flow meter shall be accurate to within ten percent (10%) of true flow and shall be easy to read.

“(d) Exposed piping in all pools and spas and PIWFs shall be labeled to identify the piping

function and direction of flow. The name of the liquid or gas and arrows indicating direction of flow, shall be permanently indicated on the pipe."

(3) 25 Tex. Admin. Code § 265.186(a) is amended to read as follows:

"(a) Licensed electrician required.

(1) Installation, maintenance, repairs, and replacement of electrical systems. The electrical system of a pool or spa and structures in the pool yard or spa yard must be installed, maintained, repaired, or replaced by a licensed electrician in accordance with the Texas Electrical Safety and Licensing Act, Texas Occupations Code, Chapter 1305 and related rules. Any electrical work must be permitted as required in Chapter 30 of the Garland Code of Ordinances.

(2) Annual certification requirements. A certification letter signed by a licensed electrician in accordance with the Texas Electrical Safety and Licensing Act, Texas Occupations Code, Chapter 1305 and related rules, shall be provided annually. The letter must certify that the electrical system meets all applicable electrical requirements as of the original date of the electrical system's installation. The certification letter must be submitted with the annual application for a permit to operate the pool or spa."

(4) 25 Tex. Admin. Code § 265.189(g)(1) is amended to read as follows:

"(1) Automatic distribution of chemicals. Required ranges of disinfectant shall be maintained by an automatic continuous feeder. When using automatic feeders, automated controllers that adjust chemical feed based on demand or manually, or remotely managed controllers for pool and spa disinfection and pH control, must be installed. Automatic feeders must meet NSF Standard 50 for use in public pools and spas and must operate in a

manner that does not invalidate the NSF rating for the system and equipment."

(5) 25 Tex. Admin. Code § 265.190(a)(3)(A) is amended in pertinent part to read as follows:

"(A) A rope and float line shall also be used in addition to the transition line and must be provided between 1 and 2 feet on the shallow water side of the 5-foot depth. The floats must be spaced at not greater than 7-foot intervals and secured so they will not slide or bunch up. The stretched rope and float line must be a size to offer a good handhold and strong enough to support loads normally imposed by users."

(6) 25 Tex. Admin. Code § 265.190 is amended by creating a new subsection (k) which shall read as follows:

"(k) Diving equipment and other water entry devices shall be installed according to the manufacturer's instructions and specifications and shall meet all applicable national standards. A certification letter shall be provided from the manufacturer or an installer stating that the equipment meets all applicable standards and is suitable for the specific pool type."

(7) 25 Tex. Admin. Code § 265.192 is amended by creation of a new subsection (i) which shall read as follows:

"(i) Overhead electrical service wires and other electrical wires and lighting shall not pass within twenty (20) feet of the pool enclosure."

(8) 25 Tex. Admin. Code § 265.194 is amended by creation of new subsections (u) and (v) which shall read as follows:

"(u) All surfaces within the pool, spa, or PIWF enclosure, including the pool, spa, and PIWF, the deck, and any other areas, shall be kept in good repair. All pool, spa, and PIWF surfaces shall be cleanable."

(v) Restrooms adjacent to or within the pool or spa enclosure shall be equipped with dispensed paper towels or a hand drying device."

(9) 25 Tex. Admin. Code § 265.198 is amended by creation of a new subsection (d) which shall read as follows:

"(d) It shall be unlawful for any person to remove, deface, cover, or render unreadable a pool closure sign posted by the health authority.

(10) 25 Tex. Admin. Code 265.302(28), defining "extensively remodeled", shall be superseded by the definition set forth in this Article."~~(A) Lifeguards shall be provided at class B pools and at all class C pools, if a diving board or a slide is present.~~

~~(B) All pool facilities that require a lifeguard shall comply with all department of state health services requirements related to training, placement and construction of facilities.~~

~~(C) All operators of pools that provide a lifeguard, including those required in subsection (A), shall provide to be readily available:~~

~~(1) One or more backboards with a minimum of three tie-down straps and head immobilizer for back and neck injuries.~~

~~(2) A first aid kit, which shall be kept filled and available for use.~~

Section 8

That Section 22.91, "Spa Operation", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, is hereby renamed and amended to read as follows:¹

"Section 22.91 Abandoned public or semipublic swimming pools, spas, and PIWFsSpa operation.

(A) It shall be unlawful to cause, suffer or permit an abandoned semipublic or public pool, or spa to exist within the City.

(B) When the Director has confirmed the existence of an abandoned

¹ Previously Section 22.97 of the Garland Code of Ordinances.

or neglected semipublic pool or spa, the owner, manager or operator shall be issued, in writing, a list of control measures that will gain compliance with this article. The control measures, and the compliance period for their completion, will be contained in a written health order."~~Spas shall meet the following additional requirements:~~

~~(1) Depth markings in numerals and units of measurement of a minimum height of four (4) inches must be placed on the edge of the deck, within twenty four (24) inches of the spa and positioned to be read while standing on the deck facing the water. The numerals and units of measurement shall be of contrasting color to the background. The depth markings shall be spaced at not more than twenty-five-foot intervals around the entire perimeter of the spa, there shall be a minimum of two deck depth markers per spa, regardless of spa size or shape.~~

~~(a) Units of measurement shall either spell out "feet" or "inches" or abbreviate "FT" or "IN."~~

~~(b) Deck depth markers shall indicate the spa depth from the design water level to the floor of the spa with a vertical measurement taken three (3) feet from the spa wall.~~

~~(2) The maximum temperature of the water in the spa shall not exceed 104° F. An unbreakable thermometer (plus or minus 1° F tolerance) that is designed for use in a spa environment shall be available for patrons and staff to monitor spa temperature. The control for the spa temperature shall not be accessible to the spa user.~~

~~(3) In addition to the signs required in section 22.88(I), the following signs shall also be securely mounted to be readily visible to the spa user:~~

~~(a) "Do not use the spa, if the water temperature is above 104 degrees Fahrenheit (40 degrees Centigrade)" in letters at least one inch high.~~

~~(b) "The maximum number of users for this spa is XX" or similar wording, where XX is the maximum load limit for the spa, as calculated to not exceed one person per each ten square feet of surface area of the spa.~~

Section 9

That Section 22.92, "Notification of Operation", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, is hereby renamed and amended to read as follows:²

"Section 22.92 Responsibility of bather~~Notification of operation~~.

(A) It shall be unlawful for any person to enter a pool or spa or PIWF within fourteen days of having diarrhea caused by infection.

(B) It shall be unlawful for any person to allow a minor under the custody and control of that person to enter a pool or spa or PIWF within fourteen days of having diarrhea caused by infection.~~"The operator of any public or semipublic pool shall notify the director of the date intended for the initial opening of the pool for the season. An evaluation will be made at that time to determine compliance with this article. The operator shall not allow operation or use of a pool prior to obtaining a valid permit.~~

Section 10

That Section 22.93, "Pool permits", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, is hereby renamed and amended to read as follows:

"Section 22.93 Interfering with or hindering the regulatory authority~~Pool permits~~.

It shall be unlawful for any person to interfere with or hinder the regulatory authority in the exercise of its duties under this Article."~~(A) No person shall operate a public or semipublic pool or spa within the City, without having first obtained a permit issued by the director. Permits shall not be transferable. A valid permit shall be available for inspection by the director at all times.~~

² Previously Section 22.99 of the Garland Code of Ordinances; was amended to add PIWFs to existing language.

~~(B)~~

~~A person desiring to operate a public or semipublic pool or spa shall make written application for a permit on forms provided by the director. Such application shall include: the operator's full name and post office address and whether such operator is an individual, firm, corporation, or partnership. The application shall also include the location of the pool or spa, the size in gallons, the type of filter equipment, the type of automatic disinfectant in use, and such other information as may be required by the director.~~

Section 11

That Section 22.94, "Permit Fees", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, is hereby renamed and amended to read as follows:

"Section 22.94 Adoption of International Swimming Pool and Spa Code Permit Fees."

(A) The International Swimming Pool and Spa Code ("ISPSC"), 2021 edition, is hereby adopted by reference, but only to the extent set forth in 25 Tex. Admin. Code § 265.181(c)-(d). A copy shall be kept on file in the office of the City Secretary. Unless deleted, amended, expanded, or otherwise changed herein, these provisions of the ISPSC shall be fully applicable, binding, of full force and effect within the city.

(B) In addition to the foregoing, the City hereby adopts the following sections of the ISPSC:

(1) Section 109.2, "Temporary connection";

(2) Section 109.3, "Authority to disconnect service utilities"; and

(3) Section 114, "Stop Work Order" (in its entirety)."~~(A) Each person who owns or operates a public or semipublic pool or spa shall be assessed an annual permit fee in the amount designated in the Master Fee and Rate Schedule, Article VII, Section 10.85, of Chapter 10, for each public or semipublic pool or spa.~~

~~(B) No fee shall be charged to any pool or spa operated by a governmental agency, independent school district, institution of~~

~~purely public charity, church, or homeowner association; however, such establishments shall comply with all other requirements of this article.~~

~~(C) Each evaluation performed pursuant to section 22.86 shall result in a follow-up evaluation if any violations of this article remain uncorrected at the conclusion of the initial evaluation. The first follow-up evaluation shall be performed at no cost to the swimming pool operator. Any subsequent follow-up evaluations shall result in the assessment of a fee in the amount designated in the Master Fee and Rate Schedule, Article VII, Section 10.85, of Chapter 10. The follow-up evaluation fee shall be paid prior to performance of the evaluation. When an initial evaluation reveals that no violations of this article exist, the person who operates the swimming pool or spa shall be credited the fee amount toward the next annual permit fee.~~

Section 12

That Section 22.95, "Registered certified pool operator required", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, is hereby renamed and amended to read as follows:

"Section 22.95 Amendments to the ISPSC (2021 edition)Registered certified pool operator required"

The following amendments are made to the ISPSC (2021 edition):

(1) Section 305.1, General, shall be amended to read as follows:

"Section 305.1 General. The provisions of this section shall apply to the design of barriers for restricting entry into areas having pools and spas."

(2) Section 305.5, Onground residential pool structure as a barrier, shall be deleted in its entirety.

(3) Section 318.3, Over-the-rim spouts, shall be amended to read as follows:

"318.3 Over-the-rim spouts. Over-the-rim spouts shall be located under a diving board, adjacent to a ladder, or

otherwise shielded so as not to create a hazard. The open end of such spouts shall not have sharp edges, shall have a soft pliable end, and shall not protrude more than 2 inches (51 mm) beyond the edge of the pool. The open end shall be separated from the water by an air gap of not less than 1.5 pipe diameters measured from the pipe outlet to the rim."~~(A) Registered pool operator.~~

~~(1) Any person who operates a public or semipublic pool or spa shall employ at least one person who has a valid and current registered pool operator certification issued by the director.~~

~~(2) A person is in compliance with the provisions of this section if there is one employee on the premises who is responsible for maintenance of any pools present on the premises who has a valid and current registered pool operator certification; provided, that semipublic pools owned by homeowner associations or maintained by off-premises management companies may utilize pool maintenance companies whose field employees are certified registered pool operators.~~

~~(B) Registration. The director shall issue a registered certified pool operator certification to any person who submits the required application, pays the required fee in the amount designated in the Master Fee and Rate Schedule, Article VII, Section 10.85, of Chapter 10, and provides evidence of completion of a pool operator training course approved by the City. An approved pool operator course shall meet the following minimum criteria:~~

~~(1) The course must have been completed within the previous three (3) years.~~

~~(2) The course shall be taught by a person adequately trained in swimming pool sanitation and has been approved by the director.~~

~~(3) The course curriculum shall include the following topics:~~

~~(a) Pool design.~~

~~(b) Disinfection.~~

~~(c) Circulation.~~

~~(d) Filtration.~~

~~(e) Swimming pool chemistry.~~

~~(f) Safety procedures.~~

~~(4) The course provider shall give persons successfully completing the course a written document of certification.~~

~~(C) Term, evidence, and transfer of registration.~~

~~(1) Unless sooner revoked by the director, a pool operator's registration expires three (3) years from the date of issuance.~~

~~(2) The person operating a public or semipublic pool must possess evidence that a registered pool operator is employed. Such evidence shall be available for inspection by the director at any time a pool is available for use.~~

~~(3) A pool operator registration certificate is not transferable.~~

~~(D) Registration by challenge test.~~

~~(1) A person may obtain a pool operator registration certificate by successfully completing a challenge test provided by the director (in lieu of attending an approved course).~~

~~(2) The contents of the challenge test shall be sufficient to determine that an applicant has knowledge of pool chemistry, disinfection, circulation, filtration, design, and safety.~~

~~(3) A score of seventy percent (70%) or greater shall be considered a passing grade on the test.~~

Section 13

That Section 22.96, "Suspension or denial of permit", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of

the Code of Ordinances of the City of Garland, Texas, is hereby renamed and amended to read as follows:

"Section 22.96 Applicability of rules~~Suspension or denial of permit.~~

Unless contradicted elsewhere in this Article, all public and semipublic swimming pools, spas, and PIWFs shall be subject to the rules in place at the time of their original construction."

~~(A) The director shall have the authority to temporarily suspend or deny a permit to operate a public or semipublic pool or spa for the following reasons:~~

~~(1) The annual permit fee or follow-up evaluation fees are not paid.~~

~~(2) The permit holder or pool operator fails to have in his employ a registered pool operator that meets the requirements of section 22.95 of this article.~~

~~(3) The permit holder or pool operator fails to keep all pool and spa equipment properly maintained as to comply with the requirements of this article.~~

~~(4) The pool or spa does not meet the water chemistry standards set in section 22.87 of this article or the safety requirements in section 22.88 of this article or other conditions exist at the pool facility that is deemed by the director to be hazardous to the health and safety of the pool users or the general public.~~

~~(5) The permit holder or pool operator prohibits the director from conducting a lawful inspection.~~

~~(6) The permit holder or pool operator provides false information to the director or provides falsified documentation on chemical testing records to the director.~~

~~(B) The director upon determination that the pool does not comply with the provisions of this article shall make reasonable efforts to notify the operator of the violation or violations and place on the primary gate leading to the pool a sign notifying patrons of pool closure. The director may, based on the nature and extent of the violation(s) present, affix a lock or similar closing mechanism on the gate or gates leading to the pool.~~

~~(C) The director will conduct a reevaluation of the pool during regular working hours of the Health Department at the request of the pool operator. If compliance has been achieved, the operator shall be notified that the pool is then opened and the director shall remove the pool closure signs, along with any locking device on gates. Follow-up evaluation fees will apply when permits are suspended.~~

Section 14

That Section 22.97, "Abandoned or neglected pools", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, is hereby renamed and amended to read as follows:³

"Section 22.97 Permit fees~~Abandoned or neglected pools~~.

(A) Each person who owns or operates a public or semipublic pool, spa, or PIWF shall be assessed an annual permit fee in the amount designated in the Master Fee and Rate Schedule, Article VII, Section 10.85 of Chapter 10, for each public or semipublic pool, spa, or PIWF.

(B) No fee shall be charged to any public or semipublic swimming pool, spa, or PIWF operated by a governmental agency, independent school district, institution of purely public charity, church, or homeowner association; however, such establishments shall comply with all other requirements of this article.

(C) Each evaluation performed pursuant to this Article shall result in a follow-up evaluation if any violations of this article remain uncorrected at the conclusion of the initial evaluation. The first follow-up evaluation shall be performed at no cost to the swimming pool operator. Any subsequent follow-up evaluations shall result in the assessment of a fee in the amount designated in the Master Fee and Rate Schedule, Article VII, Section 10.85, of Chapter 10. The follow-up evaluation fee shall be paid prior to performance of the evaluation. When an initial evaluation reveals that no violations of this article exist, the person who operates the swimming pool, spa, or PIWF shall be credited one follow-up evaluation fee amount toward the next annual permit fee."~~(A) — It shall be unlawful to cause, suffer or permit an abandoned or neglected semipublic pool or spa to exist within the City.~~

³ Previously Section 22.94 of the Garland Code of Ordinances.

~~(B) When the director has confirmed the existence of an abandoned or neglected semipublic pool or spa, the owner, manager or operator shall be issued, in writing, a list of control measures that will gain compliance with this article. The control measures, and the compliance period for their completion, will be contained in a written health order.~~

~~(C) The director may abate the nuisance of an abandoned or neglected semipublic pool or spa by draining and filling the pool or spa with inert material. All costs associated with destroying the pool or spa shall be charged to the owner of the property.~~

Section 15

That the Sections 22.98, "New Construction", and 22.99, "Responsibility of Bather", of Article VI, "Article VI, Public and Semi-public Swimming Pools, Spas, and Public Interactive Water Features", of Chapter 22, "Health", of the Code of Ordinances of the City of Garland, Texas, are hereby repealed.⁴

~~Section 22.98 New Construction.~~

~~Public or semipublic pools constructed after July 1, 2004, shall comply with the construction and operational standards as set forth in the 2004 Department of State Health Services Standards for Public Swimming Pools and Spas. A registered professional engineer or architect must confirm, by letter and seal, that the pool was designed and constructed in compliance with the 2004 Department of State Health Services Standards for Public Swimming Pools and Spas.~~

~~Section 22.99 Responsibility of bather.~~

~~(A) No person shall enter a public or semipublic pool or spa within fourteen days of having diarrhea caused by infection.~~

~~(B) No person shall allow a minor under the custody and control of that person to enter a public or semipublic pool or spa within fourteen days of having diarrhea caused by infection.~~

Section 16

That Code of Ordinances for the City of Garland, Texas, as amended, shall be and remain in full force and effect save and except as

⁴ Note that Section 22.99 was retained and renumbered as Section 22.92. It was amended to add PIWFs to the language.

amended by this Ordinance.

Section 17

That a violation of any provision of this Ordinance shall be a misdemeanor punishable in accordance with Section 10.05 of the Code of Ordinances of the City of Garland, Texas.

Section 18

That the terms and provisions of this Ordinance are severable and are governed by Section 10.06 of the Code of Ordinances of the City of Garland, Texas.

Section 19

That this Ordinance shall be and become effective immediately upon and after its passage and approval.

PASSED AND APPROVED this the _____ day of _____, 2024.

CITY OF GARLAND, TEXAS

Mayor

ATTEST:

City Secretary

TITLE 25	HEALTH SERVICES
PART 1	DEPARTMENT OF STATE HEALTH SERVICES
CHAPTER 265	GENERAL SANITATION
SUBCHAPTER L	PUBLIC SWIMMING POOLS AND SPAS

§265.181. General Provisions.

(a) Scope and purpose. The purpose of this subchapter is to implement Texas Health and Safety Code, §341.064, Swimming Pools, Artificial Swimming Lagoons and Bathhouses, and §341.0645, Pool Safety.

(b) Adoption by reference. Department of State Health Services (DSHS) adopts by reference the 2021 International Swimming Pool and Spa Code (ISPSC) regarding construction, alteration, renovation, enlargement, and repair of commercial swimming pools and spas; the ANSI/APSP-16 American National Standard for Suction Outlet Fitting Assemblies (SOFA) for use in Pools Spas and Hot Tubs; and the ANSI/PHTA/ICC-7 American National Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins as specified in subsection (c) of this section.

(c) ISPSC sections adopted. DSHS adopts by reference the following chapters and sections from the ISPSC, except as provided in subsection (d) of this section: Section 102 in Chapter 1, Scope and Administration; Chapter 2, Definitions; Chapter 3, General Compliance, only as these sections and chapters relate to the construction, alteration, renovation, enlargement, and repair of commercial swimming pools and spas; Chapter 4, Public Swimming Pools; Chapter 5, Public Spas and Public Exercise Spas; and Chapter 6, Aquatic Recreation Facilities.

(d) ISPSC sections not adopted. DSHS does not adopt by reference the following chapters and sections from the 2021 ISPSC: Sections 102.7.1, 103, 104, 105, 106, 107, 108, 109.2, 109.3, 110, 111, 112, 113, and 114 in Chapter 1, Scope and Administration; Definitions in Section 202 in Chapter 2: Code Official, Deep Area, Design Professional, and Jurisdiction; Section 412.2 in Chapter 4, Public Swimming Pools; Section 508.3 in Chapter 5, Public Spas and Public Exercise Spas; Section 603.3 in Chapter 6, Aquatic Recreation Facilities; Chapter 7, Onground Storable Residential Swimming Pools; Chapter 8, Permanent Inground Residential Swimming Pools; Chapter 9, Permanent Residential Spas and Permanent Residential Exercise Spas; and Chapter 10, Portable Residential Spas and Portable Residential Exercise Spas.

(e) Application of the rules. The rules in this subchapter establish minimum standards for swimming pools and spas concerning pool operation and management, water quality, safety standards unrelated to design and construction, signage, enclosures, and safety features intended to reduce to a practical minimum the possibility of drowning or injury to users.

(f) Date of construction. The date of construction of a pool, spa, or a bathhouse is the date that a building permit for construction is issued. If no building permit is required, the date that excavation or electrical service begins, whichever is earlier, is the date of construction. In the case of the latter, the owner or operator must

produce adequate written documentation of the date of excavation or the beginning date of electrical service.

(g) Regulations not in the ISPSC. Regarding regulations in this subchapter not addressed by the ISPSC, local regulatory authorities may, with the exception of DSHS-approved alternate methods of disinfection set forth in §265.196 of this subchapter (relating to Request for Alternate Method of Disinfectant), adopt standards that vary from the standards in this subchapter; however, such standards must be equivalent to or more stringent than the standards in this subchapter.

(h) References to public swimming pools and public spas. The rules specify whether a particular provision concerns pool operation and management, water quality, safety standards unrelated to design and construction, signage, enclosures, and safety features applies to pools and spas constructed on or after the effective date of this subchapter or whether it applies to all public swimming pools and public spas regardless of the date of construction.

§265.182. Definitions.

The following words and terms, when used in this subchapter, have the following meanings, unless the context clearly indicates otherwise.

(1) AED--Automated External Defibrillator. A device that automatically diagnoses the life-threatening cardiac arrhythmias of ventricular fibrillation and pulseless ventricular tachycardia and can treat those conditions by application of electricity which stops the arrhythmia, allowing the heart to re-establish an effective rhythm.

(2) Alternate method of disinfectant--A method of disinfectant for a pool or spa requiring approval by DSHS.

(3) Alternative communication system--Devices that alert multiple on-site staff when activated, such as pager systems, radios, or walkie-talkie communication systems. Used to notify on-site EMS, on-site medical staff, on-site certified staff such as lifeguards, or a commercial emergency monitoring service.

(4) ANSI--American National Standards Institute.

(5) APSP--Association of Pool and Spa Professionals now known as the Pool and Hot Tub Alliance (PHTA).

(6) ARC--American Red Cross.

(7) Artificial swimming lagoon--An artificial body of water used for recreational purposes with more than 20,000 square feet of surface area, an artificial liner, and a disinfectant method. The term does not include a body of water open to the public that continuously recirculates water from a spring or a pool.

(8) ASPSA--American Swimming Pool and Spa Association.

(9) ASTM International--American Society of Testing Materials International.

(10) ASTM F2376--Standard Practice For Classification, Design, Manufacture, Construction, And Operation Of Water Slide Systems.

(11) Backflow prevention device--A device designed to prevent a physical connection between a potable water system and a non-potable source, such as a pool or spa, or a physical connection between a pool or spa and a sanitary sewer or wastewater disposal system.

(12) Breakpoint chlorination--The addition of enough of the chlorination compound to water to destroy chlorine demand compounds, chloramines, and any combined chlorine that is present. The amount added is normally 10 times the combined chlorine concentration. Breakpoint chlorination, also called "superchlorination," results in a decrease in eye irritation potential and "chlorine odors."

(13) BVM--Bag-Valve Mask. A handheld device used to provide positive pressure ventilation to persons who are not breathing adequately. Also known by its proprietary name, Ambu bag.

(14) Chlorine--An element that at room temperature and pressure is a heavy green-yellow gas that is used to sanitize water. Chlorine, when mixed with water, forms hypochlorous acid, which is the disinfecting agent, and hydrochloric acid.

(15) Cleansing shower--A shower with hot and cold running water and soap for the purpose of removing dead skin, sweat, dirt, and waste material from users.

(16) Combined chlorine--Also known as "chloramine(s)." Formed when free chlorine combines with nitrogen-containing compounds such as perspiration and ammonia. Combined chlorine, or chloramines, can cause eye and skin irritation, strong and unpleasant "chlorine" odors, and is not as effective as a sanitizer or disinfectant.

(17) Commercial pool and spa--A public swimming pool and spa as defined in paragraph (51) of this section, referring to public pool and in paragraph (54) of this section, referring to public spa.

(18) Cross-connection control device--A backflow prevention device as defined in this section.

(19) *Cryptosporidium parvum* --A microscopic parasite that is highly tolerant to chlorine disinfection and that causes the diarrheal disease cryptosporidiosis. It is commonly referred to as Crypto.

(20) Day camp--A day camp as described in the Texas Youth Camps Safety and Health rules, §265.11 of this chapter (relating to Definitions).

(21) Disinfectant--Energy, chemicals, or a combination of both used to kill or irreversibly inactivate microorganisms such as bacteria, viruses, and parasites.

(22) DPD--A chemical testing reagent (N, N-Diethyl-P-Phenylenediamine) used to measure the levels of free chlorine or bromine in water by yielding a series of

colors ranging from light pink to dark red.

(23) DSHS--Texas Department of State Health Services.

(24) EMS--Emergency medical services.

(25) Emergency monitoring service--A service that provides an emergency summoning device at pools and spas that is monitored 24 hours a day off-site by personnel trained to identify pool and spa related emergencies, such as drownings. A service capable of contacting local EMS, providing a precise location of the emergency call to local EMS, and that has personnel trained to offer the caller instructions for assisting when possible.

(26) Exercise spa or swim spa--For purposes of the rules in this subchapter related to safety, operation and management, signage, and enclosures, exercise spas or swim spas are a variant of a spa in which the design and construction includes specific features and equipment to produce a water flow intended to allow recreational physical activity including swimming in place.

(27) Facility--A pool, spa, public interactive water feature or fountain, and restrooms, dressing rooms, equipment rooms, deck or walkways, beach entries, enclosure, and other appurtenances directly serving the pool or spa.

(28) FIFRA--The Federal Insecticide, Fungicide, and Rodenticide Act.

(29) Filter media--A finely graded material (for example, sand, diatomaceous earth, or polyester fabric) that removes filterable particles from the water.

(30) FINA--Fédération Internationale de Natation. The organization that administers international competition in aquatic sports.

(31) Floatation system--A combination of a float solution holding vessel and treatment system for the immersion and floatation of a person or persons in a temperature-controlled environment. Also known as a flotation system, sensory deprivation system or floatation chamber. For purposes of this subchapter, a floatation system is not considered a pool or spa.

(32) Free available chlorine or free chlorine residual--That portion of the total chlorine remaining in chlorinated water that is not combined with ammonia or nitrogen compounds and that will react chemically with bacteria or other pathogenic organisms in the water of a pool, spa, or lagoon.

(33) Gpm--Gallons per minute.

(34) Hyperchlorination--The intentional and specific raising of chlorine levels for a prolonged period-of-time to inactivate pathogens following a diarrheal release in a pool or spa as per the Centers for Disease Control and Prevention's guidance titled "Healthy Swimming: Fecal Incident Response Recommendations for Aquatic Staff".

(35) Island--A structure inside a pool where the perimeter is surrounded by the water in the pool and the top is above the surface of the pool.

(36) Langelier Saturation Index--A number indicating the degree of saturation in water related to calcium carbonate solubility. The number represents the ability of water to deposit calcium carbonate, or dissolve metal, concrete, or grout.

(37) Licensed design professional--A person licensed to engage in the practice of design in the state of Texas in accordance with relevant licensing laws, including an architect, electrician, and engineer.

(38) Licensed architect--A person licensed to engage in the practice of architecture in the State of Texas in accordance with the Texas Occupations Code, Chapter 1051, and related rules.

(39) Licensed electrician--A person licensed to perform electrical work on pools and spas in accordance with the Texas Electrical Safety and Licensing Act, Texas Occupations Code, Chapter 1305, and related rules.

(40) Licensed engineer--A person licensed to engage in the practice of engineering in the State of Texas in accordance with the Texas Engineering Practice Act, Texas Occupations Code, Chapter 1001, and related rules.

(41) Lifeguard--A person who supervises the safety and rescue of swimmers, surfers, and other water sports participants and who has successfully completed and holds a current ARC, Young Men's Christian Association, or equivalent Lifeguard Certificate from an aquatic safety organization, a current First Aid Certificate, and a current cardiopulmonary resuscitation (CPR) certificate received for training in CPR for adults, infants, and children and the use of an AED and BVM.

(42) Local regulatory authority--A county, municipality, or other political subdivision of the state having jurisdiction over pools and spas and associated facilities.

(43) mV--Millivolt.

(44) NCAA--National Collegiate Athletic Association.

(45) NRPA--National Recreation and Parks Association.

(46) ORP--Oxidation Reduction Potential. The measure of the oxidation-reduction potential of chemicals in water or the tendency for a solution to either gain or lose electrons. It is generally measured in millivolts (mV) by means of an electronic meter and depends upon types and concentrations of oxidizing and reducing chemicals in water.

(47) pH--A value expressing the relative acidic or basic tendencies of liquids, such as water, on a scale from 0 to 14 with 7.0 being neutral, values less than 7.0 being acidic, and values greater than 7.0 being basic.

(48) PHTA--Pool and Hot Tub Alliance. Formerly APSP.

(49) PIWF--Public interactive water feature and fountain. A PIWF includes any indoor or outdoor installation maintained for public recreation that includes water

sprays, dancing water jets, waterfalls, dumping buckets, or shooting water cannons in various arrays for the purpose of wetting the persons playing in the spray streams. It may be a stand-alone PIWF, also known as a splash pad, spray pad, or wet deck, or may share a water supply, disinfection system, filtration system, circulation system, or other treatment system that allows water to co-mingle with a pool.

(50) Pool yard or spa yard--An area that has an enclosure containing a pool or spa.

(51) Public pool--For purposes of the rules in this subchapter related to safety, operation and management, signage and enclosures, pools are classified and referred to as follows: any man-made permanently installed or non-portable structure, basin, chamber, or tank containing an artificial body of water that is maintained or used expressly for public recreation, swimming, diving, aquatic sports, or other aquatic activity. Public pools include but are not limited to activity pools, catch pools, lazy or leisure river pools, wave action pools, vortex pools, therapy pools, and wading pools. A public pool may be publicly or privately owned and may be operated by an owner, lessee, operator, licensee, or concessionaire. A fee for use may or not be charged. The term does not include a residential pool, artificial swimming lagoon, floatation system or chamber, or a body of water that continuously recirculates water from a spring.

(A) Class A pool--Any pool maintained or used, with or without a fee, for accredited competitive events such as FINA, United States Swimming, United States Diving, NCAA, or National Federation of State High School Association events. A Class A pool may also be used for recreational swimming.

(B) Class B pool--Any pool maintained or used for public recreation and open to the general public with or without a fee.

(C) Class C pool--Any pool that is not a Class A or B pool that is limited to occupants, members, or students and their guests, but not to the general public. It is a pool operated for and in conjunction with:

(i) lodging, such as hotels, motels, apartments, condominiums, RV parks, or mobile home parks;

(ii) youth camps, property owner associations, private organizations, or clubs; or

(iii) schools, colleges, or universities while operated for academic or continuing education classes.

(52) Pools and Spas--Public swimming pools and public spas are referred to as pools and spas throughout this subchapter.

(53) Ppm--Parts per million.

(54) Public spa--A body of water intended for the immersion of persons in either hot or cold water circulated in a closed system and not intended to be drained and

refilled after each use. A spa can include a filter, heater, a pump or pumps, blowers, and water sanitizing equipment. The term includes a swim spa or exercise spa. For purposes of the rules in this subchapter related to safety, operation and management, signage, and enclosures, spas are classified and referred to as follows:

(A) Class A spa--Any spa maintained or used, with or without a fee, for accredited competitive events such as FINA, United States Swimming, United States Diving, NCAA, and National Federation of State High School Association events.

(B) Class B spa--Any spa maintained or used for public recreation and open to the general public with or without a fee.

(C) Class C spa--A spa that is not a Class A or Class B spa that is open to occupants, members, or students and their guests, but not to the general public. It is a spa that is operated for and in conjunction with:

(i) lodging, such as hotels, motels, apartments, condominiums, RV parks, or mobile home parks;

(ii) youth camps, property owner associations, private organizations, or clubs; or

(iii) schools, colleges, or universities while operated for academic or continuing education classes, or hospitals or medical centers.

(55) Regulatory authority--A federal or state agency or local regulatory authority having jurisdiction over pools and spas, and associated facilities.

(56) Rescue tube--A piece of lifesaving equipment that is a part of the equipment used by lifeguards to make water rescue easier by helping support the victim's and rescuer's weight.

(57) Resident youth camp--A resident youth camp as described in the Texas Youth Camps Safety and Health rules, §265.11 of this chapter.

(58) Residential pool or spa--A pool or spa that is located on private property under the control of the property owner or the owner's tenant and that is intended for use by not more than two resident families and their guests. It includes a pool or a spa serving only a single-family home or duplex.

(59) Rinsing shower--A shower located on the pool or spa deck for the purpose of removing sand, dirt, sweat, and user hygiene products without the use of hot water or soap.

(60) Secchi disk--An 8-inch diameter disk with alternating black and white quadrants that is lowered in the pool and spa and is used to measure water turbidity and clarity.

(61) Secondary disinfection system--A process or system installed in addition to

the standard disinfection system required on all pools and spas.

(62) Self-closing and self-latching device--A device or mechanism that causes a gate to automatically close without human or electrical power after it has been opened and to automatically latch without human or electrical power when the gate closes.

(63) Slide--A recreational feature with a flow of water and an inclined flume or channel by which a user is conveyed downward into a pool.

(A) Drop slide--A slide that drops users into the water from an elevated height into water.

(B) Pool slide--A slide having a configuration as defined in the Code of Federal Regulations, Chapter II, Title 16, Part 1207 by United States Consumer Product Safety Commission or is similar in construction to a playground slide that allows users to slide from an elevated height to a pool. This includes children's (tot) slides.

(C) Waterslide--A slide that runs into a landing pool or runout through a fabricated channel with flowing water.

(64) Supplemental treatment system--A system, process, or water treatment which is not required on a public pool or spa for health and safety reasons that may be used to enhance overall system performance and improve water quality.

(65) Surf pool--A pool with less than 20,000 square feet of water surface area in which waves are generated and dedicated to the activity of surfing on a surfboard or analogous surfing device commonly used in the ocean and intended for sport. A surf pool is intended for the sport of surfing as opposed to general play activities in wave pools.

(66) Superchlorination--See paragraph (12) of this section, Breakpoint chlorination.

(67) TCEQ--Texas Commission on Environmental Quality.

(68) TDLR--Texas Department of Licensing and Regulation.

(69) Therapeutic pool or spa--A pool or spa that is operated exclusively for therapeutic purposes, such as physical therapy, and is under the direct supervision and control of licensed or certified medical personnel.

(70) Total alkalinity--A measure of the ability or capacity of water to resist change in pH, also known as the buffering capacity of water. Total alkalinity is measured with a test kit and expressed as parts per million (ppm) and consists mainly of carbonates, bicarbonates and hydroxides.

(71) Total chlorine--The sum of both the free available chlorine and combined chlorine (chloramines).

(72) UL--An independent testing laboratory (formerly Underwriters Laboratories).

(73) USCG--United States Coast Guard.

(74) User--A person using a pool, spa, or lagoon or adjoining deck.

(75) VGBA--The Virginia Graeme Baker Pool and Spa Safety Act. A federal law that requires drain covers to comply with entrapment protection requirements specified by the American National Standards Institute (ANSI) ANSI/APSP 16 performance standard or any successor standard, and ANSI/PHTA/ICC-7 American National Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins.

(76) Wading pool--A pool with a maximum water depth that is no greater than 18 inches. A wading pool may contain a PIWF.

(77) Wave pool--A pool, with less than 20,000 square feet of water surface area, designed to simulate breaking or cyclic waves for purposes of general play. A wave pool is intended for general play as opposed to a surf pool that is intended for sport.

(78) Written instructions--Written communication that provides directions for carrying out a procedure or performing a task. Written instructions can include manuals, journals, lists, printed materials, computer-generated materials, and handwritten materials. Written instructions may be maintained in electronic form so long as electronic use and transmission of the electronic materials does not present a risk to the health and safety of individuals accessing the electronic materials.

§265.183. Plans and Instructions.

(a) Plans for new construction of pools and spas. DSHS may review plans for pools and spas to ensure compliance with construction requirements. If DSHS intends to review plans, DSHS will notify the owner or operator in writing.

(b) Additions, alterations, renovations, or repairs authorized. A minor addition, alteration, renovation, or repair to an existing pool or spa and related mechanical, electrical, and plumbing systems may be performed in accordance with the construction standard that was in place when the pool and spa was constructed.

(c) Accepted practice for pools and spas. The structural design and materials for pools and spas constructed before the effective date of this subchapter must be in accordance with accepted industry engineering practices and methods prevailing at the time of original construction unless otherwise stated in this subchapter.

§265.184. Slides and other Aquatic Play Features.

(a) Proper installation of a slide or other aquatic play feature. A slide or other aquatic play feature, such as a climbing wall, floating amusement island, zip line, or anchored floats, must be installed according to manufacturer's instructions or in accordance with the specifications established by a licensed engineer or licensed

architect.

(b) Amusement ride. An aquatic play feature or slide that meets the definition of "Amusement Ride" in Texas Occupations Code, Chapter 2151 (the Amusement Ride Safety Inspection and Insurance Act) must comply with that chapter.

(c) Jumping rocks or ledges. Pools with diving or jumping rocks or ledges must be designed by a licensed engineer or licensed architect.

§265.185. Pumps and Motors for Pools and Spas.

A pump for a pool or spa must not be operated if the owner or operator of the pool or spa knows or should know in the exercise of ordinary care that the drain grate, suction outlet, or any suction outlet cover is missing, broken, or loose. If such a condition exists, the pool or spa must be closed and remain closed until corrected.

§265.186. Electrical Requirements for Pools and Spas.

(a) Licensed electrician required. The electrical system of a pool or spa and structures in the pool yard or spa yard must be installed, maintained, repaired, or replaced by a licensed electrician in accordance with the Texas Electrical Safety and Licensing Act, Texas Occupations Code, Chapter 1305 and related rules.

(b) Extension cords. Temporary extension cords and power connectors must not be used as a substitute for permanent wiring.

(1) All parts of an extension cord must be restrained at a minimum of 6 feet as measured along the shortest possible path from a pool or spa during times when the pool or spa is open for use.

(2) An extension cord may be used within 6 feet of the nearest edge of a pool or spa if a permanent wall exists between the pool or spa and the extension cord.

(3) The circuit supplying power to an extension cord must be protected by a ground fault circuit interrupter, commonly referred to as GFCI, when the extension cord is to be used within 6 feet of a pool or spa.

§265.187. Pool or Spa Water Supply and Drinking Water for All Pools and Spas.

(a) Water supply. For all pools and spas, the initial fill water and make-up water used to maintain the water level and water used as a vehicle for sanitizers or other chemicals for pump priming or for other additions must be from a public water system, as defined by 30 TAC §290.38 (relating to Definitions), or from a water well that complies with the requirements of subsection (c) of this section.

(b) Water distribution system. All portions of the water distribution system must be protected against backflow and back siphonage using a high hazard preventer such as a reduced-pressure-principle backflow preventer meeting the requirements of the American Society of Sanitary Engineering Standard 1013, as amended, and approved for use in potable water systems possibly subjected to back siphonage or high back pressure or an air gap designed to ASME Standard A112.1.2.

(c) Private water supply. If the water supply providing water to the pool or spa does not meet the definition of a public water system, as defined in subsection (a) of this section, that water supply must comply with the following requirements.

(1) Water pressure system must be designed to:

(A) maintain a minimum pressure of 35 pounds per square inch (psi) at all points within the distribution network at flow rates of at least 1.5 gallons per minute per connection;

(B) maintain a minimum pressure of 20 psi under combined fire and drinking water flow conditions when the system is intended to provide firefighting capability; and

(C) maintain a minimum distribution pressure not less than 20 psi at any time.

(2) Coliform testing of the well water must be performed each month the pool or spa is open for use. Records of any bacteriological tests must be kept on-site for three years and made available during inspection.

(3) Chemical analysis must be for the secondary constituent levels set out by 30 TAC §290.118 (relating to Secondary Constituent Levels).

(A) Water samples for chemical analysis obtained from the entry point to the distribution system must be submitted once every three years to a laboratory certified by the TCEQ.

(B) Records of all chemical testing must be kept on-site for three years and made available during inspection.

(d) Drinking water provided. At least one drinking water fountain or other source of drinking water, such as bottled water, must be provided and available for pool and spa users at all pools and spas constructed on or after October 1, 1999, and must be available at all times the pool or spa is open for use. A faucet, spigot, or sink does not satisfy the requirements for providing drinking water. Glass containers must not be allowed on a deck, in the pool or spa, or anywhere within the pool yard or spa yard.

(1) The drinking water is not required to be chilled.

(2) The drinking water is not required to be in the pool or spa yard.

(3) When the drinking water is not located in the pool yard or spa yard, a sign with letters a minimum of 1 inch in height is required. The sign must be posted so that it is visible to users that informs the users of the location of the drinking water.

(e) Hose bibs. Hose bibs in the pool yard or spa yard must be protected with a vacuum breaker.

§265.188. Wastewater Disposal for Pools and Spas.

(a) Filter backwash wastewater disposal. Filter backwash, cartridge wash water, and drainage water that is not reused in the pool or spa must be discharged or disposed of in accordance with the requirements of the TCEQ or local regulatory authority.

(b) No direct connection. No direct mechanical (hard) connection may be made between the pool or spa, the drains, the chemical treatment equipment, or the system of piping and the sanitary sewer system, septic system, or other wastewater disposal system.

(c) Pool and spa backwash. Backwash water and draining water must be discharged through an air gap formed by positioning the discharge pipe opening at least two pipe diameters above the overflow level of any barriers that could cause flooding and submergence of the discharge opening or by other means in accordance with TCEQ requirements. Splash screening barriers are permitted, as long as the barriers do not destroy air gap effectiveness.

(d) Wastewater post treatment. Filter backwash water and circulation system drainage water must be treated either chemically or through use of settling tanks to eliminate or neutralize chemicals, diatomaceous earth, and other contaminants in the water that exceed discharge limits set by TCEQ or the local regulatory authority.

(e) Other wastewater or drainage water disposal facilities or lines. The location of other wastewater disposal facilities or lines must meet applicable standards of 30 TAC Chapter 307, Texas Surface Water Quality Standards, Chapter 308, Criteria and Standards for the National Pollutant Discharge Elimination System, Chapter 311, Watershed Protection, and Chapter 315, Pretreatment Regulations for Existing and New Sources of Pollution, or the local regulatory authority.

§265.189. Disinfectant Equipment and Chemical Feeders.

(a) Disinfectant agent. Pool and spa water must be continuously disinfected by a chlorine or bromine disinfectant agent that can be easily measured by simple and accurate field tests.

(b) Supplemental treatment systems. Supplemental treatment systems may be installed and used on pools and spas.

(1) Supplemental treatment systems used only to treat water in a pool or spa and not a public interactive water feature or fountain (PIWF) are not required to meet the minimum 3-log or 2-log inactivation of *Cryptosporidium parvum*.

(2) Supplemental treatment systems used to treat water in a PIWF must comply with the requirements in §265.306(g) of this chapter (relating to Water Quality at Public Interactive Water Features and Fountains) referring to supplemental water treatment systems for PIWFs.

(3) Supplemental treatment systems must meet NSF Standard 50 or NSF

Standard 60, have an Environmental Protection Agency (EPA) or FIFRA registration, and be used in accordance with the manufacturer's instructions.

(c) Secondary disinfection systems. Secondary disinfection systems may be installed and used on a pool or spa and must be certified, listed, and labeled to NSF Standard 50.

(1) Secondary disinfection systems must achieve a minimum 2-log (99%) reduction in the number of infective *Cryptosporidium parvum* oocysts per pass through the treatment system; and

(2) must be located in the treatment system so that the 2-log reduction is obtained.

(3) Validation records, as applicable, and operation records must be maintained for any secondary disinfection system or treatment, and must be maintained on-site, or made available to the inspector within five business days upon request if kept off-site.

(d) Water treatment chemicals. Treatment chemicals must be certified, listed, and labeled to either NSF Standard 50 or NSF Standard 60 or have an EPA FIFRA registration and be used only in accordance with the manufacturer's instructions.

(e) Chlorine gas prohibited. Use of compressed chlorine gas is prohibited in pools and spas constructed on or after January 1, 2021.

(f) Training and protection. Personnel responsible for the operation of the disinfectant agent and other potentially hazardous chemicals, whether it is the trained and certified operator, or someone assigned to maintain a pool or spa when the trained and certified operator is not on-site, must be properly trained and provided with appropriate protective equipment and clothing, including rubber gloves and goggles, safety information, and safety data sheets. Safety data sheets covering all chemicals for which personnel are responsible must be kept on-site and be readily available.

(g) Application of disinfectant in a pool or spa.

(1) Automatic distribution of chemicals. If using automatic feeders, automated controllers that adjust chemical feed based on demand or manually, or remotely managed controllers for pool and spa disinfection and pH control, must be installed. Automatic feeders must meet NSF Standard 50 for use in public pools and spas and must operate in a manner that does not invalidate the NSF rating for the system and equipment.

(A) Controllers that adjust chemical feed either manually or automatically are required.

(B) Disinfection equipment must be selected and monitored so that continuous and effective disinfection can be achieved under all conditions.

(C) Disinfectant feed systems must have the capacity to maintain up to 5

parts per million (ppm) chlorine (or equivalent bromine level) in outdoor pools and spas and up to 3 ppm chlorine (or equivalent bromine level) in indoor pools and spas under all conditions of intended use.

(D) Skimmer baskets or floating dispensers may not be used to dispense disinfectant, chemicals that adjust pH, or algaecides.

(2) Hand distribution of chemicals. Hand distribution of disinfectant chemicals, chemicals used to adjust pH, or algaecides is prohibited when users are in the pool or spa. Before users reenter the pool or spa following hand distribution of disinfectant chemicals, chemicals used to adjust pH, or algaecides, the following applies:

(A) tests of disinfectant levels and pH must be performed 30 minutes after hand distribution; and

(B) no one may reenter the pool or spa until the disinfectant levels and pH are checked and are found to be within the required range.

(h) Bulk chemical tanks. All chemical bulk and day tanks must be clearly labeled to indicate the tank's contents.

(i) Chemical storage areas.

(1) Disinfectant agents, other chemicals, and feed equipment must be stored so that pool and spa users and other unauthorized persons do not have access.

(2) Dry chemicals must be stored off the floor or in waterproof containers in a dry room and protected against flooding or wetting from floors, walls and ceiling.

(3) Chlorine compounds must not be stored in the same storage room or storage area as petroleum products.

§265.190. Safety Features for Pools and Spas.

(a) Safety rope and float lines and floor markings.

(1) Class A pools not being used for competitive events or lap swimming must have a rope and float line:

(A) provided between 1 and 2 feet on the shallow water side of the 5-foot depth and floats must be spaced at not greater than 7-foot intervals and secured so they will not slide or bunch up, and the stretched rope and float line must be a size to provide a good handhold and strong enough to support loads normally imposed by users; and

(B) be securely fastened to wall or deck anchors made of corrosion-resisting materials of the type that is recessed or removable and must have no projection that will constitute a hazard when the line is removed.

(2) Class B pools that are over 5-feet deep must have:

(A) a 4-inch minimum width row of floor tile or other permanent method using a color contrasting with the bottom of the pool at the transition point of the pool floor from the shallow area to the deep area of the pool;

(B) a rope and float line between 1 and 2 feet on the shallow water side of the 5-foot depth and floats must be spaced at not greater than 7-foot intervals and secured so they will not slide or bunch up; and

(i) the stretched rope and float line must be a size to provide a good handhold and strong enough to support loads normally imposed by users; and

(ii) the rope and float may be removed when the pool is used for lap swimming or for competitive events; and

(C) rope and float lines securely fastened to wall or deck anchors made of corrosion-resisting materials of the type that is recessed or removable and must have no projection that will constitute a hazard when the line is removed.

(3) Class C pools that are over 5-feet deep must have a 4-inch minimum width row of floor tile or other permanent method using a color contrasting with the bottom of the pool at the transition point of the pool floor from the shallow area to the deep area of the pool.

(A) A rope and float line may also be used in addition to the transition line and must be provided between 1 and 2 feet on the shallow water side of the 5-foot depth. The floats must be spaced at not greater than 7-foot intervals and secured so they will not slide or bunch up. The stretched rope and float line must be a size to offer a good handhold and strong enough to support loads normally imposed by users.

(B) Rope and float lines must be securely fastened to wall or deck anchors made of corrosion-resisting materials of the type that is recessed or removable and must have no projection that will constitute a hazard when the line is removed.

(4) Wave pools, surf pools, and waterslide landing pools are not required to provide a safety rope on the shallow side of the change in floor slope.

(b) Depth markers. Depth markers in pools and spas constructed or renovated after the effective date of the rules of this subchapter or that are being replaced must be placed in the top 4-1/2 inches of the pool or spa wall just under the coping and be positioned to be read by a user while in the pool.

(c) Depth markers in spas. Spa depth markers must comply with the following:

(1) There must be no less than two depth markers for each spa, regardless of spa size and shape.

(2) Depth markers in spas must be permanent in nature with numbers and letters not less than 4 inches in height and must be clearly marked in a color contrasting to the background on which they are applied both on the deck and on the vertical wall of the spa.

(3) Depth markers in spas on the vertical wall must be positioned in the top 4-1/2 inches of the spa wall and be positioned to be read by a user while in the spa.

(4) Depth markers in spas must be spaced at not more than 25-foot intervals and must be uniformly located around the perimeter of the spa.

(5) Deck depth markers for spas must be positioned to be read while standing on the deck and must be slip-resistant.

(6) Depth markers for spas must have units of measurement that either spell out "feet" or "inches" or abbreviate "FT," "IN," or fractions of a foot.

(d) Deck "NO DIVING" marker and symbol. Where no diving markers and symbols are required in pools, the markers and symbols must comply with the requirements in the International Swimming Pool and Spa Code (ISPSC) and with the following:

(1) The no diving marker and symbol may not be less than 4 inches in height. The no diving symbol must consist of a diver's profile in a circle with a 45-degree slash through the diver.

(2) The color of the letters and symbol must contrast with the background on which they are applied, and the color must be permanent in nature.

(3) The no diving markers and symbols on the deck must be slip resistant.

(4) The no diving marker and symbol on the deck must be within 18 inches of the water's edge and positioned to be read while standing on the deck facing the water.

(5) If a permanent structure above the pool deck is within 5 feet of the water's surface, the 4-inch no diving marker and symbol must be affixed to the structure so that the warning is visible to persons who may attempt to use the structure for diving. The no diving symbol and warning are not required on diving boards or diving platforms, ADA-compliant chair lifts, slide flumes, lifeguard stands, or bridges over the water.

(6) The no diving marker and symbol is not required on the interior tile line of a pool or in a spa.

(e) Starting platforms. Starting platforms must be used during official competition only or when there is direct supervision by the team coach, a qualified instructor, or a lifeguard. Starting platforms must be removed or secured to prevent inadvertent use when the starting platforms are not directly supervised.

(f) Safety signage. In addition to safety signs required in the ISPSC, the additional safety and operational signs are required for pools as follows.

(1) Signs must be in the pool yard, securely mounted as applicable, and readily visible to the pool user and must be posted within the pool yard unless otherwise stated within this subchapter.

(2) Sign panels must be durable for the weather conditions and the message surface must be clean and smooth and readily accept paint or precut lettering adhesives.

(3) Theming or artwork applied to signs must not invade the message panel and signs must have a distinct border.

(4) Multiple signs may be used or messages may be combined on one sign.

(5) Safety signs for pools constructed on or after the effective date of this subchapter or safety signs that are replaced at pools constructed before the effective date of this subchapter must be in compliance with Figure: 25 TAC §265.190(f)(5).

Figure: 25 TAC §265.190(f)(5)

Required Pool Sign or Signs	Letter and Symbol Size
"WARNING-NO LIFEGUARD ON DUTY" (Where no lifeguard required or provided.)	4 inches
"NO DIVING" and International No Diving Symbol (Where no lifeguard required or provided.)	4 inches
"IN CASE OF EMERGENCY, DIAL 911"	4 inches
Precise Location of the Pool on or with the Emergency Phone (address, directions, GPS location, or building number, as appropriate)	Minimum 1-inch
Hours of Operation	Minimum 1-inch
Directions to and Location of Emergency Phone if Phone Not Visible in Pool Yard	Minimum 2-inches
Maximum User Load Limit	Minimum 2-inches
"PETS IN THE POOL ARE PROHIBITED"	Minimum 2-inches
"DO NOT SWIM IF YOU HAVE BEEN ILL WITH DIARRHEA WITHIN THE PAST 2 WEEKS"	Minimum 2-inches
"CHANGING DIAPERS WITHIN 6 FEET OF THE POOL IS PROHIBITED"	Minimum 2-inches
"GLASS ITEMS NOT ALLOWED IN THE POOL YARD"	Minimum 2-inches
"PERSONS UNDER THE AGE OF 14 MUST NOT BE IN THE POOL WITHOUT ADULT SUPERVISION"	Minimum 2-inches
"EXTENDED BREATH HOLDING ACTIVITIES ARE DANGEROUS AND PROHIBITED"	Minimum 2-inches

(6) In areas of Texas where the majority of residents are non-English speaking, in addition to signs in English, signs and other written warnings or information required by the rules in this subchapter may be posted in the predominant language.

(7) Variations of the language of the required safety signs in Figure: 25 TAC §265.190(f)(5) are allowed if the language of the safety signs is substantially equivalent to the language in Figure: 25 TAC §265.190(f)(5) and if local regulatory officials that regulate swimming pools and spas approve the variations before the sign is posted in the pool yard.

(g) Rescue equipment. A pool must have at least one ring buoy with throwing rope and a reaching pole for every 2000 square feet of pool surface area up to 6000 square feet. If the pool has over 6000 square feet of surface area an additional ring buoy, throw rope, and reaching pole must be provided for each additional 4000 square feet of surface area or fraction thereof. The reaching poles and ring buoys with rope must be visible and readily accessible from all areas of the pool yard.

(1) The reaching pole must be light, strong, non-telescoping, and at least 12 feet long. The pole must be constructed of fiberglass or other material that does not conduct electricity and must have a body hook or shepherd's crook with blunted ends attached.

(2) The throwing rope must be 1/4-inch to 3/8-inch in diameter, with a length at least two-thirds the maximum width of the pool. A USCG-approved ring buoy, maximum 24-inches in diameter, must be attached to the throwing rope.

(h) Certain safety requirements for spas.

(1) Signs for spas constructed on or after the effective date of this subchapter or safety signs that are replaced at spas constructed before the effective date of this subchapter must be securely mounted and readily visible to spa users and must be inside the spa enclosure as required in Figure: 25 TAC §265.190(h)(4), Required Spa Signs.

(2) Safety signs can be combined on one sign or posted individually.

(3) Variations of the language of the required safety signs in Figure: 25 TAC §265.190(h)(4) are allowed if the language of the safety signs is substantially equivalent to the language in Figure: 25 TAC §265.190(h)(4) and if local regulatory officials that regulate swimming pools and spas approve the variations before the sign is posted in the pool yard or spa yard.

(4) Safety signs for spas constructed on or after the effective date of this subchapter, or safety signs that are replaced at pools constructed prior to the effective date of this subchapter, must be in compliance with Figure: 25 TAC §265.190(h)(4).

Figure: 25 TAC §265.190(h)(4)

Required Spa Signs	Letter and Symbol Size
"WARNING – NO LIFEGUARD ON DUTY" (if no lifeguard is provided or required)	4 inches
"DO NOT USE THE SPA IF THE WATER TEMPERATURE IS ABOVE 104 DEGREES FAHRENHEIT"	Minimum 1-inch
Maximum User Load	Minimum 1-inch
Location of the nearest emergency phone or device	Minimum 2-inches
EMERGENCY SPA SHUTOFF	Minimum 2-inches
"DO NOT SWIM IF YOU HAVE BEEN ILL WITH DIARRHEA WITHIN THE PAST 2 WEEKS"	Minimum 2-inches
"PERSONS UNDER THE AGE OF 14 MUST NOT BE IN THE SPA WITHOUT ADULT SUPERVISION"	Minimum 2-inches
"PETS IN THE SPA ARE PROHIBITED"	Minimum 2-inches

(i) Emergency summoning device. A pool or spa must have a minimum of one emergency telephone, emergency monitoring contact device, or alternative communication system that is capable of immediately summoning emergency services and that is readily accessible, within 200 feet of the water, and is functioning at all times the pool or spa is open for use. Where a pool or spa has a seasonal operation schedule, the emergency summoning device must be functioning 24 hours a day during the entire season the pool or spa will be in use. Clear operating instructions for the emergency summoning device must be provided.

(1) A fixed-location telephone, emergency monitoring device, or alternative communication system must be visible, have no obstruction to access, and have some method of identification that enables the telephone or other device or system to be easily identified by users.

(2) A telephone or emergency monitoring device must not be answered by an on-site office. An alternative communication system must not be answered by an on-site office unless the alternative communication system complies with paragraph (5) of this subsection.

(3) A telephone must be capable of making calls to 911 dispatch or to an emergency service.

(4) An emergency monitoring contact device, when activated, must directly connect to a 24-hour monitoring service, or directly to 911 dispatch or to emergency medical services.

(5) An alternative communication system that contacts an on-site office may be

used if the pool or spa is in a remote area with limited or delayed emergency medical services response times and there are employees on-site that are trained and certified or licensed to perform emergency medical intervention when the pool or spa is open for use.

(6) A cell phone that is dedicated for use at the pool or spa that is mounted in the pool yard or spa yard for public use and labeled as the emergency phone may be used if the cell phone is activated by a service provider, is provided with a permanent power supply, and is capable of reaching the emergency service provider or 911 emergency services.

(7) A sign must be posted above the emergency summoning device whether it is a phone, emergency monitoring device, or alternative communication device with the precise location of the pool or spa, such as an address, building number, GPS location, or other location identifying information in letters a minimum of 1-inch in height.

(j) Lighting at pools and spas. Lighting at pools and spas that operate before sunrise and after sunset must be provided a minimum 30 minutes before sunrise and a minimum of 30 minutes after sunset or while the pool or spa is open.

§265.191. Lifeguard Personnel Requirements and Standards at Pools.

(a) Lifeguards required. Pools and spas are required to meet the operational standard that is most applicable to their respective use. For example, a pool or spa that is normally operated as a Class C pool or spa but is occasionally made available to the public, with or without a fee, must meet Class B lifeguard standards when the pool is open to the general public, with or without a fee. A minimum of two lifeguards must be provided at:

(1) Class A pools during competitive events;

(2) Class B pools whenever the Class B pool is open;

(3) any pool where a user enters the water from any height above the deck or wall, including from diving boards, diving platforms, drop slides, waterslides, starting platforms, zip lines, or climbing walls that are open for use;

(4) any wave or surf pool; or

(5) any pool while it is being used for the recreation of youth groups, including youth camps, visiting childcare groups, or visiting school groups, and a minimum of two lifeguards must be provided by either the aquatic facility or by the youth group using the aquatic facility.

(b) Closing diving boards, diving platforms, drop slides, waterslides, starting platforms, zip line, or climbing wall. A diving board, diving platform, drop slide, waterslide, starting platform, zip line, climbing wall, or any other structure that allows entry from any height above the deck will be considered open unless there is a lock, chain, or other method used to prevent access to these structures, and a sign is posted on the entry to these structures stating that they are closed.

(c) Lifeguards at spas. Lifeguards are not required at spas.

(d) Lifeguard staffing plan required. A staffing plan specifying the number of on-duty lifeguards must be prepared by the pool operator, lifeguard supervisor, or pool owner, and must provide adequate supervision and close observation of all users at all times. A copy of the plan must be available on-site and be provided to a DSHS or local regulatory authority inspector upon request.

(e) Surveillance area. Each lifeguard must be given an assigned surveillance area commensurate with ability and training. The lifeguard must be able to view the entire assigned surveillance area.

(f) Other duties must not distract. Lifeguards conducting surveillance of users must not be assigned duties that would distract the lifeguard's attention from proper observation of the users or that would prevent immediate assistance to persons in the water.

(g) Lifeguard rotation required. When lifeguards are provided or required, a rotation procedure for lifeguards is required. Lifeguards must have break time from guarding activities as recommended by ARC or equivalent aquatic safety organization.

(h) Lifeguard training and drills. When lifeguards are provided or required, alertness and response drills and any other training is required, including:

(1) a pre-season training program;

(2) a continual "in-service" program of at least a minimum of 60 minutes for every 40 hours of employment by the lifeguard or other aquatic safety personnel;

(3) a review of the Centers for Disease Control and Prevention standards for responding to formed-stool contamination, diarrheal-stool contamination, vomit contamination, and contamination involving blood;

(4) performance audits as recommended by the ARC, Young Men's Christian Association, or by an equivalent aquatic safety organization; and

(5) a facility emergency action plan for an event, such as submersion, suspected spinal injury, medical emergency, thunderstorm, missing person, bad weather, or chemical exposure.

(i) Emergency action plan. Any pool or spa emergency action plan must contain the following:

(1) a list of emergency phone numbers and contacts, including the trained and certified operator;

(2) the location of the first-aid kit and other rescue equipment such as the AED, BVM, and backboard;

(3) a response plan for inclement weather such as a thunderstorm, lightning, or

high wind, including evacuation areas; and

(4) a plan following the Centers for Disease Control and Prevention standards for responding to formed-stool contamination, diarrheal-stool contamination, vomit contamination, and contamination involving blood.

(j) Lifeguard records. All training must be kept current. Records confirming the status of training must be made available upon request. If records are not kept on-site, records must be provided to DSHS or local regulatory authority within five business days of the request. The following records pertaining to lifeguards must be kept three years:

(1) each lifeguard's certification, including the expiration date; and

(2) records of the most current training, including date, length of training, training topic, trainer name, and attendee.

(k) Lifeguard access to safety equipment. Lifeguards must have access to safety equipment including:

(1) an Occupational Safety and Health Administration (OSHA) compliant, minimum 24-unit first aid kit housed in a durable weather-resistant container that is fully stocked and ready for use. The kit must include disease transmission barriers and cleaning kits meeting OSHA standards;

(2) at least one backboard equipped with a head immobilizer and sufficient straps to immobilize a person to the backboard located close enough to a pool or spa to enable a two-minute response time to an incident in a pool or spa.

(3) at least one portable AED and one BVM kept in a secure location that can be easily and quickly accessed by lifeguards or other trained personnel.

(l) Lifeguard stands. OSHA-compliant lifeguard stands with platforms for lifeguards are required where water depth is greater than 5 feet and must have a protective umbrella or sunshade high enough to give lifeguards a complete and unobstructed view of the assigned area of surveillance for the lifeguards. Lifeguard stands and platforms must be located such that there are no hazards such as electrical wires directly overhead.

(m) Personal lifeguard equipment. Each lifeguard must be provided with the following personal equipment:

(1) uniform attire that readily identifies the lifeguard as a staff member and a lifeguard;

(2) a rescue tube with attached rope or strap;

(3) personal protective devices including a resuscitation mask with one-way valve and non-latex, non-powdered, single use disposable gloves worn in a hip pack or attached to the rescue tube; and

(4) a whistle or other signaling device for communicating to users, other lifeguards, or staff.

(n) Minimum lifeguard standards. The standards in this subsection are considered minimum standards. Pool owners or operators may require additional and more stringent lifeguard policies, procedures, staffing requirements, training requirements, and performance audits.

§265.192. Pool Yard and Spa Yard Enclosures.

(a) Fence or barrier required. All pool yards and spa yards must be completely enclosed by a fence, wall, or equivalent barrier that is durable and is not easily climbed. An enclosure can surround multiple pools and spas within an aquatic facility.

(1) Planters, light poles, and other structures and site furnishings must not be permitted within 36 inches, as measured horizontally, outside of the enclosure.

(2) Planters, light poles, and other structures and site furnishings inside the pool or spa enclosure must be constructed and placed such that the fence is not made easily climbable from outside the pool or spa enclosure.

(3) Tree limbs must be kept trimmed to prevent a tree or the limbs of the tree from being used by children to climb over the enclosure.

(4) Solid barriers that do not have openings must be smooth and not have any indentations or protrusions that could be used as a handhold or foothold except for normal construction tolerances and tooled masonry joints on the side away from the pool or spa.

(b) Enclosures for Class A and Class B pools and spas and resident youth camp pools and spas. Enclosures for Class A and Class B pools and spas and resident youth camp pools and spas must meet the following requirements.

(1) Class A and B pools and spas and pools and spas at resident youth camps must have an enclosure consisting of a fence, portion of a building, wall or other durable enclosure, or an equivalent structure. Chain link material with a maximum opening of 1-3/4 inch mesh may be used for fencing at Class A, Class B, and residential youth camp pools and spas.

(2) A building that serves as part of the enclosure must have doors or gates that open into the pool or spa yard only if:

(A) any doors or gates between the building and the pool or spa yard are for entry into a storage room, restroom, shower room, dressing room, or mechanical room adjacent to the pool or spa; and

(B) the room does not have any door or gate openings to the outside of the pool yard or spa yard enclosure.

(3) The enclosure, including doors and gates, must be designed and constructed

so that it cannot be easily climbed and:

(A) have a minimum effective perpendicular height of at least 6 feet as measured from the ground surface on the outside of the enclosure;

(B) have no openings in the enclosure, either through or under it, which would allow passage of a 4-inch sphere;

(C) have no horizontal mid-rail and be designed and constructed so that it cannot be readily climbed;

(D) have all doors and gates in the enclosure directly and continuously supervised by staff at the pool during hours of operation or locked to prevent unauthorized entry; and

(E) have no windows in the enclosure lower than 6 feet from the ground as measured from outside of the enclosure that can be opened.

(4) Gates and doors of Class A, Class B, and resident youth camp pool and spa enclosures must open outward away from the pool or spa, be capable of being locked, and must be locked if the pool or spa is not open for use. The gate or door must be locked if the pool or spa is closed for repairs, hazards, weather related hazards, adding chemicals by hand, or any other condition that warrants closure of the pool or spa.

(c) Enclosures for pools and spas subject to Texas Health and Safety Code, Chapter 757. A pool or spa that is in a multiunit rental complex or owned, controlled, or maintained by a property owners association and subject to Texas Health and Safety Code, Chapter 757, must have an enclosure as required in Chapter 757.

(d) Enclosures for all other Class C and day camp pools and spas. A Class C or day camp pool or spa not subject to Texas Health and Safety Code, Chapter 757 must have an enclosure that complies with this subsection and, if applicable, subsection (h) of this section.

(1) The pool yard or spa yard enclosure must consist of one or a combination of a fence, portion of a building, wall, or other durable enclosure that meets the requirements of this section. The enclosure must comply with the following:

(A) The enclosure must have a minimum perpendicular height of at least 48 inches as measured from the ground surface on the outside of the enclosure.

(B) An enclosure with horizontal and vertical members constructed or replaced on or after January 1, 2021, must have no horizontal mid-rail and be constructed so that it cannot be easily climbed. The distance between horizontal members of the fence that is 48 inches in height must not be less than 45 inches.

(C) Openings in, under, or through all enclosures at Class C and day camp pools and spas must not allow the passage of a 4-inch diameter sphere.

(D) Chain link fencing material is prohibited for Class C pools and spas

constructed on or after October 1, 1999. Pool and spa fences at Class C pools and spas constructed before October 1, 1999, that replace a chain link fence are prohibited from using chain link fencing material.

(E) Windows that are capable of being opened are not allowed as a part of a pool or spa enclosure unless those windows are above the required enclosure height as measured from the ground level outside of the pool enclosure, and have a maximum opening of 4 inches, or are provided with a non-removable screen.

(F) Doors or gates of a building that are capable of being opened are not allowed as part of an enclosure unless:

(i) the doors or gates between the building and pool yard or spa yard are for entry into a storage room, restroom, shower room, dressing room, or mechanical room adjacent to the pool or spa;

(ii) the room does not have any door or gate openings to the outside of the pool yard or spa yard enclosure; or

(iii) the pool yard or spa yard is indoor and complies with the requirements of subsection (h) of this section.

(2) Gates and doors of a pool or spa enclosure subject to this subsection must:

(A) be equipped with self-closing and self-latching devices meeting the definition in §265.182(62) of this subchapter (relating to Definitions);

(B) be designed to close and to keep the gate or door securely closed and latched whenever the gate or door is not in use;

(C) open outward away from the pool or spa;

(D) be capable of being locked and be locked if the pool or spa is not open for use; and

(E) be locked if the pool or spa is closed for repairs, hazards, weather-related hazards, adding chemicals by hand, or any other condition that warrants closure of the pool or spa.

(3) Self-closing and self-latching devices on gates and doors of a pool or spa constructed on or after January 1, 2021, must:

(A) have hand-activated door- or gate-opening hardware located at least 3-1/2 feet above the deck or walkway; or

(B) have hand-activated door- or gate-opening hardware located on the pool yard side of the gate that is at least 3 inches below the top of the gate;

(C) have a gate or enclosure with no opening greater than 1/2 inch in any direction within 18 inches from the latch including the space between the gate and the gate post to which the gate latches; and

(D) have a gate latch that may be located 42 inches or higher above the ground if the gate cannot be opened except by key, card, or combination on both sides of the gate.

(e) Entry into pool yard or spa yard. Pool yard and spa yard enclosures must be constructed so that all persons will be required to pass through an enclosure gate or door to gain access to the pool or spa. All gates and doors exiting a pool or spa yard must open into a public area or walkway accessible by all users of the pool or spa.

(f) Propping open gates prohibited. No gate or door into a pool yard or spa yard may be propped open or remain propped open unless an agent, employee, or contractor of the owner is present and doing construction, maintenance, or repair work in the pool yard or spa yard or on its enclosure that reasonably requires the gate to be propped open.

(g) Service gates or doors. Service gates or doors at a Class A, Class B, or Class C facility used only by service personnel are not required to be self-closing and self-latching. Service gates and doors must not be used as a user entry or exit and must be kept securely closed and locked when not in actual use by service personnel entering or exiting the pool or spa yard. A service gate or door may include:

(1) a gate or door used by chemical delivery services, facility maintenance services, and lawn and landscaping services; or

(2) a door or service window used solely by food service staff from a food preparation area, bar, or snack bar.

(h) Enclosures for pools and spas in a building. For pools and spas that are in a building, the interior or exterior building walls may be designated as the enclosure.

(1) Entry and exit gates or doors into the pool or spa located in a building must comply with the requirements for entry and exit gates and doors for Class A, Class B, or Class C pool and spa gates and doors in subsections (b), (c), and (d) of this section, as applicable.

(2) Elevator doors are not to be used as an entry or exit into the pool yard or spa yard when the pool or spa is inside a building or accessed from the interior of a building.

(3) Where separate indoor and outdoor pools and spas are located at the same site, a door or gate may be provided between them if they comply with all the requirements in subsections (b), (c), and (d) of this section for Class A, Class B, and Class C pool and spa gates and doors, as applicable, except that if the gate or door between the indoor and outdoor pool or spa does not provide an exit from the pool or spa yard, that gate or door may open inward into the outdoor pool or spa yard.

§265.193. Water Quality at Pools and Spas.

(a) Environmental Protection Agency (EPA) registration. A sanitizer, disinfectant, or other chemical used to disinfect or sanitize the pool or spa water must be EPA-registered for use in pools and spas under the Federal Insecticide, Fungicide, and Rodenticide Act.

(b) Algae. Pools and spas must be treated to eliminate algae in order to prevent creation of a slip hazard, to prevent the water from becoming cloudy reducing visibility in the pool or spa, and to prevent uncontrolled growth of algae that could harbor pathogens.

(c) Required chemical levels. Water quality for a pool or spa must meet the following criteria when the pool or spa is open for use. The water quality parameters in Figure: 25 TAC §265.193(c) apply to both pools and spas unless otherwise indicated.

Figure: 25 TAC §265.193(c)

Required Chemical Levels			
Disinfectant Level	Minimum	Ideal	Maximum
Pool Free Available Chlorine	1.0 ppm	2.0 – 3.0 ppm	8.0 ppm
Spa Free Available Chlorine	2.0 ppm	3.0 ppm	8.0 ppm
Pool Bromine	3.0 ppm	4.0 – 6.0 ppm	10.0 ppm
Spa Bromine	4.0 ppm	5.0 ppm	10.0 ppm
Combined Chlorine	None	None	0.4 ppm
pH	Not less than 7.0	7.2 – 7.6	7.8
Cyanuric Acid	None	30 – 50 ppm	100 ppm
ORP	600 mV	650 – 750 mV	900 mV
Alkalinity	60 ppm	60 ppm – 180 ppm	>180 ppm
Calcium Hardness in Pools	150 ppm	>150 – 400 ppm	1000 ppm
Calcium Hardness in Spas	100 ppm	150 – 400 ppm	800 ppm

(d) Cyanuric acid. Cyanuric acid and stabilized chlorine such as dichlor, must not be used in any indoor pool or spa or in therapy pools.

(e) Water clarity. Water clarity must be sufficient such that an 8-inch black disk or Secchi disk on the floor at the deepest part of the pool can be clearly and

immediately seen by an observer on the water surface above the disk or by someone standing on the deck closest to the disk.

(f) Reliable means of water testing required. A reliable means of testing for pH, free and total (combined) chlorine, bromine, cyanuric acid, alkalinity, and calcium hardness to minimum and maximum levels and levels in between, must be provided and available for the pool operator at the pool or spa when the pool or spa is open for use.

(g) DPD chemical test. Free available chlorine levels and bromine levels must be determined using the DPD testing method.

(h) ORP reading frequency. ORP readings must be recorded at the same time required sanitizer and pH tests are performed where in-line ORP meters are used. The date and the mV level must be recorded in the required pool or spa logs required in this section.

(i) Storage of test kits and reagents. Test kits and reagents must be stored according to the manufacturer's instructions and protected from extreme heat and cold and from exposure to water, chemicals, petroleum products, or any other element or environment that could adversely affect the efficacy of water quality test results.

(j) Accuracy of test reagents. Testing reagents must be changed at frequencies recommended by the manufacturer to ensure accuracy of the tests.

(k) Chemical balance. Water in the pool or spa must be chemically balanced. Testing methods to determine the chemical balance of the water in the pool or spa, such as the Langelier Saturation Index, must be conducted at least once every 10 days while the pool or spa is open. The date of the test and the results of the testing and any adjustments made to the pool or spa to correct water quality must be recorded in the required pool or spa logs required in this section. Logs must be made available upon request. If logs are not kept on-site, logs must be provided to DSHS or local regulatory authority within five business days of the request.

(l) Water monitoring records of public pools and spas. A record of all pool and spa water chemical testing must be recorded in a pool or spa log, either electronically or manually in a logbook, and must be made available upon request. If logs are not kept on-site, logs must be provided to DSHS or local regulatory authority within five business days of the request. Records shall be maintained for a minimum of three years and must include:

- (1) if multiple pools or spas on-site, identification of the pool or spa tested;
- (2) date and time of testing;
- (3) chemical levels as required in Figure: 25 TAC §265.193(c) in accordance with the testing schedule requirements in subsection (o) of this section;
- (4) mV of ORP meter where applicable; and

(5) any action taken to correct chemical readings including addition of sanitizer, algaecide, or chemical to correct pH and tests to ensure chemical levels return to required levels, closure of the pool or spa, formed stool or diarrhea in a pool or spa and remedial actions taken as a result, or any other significant action taken which impacts pool and spa water quality.

(m) Skimmers. Skimmers must not be used for dispensing chemicals into the pool or spa.

(n) Off-season circulation system operation. When an outdoor pool or spa is not in use for an extended period of time (such as off-season), clarity must be maintained. Circulation rates must provide acceptable water clarity as required in this section.

(o) Testing frequency and record keeping when pools and spas are open for use.

(1) When Class A and Class B pools and spas are open for use:

(A) Tests for disinfectant levels and pH must be made and recorded in pool or spa logs every two hours.

(B) If a system is used to automatically control disinfectant and pH, tests for disinfectant level and pH must be performed and the results recorded in the pool or spa logs at least three times per day and a reading of the automatic control device must also be made and recorded in the pool or spa logs.

(C) Where cyanuric acid is used either in stabilized chlorine or used as needed, tests for cyanuric acid levels must be performed once each week and the results recorded in the pool or spa log.

(2) Class C pools and spas that have on-site staff primarily responsible for pool and spa operations, such as lifeguards, must be tested for disinfectant levels and pH a minimum of three times a day. Results of the testing must be recorded in pool or spa logs.

(A) If a system is used to automatically control disinfectant and pH, testing for disinfectant level and pH must be performed and the results recorded a minimum of once a day and a reading of the automatic control device must also be made and the results recorded in the pool or spa log.

(B) Where cyanuric acid is used either in stabilized chlorine or as needed, tests for levels of cyanuric acid must be performed once each week and the results recorded in the pool or spa log.

(3) Class C pools and spas that do not have on-site staff primarily responsible for pool and spa operations, such as lifeguards, must be tested for disinfectant levels and pH a minimum of one time a day and the results must be recorded in the pool or spa log.

(A) If a system is used to control disinfectant and pH electronically, and the system has the ability to record and transmit the mV level or free chlorine level and

pH to the trained and certified operator once a day, sanitizer level and pH must be measured once each week using a test kit and recorded in the pool or spa log.

(B) A reading of the automatic control device must also be recorded at the same time the sanitizer level and pH are measured using the test kit and recorded in the pool or spa log.

(C) Where cyanuric acid is used either in stabilized chlorine or as needed, tests for levels of cyanuric acid must also be performed once each week and the results recorded in the pool or spa log.

(4) Other required tests for pools and spas. Tests for alkalinity, calcium hardness, and chemical balance must be performed at least once every 10 days, or more often, if necessary, to maintain required water quality parameters in subsection (c) of this section and water clarity requirements in subsection (e) of this section. Results of the tests must be recorded in the pool or spa log.

(5) Records of all testing of the pool and spa water must be maintained for at least three years and be available or made available upon request by DSHS or local regulatory authority. If records are stored off-site, they must be provided within five business days.

(p) Cyanuric acid levels must not exceed 100 ppm. Whenever cyanuric acid levels exceed 100 ppm the following is required.

(1) Sanitizer level must be raised to 2.0 ppm free available chlorine and maintained at that level until the cyanuric acid level drops to less than 100 ppm.

(2) Sanitizer level, pH, and cyanuric acid levels must be measured and recorded at least once a day in the pool or spa log until the cyanuric acid level drops below 100 ppm.

(3) Records of cyanuric acid levels exceeding 100 ppm and actions taken to return those levels to at or below the allowable maximum must be recorded in the pool or spa log.

(q) Clarifiers, flocculants, and defoamers.

(1) Clarifiers, flocculants, and defoamers must be used per manufacturer's instructions and must not create a hazardous condition, compromise disinfectant efficacy, or interfere with other water quality measures in Figure: 25 TAC §265.193(c).

(2) Clarifiers, flocculants, defoamers, and any other chemical used in a pool or spa must be certified, listed, and labeled to either NSF Standard 50 or NSF Standard 60.

(r) Chemical feed equipment. All chemical feed equipment must be maintained in good working condition at all times.

§265.194. Operation and Management of Pools and Spas.

(a) Operational standard for all pools and spas. Pools and spas must be required to meet the operational standard that is most applicable to their respective use. For example, a pool or spa that is being operated as a Class C pool or spa but is generally or for specific occasions made available to the public, with or without a fee, must meet Class B operational standards.

(b) Required operator certification. All Class A, Class B, and Class C pools and spas must be maintained under the supervision and direction of a properly trained and certified operator.

(1) The operator is not required to be on-site when the pool or spa is open.

(2) The operator may be responsible for multiple pools and spas.

(3) The trained and certified operator's name and contact information must be made available to on-site staff, such as lifeguards, and to property management companies or property managers, and must be made available at the request of DSHS or a local regulatory authority.

(c) Operator responsibilities. The trained operator must ensure that the staff is properly trained in day-to-day operations of the pool and spa circulation system, as defined in the International Swimming Pool and Spa Code, and that the circulation system is being maintained in good operating condition in accordance with manufacturer's instructions.

(d) Operator training and certification. Operator training and certification can be obtained by completion of one of the following courses or the equivalent:

(1) the NRPA, "Aquatic Facility Operator;"

(2) the PHTA, "Certified Pool Operator;"

(3) the ASPSA, "Licensed Aquatic Facility Technician;" or

(4) an equivalent course which requires testing and provides certification and that is approved by the local regulatory authority.

(e) Documentation required for pools and spas.

(1) Documentation for all pool and spa suction outlets confirming compliance with ANSI/APSP-16 or any successor standard, whether the suction outlet is manufactured or field fabricated, must be kept on-site at all times the pool or spa is open for use or must be made available within five business days upon request by a regulatory official.

(2) Documentation of compliance with ASME/ANSI A112.19.17, ASTM F 2387, or any successor United States Consumer Product Safety Commission approved standard for manufactured pool and spa Safety Vacuum Release Systems and Automatic pump shut-off systems must be kept on-site at all times the pool or spa

is open for use or must be made available within five business days upon request by a regulatory official.

(f) Proper use and protection from chemicals in pools and spas. Personnel in charge of maintaining a pool or spa, whether it is the trained and certified operator or someone assigned to maintain a pool or spa when the trained and certified operator is not on-site, must be properly trained in accordance with §265.193 of this subchapter (relating to Water Quality at Pools and Spas).

(1) The use of chemicals at pools and spas must be according to the chemical manufacturer's directions.

(2) No chemical may be used in a way that violates the manufacturer's instructions for the chemical feed system or NSF 50 certification of that chemical feed system.

(g) Pool and spa equipment access. Pool and spa circulation equipment, mechanical spaces, and chemical storage spaces, whether indoors or out-of-doors, must be inaccessible to pool and spa users or other unauthorized persons. A warning sign against unauthorized entry must be posted on the entry door or gate to the pool and spa equipment room, building, or area.

(h) Water clarity standards for pools and spas. When the pool or spa is open and available for use the water must be of sufficient clarity that the bottom of the pool or spa is clearly visible while the water is static. Visual occlusion by sediment or other matter must be checked before opening and periodically, as necessary, while the pool or spa is in use. The pool or spa must be open for use only if the bottom and the submerged suction outlets, when present, are clearly visible.

(i) Off-season water quality. When an outdoor pool or spa is not in use for an extended period of time, such as off-season, clarity must be maintained, and algae growth must be prevented; however, other water quality parameters as required in §265.193 of this subchapter do not need to be maintained. Other methods may be used to maintain pools and spas during extended periods of non-use if approved by local regulatory officials in writing and water clarity is maintained.

(j) Pool and spa closure. When a pool or spa is not in use, such as after seasonal operation, while under construction, renovation, or for any reason, entry to the pool yard or spa yard by users or other unauthorized persons must not be allowed. A sign must be posted on the entry gates indicating the pool and spa are closed. The pool and spa and facility, when closed, must not give off objectionable odors, become a breeding site for insects, or create any other nuisance conditions or hazards.

(k) Domestic animals prohibited at pools and spas. Domestic animals and other pets must not be allowed within a pool or spa enclosure area or in the pool or spa except as required by 28 CFR §36.302(c) and, if applicable, 24 CFR §100.204. Animals permitted under 28 CFR §36.302(c) and 24 CFR §100.204 must be allowed on the deck and within the pool and spa yard, but not in the pool or spa.

(l) Wave pools constructed or renovated on or after the effective date of this subchapter. The wave pools must have a minimum of two emergency shutoff switches capable of immediately stopping wave generation, one on each side of the wave pool, clearly marked as emergency shutoffs and readily accessible to lifeguards.

(m) Surf pools constructed or renovated on or after the effective date of this subchapter. The surf pools must have a minimum of two emergency shutoff switches capable of immediately stopping wave generation, one on each side of the surf pool, clearly marked as emergency shutoffs and readily accessible to lifeguards.

(n) Actual water level at pools and spas. The actual water level in pools and spas must be maintained within the designed operating water level range of the rim, gutter, or skimmer system. When the water level is below the operating water level range of the pool or spa rim, gutter, or skimmer system, the pool or spa must be closed.

(o) Use of personal floatation devices (PFD). No person may be prohibited from the use of a USCG-approved PFD in a pool or spa.

(p) Food and beverages. Food and beverages may be consumed in the pool or spa only if it is privately owned and operated. Consumption of food and beverages in a pool or spa that is not privately owned and operated is prohibited.

(q) Glass containers prohibited. Food and beverages in the pool or spa or in the pool yard or spa yard must be in non-breakable containers. Glass containers and glass furniture must not be allowed on a deck, in the pool or spa, or anywhere within the pool yard or spa yard.

(r) Covered trash receptacles required. Covered trash receptacles must be provided where food and beverages are allowed or served.

(s) Standing water on decks. Decks must not have standing water and deck drains must be cleaned and maintained to prevent water accumulating on a pool or spa deck.

(t) Slime and biofilm. Slime and biofilm layers must be removed from all accessible pool and spa surfaces including steps and ladders, sidewall tile, depth markers, and from all aquatic features such as slides, climbing walls, and diving boards.

§265.195. Additional Requirements for Aquatic Activity Devices and Specific Pools.

(a) Slide flumes. Slide flumes constructed on or after the effective date of this subchapter must be easily cleanable, have proper drainage in all valleys and dips, and have safety measures that ensure a rider cannot fall or be ejected from the flume.

(b) Wave pools.

(1) Wave pools must be fitted with a rope and float line located to restrict access

to the caisson wall if required by the wave pool equipment manufacturer. Safety rope and float lines typically required at the shallow to deep water transition do not apply to wave pools.

(2) A minimum of two emergency shutoff switches to disable the wave action must be provided, one on each side of the wave pool.

(3) Caisson barriers must have no openings that would allow passage of a 4-inch sphere and must be provided for all wave pools. Wave pools using forced air to generate waves must not be required to have caisson barriers unless recommended by the manufacturer.

(4) Safety rope and float lines required at the shallow to deep water transition do not apply to surf pools.

(c) Leisure rivers. Leisure rivers constructed on or after the effective date of this subchapter must comply with the following:

(1) Obstructions such as landscaping, walls, or bridges are allowed provided they do not impact lifeguarding, sight lines, or rescue operations.

(2) Depth markers at leisure rivers are required on the sidewalls on both sides of all entry and exits, but if the depth is consistent, they are not required in the landscape, where there is no deck, or on the sidewalls in the main channel of the leisure river.

(d) Movable floor pools.

(1) The use of starting platforms in the area of a movable floor is prohibited when the water depth is shallower than 5 feet.

(2) Use of the moveable floor portion of the pool must not be open to users when the floor is being raised or lowered.

(3) Pools or spas with movable floors must have a sign indicating movable floor and varied water depth. The posted water depth must be the water level to the floor of the pool or spa measured vertically 3 feet from the wall of the pool or spa.

(4) A sign must be posted to inform the user that the pool or spa has a varied depth and refer to the sign showing the current depth.

(e) Surf pools.

(1) Surf pools must be fitted with a float line located to restrict access to the caisson wall if required by the surf pool equipment manufacturer.

(2) Wave caisson barriers must be provided for all surf pools and may not have an opening that would allow passage of a 4-inch sphere. Surf pools using forced air to generate waves may not have caisson barriers unless recommended by the manufacturer.

(3) Safety rope and float lines required at the shallow to deep water transition

do not apply to surf pools.

(4) In addition to the requirements for lifeguards in §265.191 of this subchapter (relating to Lifeguard Personnel Requirements and Standards at Pools), lifeguards must be provided with any equipment necessary to reach the deepest area of the surf pool during an emergency. The equipment must be accessible to all lifeguards, clearly labeled "For Lifeguard Use Only," and be available when the surf pool is open and used for surfing.

(5) No surfer may enter the surf pool unless:

(A) tethered to the surfboard;

(B) wearing a USCG-approved PFD; or

(C) a lifeguard is in the surf pool in the surfing area directly supervising surfing activity.

(6) Non-surfing users may not be allowed to enter the wave areas of the surf pool over 5 feet of depth while waves are being generated unless they are wearing a USCG-approved PFD.

(f) Islands in Pools and Spas Constructed on or After the Effective Date of This Subchapter.

(1) An island not designed or intended for walking on by pool or spa users must have signs stating "No Entry" in letters a minimum of 2 inches in height.

(2) An island must have a demarcation tile line on the perimeter of the island that is a minimum of 4 inches in height and must be positioned in the top 4-1/2 inches of the island wall just under the coping.

§265.196. Request for Alternate Method of Disinfectant.

(a) Application. Pursuant to Texas Health and Safety Code, §341.064(b-1), an owner or operator may apply to use an alternate method of disinfectant.

(b) Submission. A completed application for use of an alternate method of disinfectant must be submitted to DSHS's Consumer Protection Division at least 180 days before the opening of the pool or spa. The application must include:

(1) the type and level of primary disinfectant;

(2) the type and level, where applicable, of any supplemental method of water treatment;

(3) the method and equipment used for storing, delivering, and measuring primary disinfectant levels and supplemental water treatment levels;

(4) data supporting the effectiveness of the primary disinfectant and supplemental method of water treatment in maintaining required water quality;

(5) descriptions of any specialized equipment, application methods, or other water treatment methods that may differ from the requirements in §265.193 of this subchapter (relating to Water Quality at Pools and Spas);

(6) a proposed testing schedule for determining levels of biological and chemical levels as specified by DSHS to ensure the health and safety of the public;

(7) a detailed drawing or map of the pool that indicates swimming areas and non-swimming areas; and

(8) any additional information DSHS requires to make its decision.

(c) Decision. DSHS approves or rejects a request to use an alternate method of disinfectant no later than 90 days after the completed application is submitted.

(d) Additional information. If DSHS requires additional information to make its decision, the application is not considered complete for purposes of subsections (b) and (c) of this section until DSHS receives the additional information as requested.

§265.197. Compliance, Inspections, and Investigations.

(a) DSHS or the local regulatory authority has the right to enter at all reasonable times any area or environment, including a building, storage, equipment room, bathhouse, or office to inspect and investigate for compliance with this subchapter, to review records, to question any person, or to locate, identify, and assess the condition of the pool or spa.

(b) Advance notice or permission for entry is not required.

(c) DSHS or the local regulatory authority must not be impeded or refused entry during its official duties by reason of any company policy.

(d) It is a violation of this subchapter for a person to interfere with, deny, or delay an inspection or investigation conducted by DSHS or a local regulatory authority.

§265.198. Enforcement.

(a) If a person violates Texas Health and Safety Code, §341.064 or §341.0645 or this subchapter, DSHS or the local regulatory authority may, in accordance with Texas Health and Safety Code, §341.092, institute a civil suit in district court for the assessment of civil penalties, injunctive relief, or both.

(b) A person who violates Texas Health Safety Code, §341.064 or §341.0645, or this subchapter may also be subject to a criminal penalty under Texas Health and Safety Code, §341.091.

(c) If a pool or spa closes, either voluntarily or by court order, public access to the pool or spa must be restricted and a notice posted on the entry gates or doors.

Texas Administrative Code



Title 25 Health Services

Part 1 Department of State Health Services

Chapter 265 General Sanitation

Subchapter M Public Interactive Water Features and Fountains

§§265.301 – 265.308

§265.301. General Provisions.

(a) Purpose of the rules. These rules implement Texas Health and Safety Code, §341.0695.

(b) Scope of rules. These rules address minimum sanitation requirements for public interactive water features and fountains (PIWFs). These standards are based in part on the American National Standards Institute and International Aquatic Foundation Standards for Aquatic Recreation Facilities (ANSI/IAF-9 2005) as amended, the National Swimming Pool Foundation's 2008 "Aquatic Play Feature Handbook" as amended, the Centers for Disease Control and Prevention "Designing Public Swimming Facilities Guidelines," and the Centers for Disease Control and Prevention "Operating Public Swimming Pools Guidelines" both available at <http://www.cdc.gov/healthyswimming/>.

(1) These rules apply to all PIWFs whether the PIWF shares or does not share a water supply, disinfection system, filtration system, circulation system, or any other treatment system that allows water to co-mingle with any other water feature or a pool.

(2) A PIWF that is supplied entirely by drinking water that is not recirculated is not subject to §265.303(d) and §265.303(f) of this title (relating to Operation and Maintenance of Public Interactive Water Features and Fountains); §265.305 (relating to Circulation and Disinfectant Systems for Public Interactive Water Features and Fountains), and §265.306 of this title (relating to Water Quality at Public Interactive Water Features and Fountains).

(3) These rules do not apply to a PIWF that uses freshwater originating from a natural watercourse for recreational purposes and that releases the freshwater back into the same natural water course.

(4) A PIWF with water reservoirs or basins that are accessible to users may be subject to the suction device requirements of Chapter 265, Subchapter L of this title (relating to Standards for Public Swimming Pools and Spas).

(c) PIWF standards. Where a local regulatory authority has jurisdiction for the regulation of PIWFs, such authorities may adopt standards that vary from these standards; however, such standards shall be the same as, equivalent to, or more stringent than these standards.

§265.302. Definitions. The following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise.

(1) Act--Refers to Health and Safety Code, §341.0695, relating to Interactive Water Features and Fountains.

(2) American Society of Sanitary Engineering (ASSE)--International Office, 901 Canterbury, Suite A, Westlake, Ohio 44145, telephone (440) 835-3040, website: www.asse-plumbing.org.

(3) ANSI--American National Standards Institute, 25 West 43rd Street (4th Floor), New York, New York 10036, telephone (212) 642-4900, website: www.ansi.org.

(4) ANSI/IAF-9 2005--American National Standards Institute and International Aquatic Foundation Standards for Aquatic Recreation Facilities.

(5) AquaTech--Starfish Aquatics Institute, Human Kinetics Aquatic Education Center, P.O. Box 5076, Champaign, Illinois, 61825-5076, telephone (800) 747-4457, website: www.aquaticeducationcenter.com.

(6) APSP--Association of Pool and Spa Professionals, 2111 Eisenhower Avenue, Suite 500, Alexandria, Virginia 22314-4695, telephone (703) 838-0083, website: www.apsp.org.

(7) ASPSA--American Swimming Pool and Spa Association, 1108 Little River Drive, Elizabeth City, North Carolina 27909, telephone (252) 331-2301, website: www.swimmingpooloperator.com.

(8) Automatic chemical feeder--An automatic device for adding chemical to water in a public interactive water feature or fountain (PIWF). An automatic chemical feeder has valves controlled by electronic equipment that use pumps to dispense chemicals based on signals from probes continuously monitoring the water's properties.

(9) Available chlorine--Rating of chlorine-containing products for total oxidizing power (See definition number (30) "Free available chlorine.")

(10) Backflow prevention device--A device that is designed to prevent a physical connection between a potable water system and a non-potable source such as a pool, spa, or PIWF, or to prevent a physical connection between a pool, spa, or PIWF and a sanitary sewer or wastewater disposal system. (See definition number (20) "Cross-connection control device.")

(11) Bacteria--Single-celled microorganisms of various forms, some of which cause infections or disease.

(12) Bromine--A chemical element (Br_2) that exists as a liquid in its elemental form or as part of a chemical compound that is a biocide agent used to disinfect water in a pool, spa, or PIWF.

(13) CDC--Centers for Disease Control and Prevention, 1600 Clifton Road, Atlanta, Georgia 30333, telephone (800) 232-4636, website: www.cdc.gov.

(14) Chlorine--A chemical element (Cl_2) that exists as a gas in its elemental form or as part of a chemical compound that is an oxidant. Chlorine is a biocide agent used to disinfect water in a pool, spa, or PIWF.

(15) Chloramine--A compound formed when chlorine combines with nitrogen or ammonia that, when found in significant amounts in the water of a PIWF, may cause eye and skin irritation and may have an objectionable odor.

(16) Circulation equipment--The components that are part of a circulation system for a PIWF. Circulation equipment may include but is not limited to, categories of pumps; treatment tanks; hair and lint strainers; filters; valves; gauges; meters; heaters; inlet/outlet fittings; and chemical feeding devices. The components have separate functions, but when connected to each other by piping, perform as a coordinated system for purposes of maintaining PIWF water in a clear, sanitary, and desirable condition for use.

(17) Circulation system--An arrangement of equipment or components, connected by piping to a PIWF in a closed circuit. The function of a circulation system is to direct water from the PIWF, causing it to flow through the various system components for purposes of clarifying, heating, purifying, and returning the water back to the PIWF.

(18) Coliform bacteria--Bacteria found in the intestines and fecal matter of warm-blooded animals.

(19) Combined chlorine--The portion of total chlorine in a water-chemical combination with ammonia, nitrogen, and/or organic compounds, mostly comprised of chloramines. Combined chlorine plus free available chlorine equals total chlorine.

(20) Cross-connection control device--A device that is designed to prevent a physical connection between a potable water system and a non-potable source such as a pool, spa, or PIWF, or to prevent a physical connection between a pool, spa, or PIWF and a sanitary sewer or wastewater disposal system. (See definition number (10) "Backflow prevention device.")

(21) Cryptosporidiosis--A diarrheal disease caused by microscopic parasites of the genus *Cryptosporidium*. Water is the most common method of transmission and *Cryptosporidium* is one of the most frequent causes of waterborne illness among humans in the United States.

(22) Cyanuric acid--A chemical that reduces the loss of chlorine in water due to the ultraviolet rays of the sun. Also known by the names stabilizer, isocyanuric acid, conditioner and triazinetrione.

(23) Date of construction--The date a building permit for construction of a PIWF is issued by a municipality or county. If no building permit is required, the date excavation or electrical service to the PIWF begins, whichever is first.

(24) Department--Department of State Health Services, Environmental and Consumer Safety Unit, Policy, Standards, and Quality Assurance, P.O. Box 149347, MC 1987, Austin, Texas 78714-9347, telephone (512) 834-6788, website: www.dshs.state.tx.us.

(25) Disinfectant--Energy or chemicals used to kill undesirable or pathogenic (disease causing) organisms at a level adequate to make the desired kill.

(26) Disinfection equipment--Equipment designed to apply or deliver a disinfectant (such as chlorine) at a controlled rate.

(27) DPD--A chemical testing reagent (N,N-Diethyl-P-Phenylenediamine) used to measure the levels of available chlorine or bromine in water by yielding a series of colors ranging from light pink to dark red.

(28) Extensively remodeled--Replacement of facility components or modification of the PIWF so that the design, configuration, capacity, or operation is 20% or more different from the original design, configuration, capacity, or operation. This term does not include the normal maintenance and repair of a PIWF or a water circulation system or the partial replacement of circulation system equipment if the size, type, or operation of the equipment is not substantially different from the original equipment. Replacement of 30% or more of the circulation system shall fall within the meaning of extensively remodeled.

(29) Filter--A device that removes undissolved particles from water by recirculating the water through a porous substance (filter media or element).

(30) Free available chlorine--That portion of the total chlorine remaining in the chlorinated water that is not combined with ammonia or nitrogen compounds and that will react chemically with undesirable or pathogenic organisms. Free chlorine is also known as free available chlorine. Combined chlorine plus free available chlorine equals total chlorine.

(31) Free residual chlorine--For purposes of this rule free residual chlorine means free available chlorine. (See definition number (30) "Free available chlorine.")

(32) Incidental water contact--Contact with water that is accidental and/or that occurs merely by chance. For purposes of this subchapter, incidental water contact at a water feature or attraction is contact that occurs primarily when users do not expect to become completely wetted, immersed, or submerged in water and the water feature or attraction is not designed to completely wet users or to allow for immersion or submersion in water, and is not used by users who become completely wetted, immersed, or submerged in water when using the water feature or attraction.

(33) Labeled--Equipment or material to which has been attached a label, symbol, or other identifying mark of an organization that is acceptable to the authority having jurisdiction and concerned with product evaluation that maintains periodic inspection of production of labeled equipment or materials and by whose labeling the manufacturer indicates compliance with appropriate standards of performance in a specified manner.

(34) Local regulatory authority--The local enforcement body or authorized representative having jurisdiction over PIWFs and associated facilities.

(35) mJ--Millijoule, a unit of work or energy.

(36) mJ/cm²--Millijoules per centimeter squared.

(37) NRPA--National Recreation and Parks Association, 22377 Belmont Ridge Road, Ashburn, Virginia 20148-4501, telephone 1-800-626-6772, website: www.nrpa.org.

(38) NSF--National Sanitation Foundation International, P.O. Box 130140, 789 N. Dixboro Drive, Ann Arbor, Michigan 48113-0140, telephone (800) 673-6275, website www.nsf.org.

(39) NSF/ANSI-50 Standard--National Sanitation Foundation International/American National Standard Institute Standard 50, Equipment for Swimming Pools, Spas, Hot Tubs and other Recreational Water Facilities.

(40) NSPF--National Swimming Pool Foundation, 4775 Granby Circle, Colorado Springs, Colorado 80919-3131, telephone (719) 540-9119, website: www.nspf.com.

(41) ONPG-MUG--Ortho-nitrophenyl-beta-D-galactopyranoside-4-methylumbelliferyl-beta-D-glucuronide, an enzyme substrate assay used for measuring total coliform and *E. coli* in water as described in the Code of Federal Regulations, Title 40, Part 141.

(42) Owner or operator--The owner of the property upon which the PIWF is located, or the operator, business manager, complex manager, property owners association manager, rental agent, lessee, licensee, concessionaire, or other individual who is in charge of the day to day operations or maintenance of the property. The owner or operator is responsible to ensure that the PIWF complies with state and local standards.

(43) Ozone (O₃)--A gas composed of oxygen that is generated on site and used to oxidize organic matter in water.

(44) Ozone generator--A device that produces ozone, usually by exposing air or oxygen to a corona discharge or ultraviolet light.

(45) Parts per million (ppm)--A unit measurement in chemical testing that indicates the parts by weight in relation to one million parts by weight of water. For the purposes of PIWF water chemistry, ppm is considered to be essentially identical to the term milligrams per liter (mg/L).

(46) pH--A value expressing the relative acidic or basic tendencies of a substance, such as water, as indicated by the hydrogen ion concentration. The pH is expressed as a number on the scale of zero to 14, less than one being most acidic, 1 to 6.9 being acidic, 7 being neutral, 7.1 to 14 being basic, and 14 being most basic.

(47) Pool--For purposes of this subchapter, the term shall have the meaning assigned to it in Subchapter L, §265.182 of this title (relating to Definitions).

(48) Potable water--Water that meets all applicable standards for an approved drinking water source of the Texas Commission on Environmental Quality (TCEQ), 30 Texas Administrative Code (TAC), Chapter 290, Public Drinking Water, Subchapter D, Rules and Regulations for Public Water Systems, as amended, and 30 TAC Chapter 290, Public Drinking Water, Subchapter F, Drinking Water Standards Governing Drinking Water Quality And Reporting Requirements For Public Water Systems, as amended, or the equivalent

(49) Public interactive water feature and fountain (PIWF)--Any indoor or outdoor installation maintained for public recreation that includes water sprays, dancing water jets, waterfalls, dumping buckets, or shooting water cannons in various arrays for the purpose of wetting the persons playing in the spray streams. PIWFs:

(A) may be stand-alone PIWFs or may share a water supply, disinfection system, filtration system, circulation system, or other treatment system that allows water to co-mingle with a pool;

(B) may be publicly or privately owned;

(C) may be operated by an owner, lessee, operator, licensee, or concessionaire, regardless of whether a fee is charged for use;

(D) include, but are not limited to, interactive water features or fountains that are open exclusively to members of an organization and their guests, residents of a multi-unit apartment building or apartment complex, residential real estate development, or other multi-family residential area, schools, day care facilities, youth camp, or hotel or other public accommodations facility;

(E) do not include interactive water features or fountains located on private property under the control of the property owner or the owner's tenant serving a single-family residence or duplex and that are intended for use by not more than two resident families and their guests; and

(F) are not fountains, installations, amusement rides, or other attractions, whether decorative or interactive, in which only incidental water contact occurs.

(50) Pump--A mechanical device, usually powered by an electric motor that causes hydraulic flow and pressure for the purpose of filtration, heating, and circulation of the PIWF water.

(51) Recreational water park--A property or any portion thereof upon which one or more PIWFs are located.

(52) Regulatory authority--Any federal, state, or local enforcement body or authorized representative having jurisdiction over PIWFs.

(53) Shall--Indicator of the mandatory provisions of these rules.

(54) Stabilizer--A chemical that reduces the loss of chlorine in water due to the ultraviolet rays of the sun. Also known by the names cyanuric acid, isocyanuric acid, conditioner, and triazinetrione.

(55) Stand-alone PIWF--A PIWF that does not share a water supply, disinfection system, filtration system, circulation system, or any other treatment system that allows water to co-mingle with a pool as defined in Subchapter L, §265.182 of this title. This does include a PIWF that shares a water supply, disinfection system, filtration system, circulation system, or any other treatment system that allows water to co-mingle with any other water feature other than a pool as defined in Subchapter L, §265.182 of this title.

(56) TCEQ--Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087, telephone (512) 239-1000, website: www.tceq.state.tx.us.

(57) Total chlorine--The sum of both the free available chlorine and combined chlorine.

(58) Treatment tank--The vessel, chamber, or tank used to collect the water that has been sprayed, dumped, or otherwise used at the PIWF and returned through the drains.

(59) Turnover rate--The period of time (usually in hours) required to circulate a volume of water equal to the total pool and PIWF water volume, or in the case of a stand-alone PIWF, the PIWF water volume, through the filtration equipment.

(60) Ultraviolet light (UV)--Electromagnetic radiation that is invisible to the human eye with wavelengths on the border of x-rays, about 4 nanometers, to just beyond violet in the visible spectrum, about 380 nanometers.

(61) United States Environmental Protection Agency (EPA)--Ariel Rios Building, 12000 Pennsylvania Avenue, N.W., Washington, DC 20450, telephone (202) 272-0167, website: www.epa.gov.

(62) Water quality testing device or kit--A product designed to measure the level of a specific chemical in the water of a PIWF. A water quality testing device or kit includes a method to provide a visual indication of chemical level, and may include one or more testing reagents and accessory items.

§265.303. Operation and Maintenance of Public Interactive Water Features and Fountains.

(a) Public interactive water feature and fountain (PIWF) operation requirements. PIWFs shall be operated and maintained under the supervision and direction of a properly trained and certified operator who is responsible for sanitation and proper maintenance of the PIWF, and who is responsible for maintaining all physical and mechanical equipment and records. Training and certification shall be obtained by completion of one of the following courses or its equivalent:

- (1) the NRPA, "Aquatic Facility Operator" (A.F.O.);
- (2) the NSPF, "Certified Pool Operator" (C.P.O.);
- (3) the ASPSA, "Licensed Aquatic Facility Technician" (L.A.F.T.); or
- (4) AquaTech Pool and Aquatic Facility Operator.

(b) Operator credentials. The operator of the PIWF who is responsible for the sanitation and proper maintenance of the PIWF shall provide evidence of current certification as specified in subsection (a) of this section during inspection by the regulatory authority.

(c) Sanitation of PIWFs. The owner, manager, operator, or other attendant in charge of a PIWF shall maintain the water feature or fountain in a sanitary condition.

(1) The PIWF treatment tank shall be completely drained and cleaned at a frequency necessary to maintain water quality and sanitary conditions.

(2) Any dirt, trash, refuse, animal waste, or debris on the surface of a zero depth PIWF shall be removed from the surface and the surfaces shall be flushed and sanitized with a United States Environmental Protection Agency approved disinfectant as often as is needed to prevent contamination of the water in the PIWF.

(3) The surfaces of zero depth PIWFs and the decks of all PIWFs shall be kept clean and free of pooled water to prevent the growth of algae and bacteria.

(d) Signs for PIWFs. Warning and notification signs shall be posted at the entrance of all PIWFs, or where the signs are clearly visible to users entering the PIWF area before contact with PIWF water occurs, when the PIWF is open or in use. Signs shall be securely mounted, clearly visible, and easily read with letters in a contrasting color to the background. The required signage can be combined into a single sign. The signage shall provide the following notifications and warnings in letters at least 2 inches in height:

(1) "Non-Service Animals Prohibited";

(2) "Changing Diapers Within 6 Feet Of The Water Feature is Prohibited;"

(3) "Use Of The Water Feature If Ill With A Contagious Disease is Prohibited";

(4) "Do Not Drink Water From The Water Feature"; and

(5) "Use Of The Water Feature When Ill With Diarrhea is Prohibited."

(e) PIWFs without an on-site owner or operator. At PIWFs without an on-site owner or operator a sign shall be posted that provides a contact number to be used in the event of a malfunction, unsanitary condition, or any other non-emergency problem requiring correction at the PIWF. Letters and numbers on the posted sign shall be a minimum of 2 inches in height and the sign shall be clearly visible.

(f) Records for PIWFs. The following records pertaining to the operation, maintenance, cleaning, sanitation, and chemical levels shall be kept for a minimum of 2 years and, when kept on site, shall be made available during inspection by the regulatory authority. If the records are kept in a separate location off site they shall be provided to the regulatory authority within 5 working days following the inspection:

- (1) daily chemical log;
- (2) chlorine, bromine, cyanuric acid, and pH test results;
- (3) routine maintenance schedule and activities;
- (4) preventative maintenance schedule and activities;
- (5) documentation that circulation equipment meets the NSF/ANSI-50 Standard, if applicable;
- (6) copy of manufacturer's instructions for operation of the disinfection equipment, chemical control equipment, and chemical feed system;
- (7) documentation of the facility's method for determining turnover rates as described in §265.305(c) of this title (relating to Circulation and Disinfectant Systems for Public Interactive Water Features and Fountains (PIWFs));
- (8) documentation that the turnover rates meet the requirements as described in §265.305(c) of this title;
- (9) documentation of any *Cryptosporidium* testing required by this subchapter;
- (10) documentation of supplemental water treatment conducted as required in §265.308(f) of this title (relating to Closure of a Public Interactive Water Feature and Fountain); and
- (11) documentation of the date of construction of the PIWF.

§265.304. Water Supply and Wastewater Disposal.

(a) Water supply. The initial water supply of a public interactive water feature or fountain (PIWF) shall be potable water.

(b) Water distribution system. All portions of the water distribution system serving a PIWF shall be protected against backflow and back siphonage. For purposes of these rules, this means a high hazard preventer such as a reduced-pressure-principle backflow preventer meeting the requirements of American Society of Sanitary Engineering ASSE Standard 1013 2009, as amended, and approved for use in potable water systems possibly subjected to backsiphonage or high backpressure. An air-gap designed to ASME Standard A112.1.2 is an acceptable high-hazard backflow preventer. No direct mechanical connection shall be made between the chlorinating equipment or system of piping for the PIWF and a sanitary sewer system, septic system, or other wastewater disposal system.

(c) Hose bibs. Hose bibs shall be protected with a vacuum beaker.

(d) Backwash water. Filter backwash water or drainage water from a PIWF shall be discharged or disposed of as wastewater in accordance with the requirements of the Texas Commission on Environmental Quality or local regulatory authority.

§265.305. Circulation and Disinfectant Systems for Public Interactive Water Features and Fountains.

(a) General circulation requirements. The circulation system consisting of pumps, piping, filters, return inlets, water conditioning equipment, disinfection equipment, surge chamber, treatment tank and other ancillary equipment shall provide adequate circulation of water and be designed to accommodate 100% of the turnover flow rate and maintain the distribution of disinfectant through all parts of the public interactive water feature or fountain (PIWF).

(b) Circulation equipment. Where circulation equipment falls within the scope of NSF and ANSI Standard 50 (NSF/ANSI-50 Standard), such equipment shall meet the standard. Conformity with NSF/ANSI-50 as evidenced by the listing or labeling of such equipment by a testing laboratory or by separate documentation is required.

(c) Turnover rate. The turnover rate for the circulation of water in a PIWF that is combined or circulated with water from a pool shall be the same as the pool. The turnover rate for circulation of water in a stand-alone PIWF shall meet the following requirements.

(1) If the PIWF was constructed prior to May 1, 2010, the turnover rate shall meet the minimum design turnover rate for that PIWF.

(2) If the PIWF is constructed or extensively remodeled on or after May 1, 2010 the minimum turnover rate shall be at least once every hour.

(d) Treatment tank. The treatment tank shall:

(1) be designed to provide ready access for cleaning and inspections, and be capable of complete draining;

(2) have an automatic water level controller; and

(3) have any makeup water introduced into the treatment tank through an air gap or by another method which will prevent back flow and back-siphonage.

§265.306. Water Quality at Public Interactive Water Features and Fountains.

(a) Public interactive water features and fountains (PIWF) constructed prior to May 1, 2010, shall be equipped with equipment capable of maintaining chemical levels as required in subsection (c) of this section, referring to disinfection and cyanuric acid levels, and subsection (d) of this section, referring to pH, at all times the PIWF is open.

(b) PIWFs constructed or extensively remodeled on or after May 1, 2010, shall be equipped with automatic disinfectant and pH feed equipment that provides continuous and effective disinfection and maintains the required pH at all times the PIWF is open. Disinfection, pH, and any other chemical control equipment shall:

(1) be capable of automatically adjusting chemical feed based on demand;

(2) be installed, maintained, operated, and repaired in accordance with manufacturer's instructions;

(3) be provided with make-up water supply lines to chemical feeder solution containers that have an air gap or other acceptable cross-connection control;

(4) be designed to prevent siphoning from the recirculation system to the solution container and to prevent siphoning of the chemical solution into the PIWF; and

(5) incorporate failure-proof features so that the chemical cannot feed into the PIWF, the piping system, or the water supply system if equipment or power fails, or if there is not adequate return flow to properly disperse the chemical.

(c) Disinfectant and cyanuric acid levels shall meet the following criteria at any time a PIWF is open or in use:

Figure: 25 TAC §265.306(c)

Disinfectant and Cyanuric Acid Levels	Minimum	Ideal	Maximum
Free Available Chlorine	1.0 ppm	3.0 – 5.0 ppm	8.0 ppm
Bromine	2.5 ppm	5.5 – 7.5 ppm	12.0 ppm
Combined Chlorine: Out-of-Door Facilities Only	0.0 ppm	0.0 ppm	1.5 ppm
Combined Chlorine: Indoor Facilities Only	0.0 ppm	0.0 ppm	0.5 ppm
Cyanuric Acid (Stabilizer) – Out-of-Door Facilities Only	0.0 ppm	20 ppm	50 ppm
Cyanuric Acid (Stabilizer) – Indoor Facilities	0.0 ppm	0.0 ppm	0.0 ppm

(d) The pH shall meet the following criteria at any time a PIWF is open or in use:

Figure: 25 TAC §265.306(d)

pH Levels	Minimum	Ideal	Maximum
pH	Not less than 7.0	7.4 – 7.6	7.8

(e) Forms of chlorine containing stabilizer (cyanuric acid) shall not be used in indoor PIWFs.

(f) Chemicals used in a PIWF shall:

(1) be registered and labeled for use in recreational aquatic facilities, such as pools and spas, by the United States Environmental Protection Agency (EPA);

(2) be used according to the chemical manufacturer's instructions for the chemical feed system in use; and

(3) comply with the NSF/ANSI-50 Standard certification for the chemical feed system.

(g) In addition to maintaining sanitizer, cyanuric acid, and pH levels as required in this section, and except as provided in subsections (j) and (l) of this section, PIWFs shall be equipped with a supplemental water treatment system that will protect the public against infection by the parasite, *Cryptosporidium*.

(1) Supplemental water treatment systems for a PIWF include:

(A) UV light disinfection installed after filtration;

(B) ozone;

(C) a NSF/ANSI-50 product, combination of products, or process to control *Cryptosporidium*; or

(D) weekly hyperchlorination following the Center for Disease Control's Recommendations for Aquatics Operators of Treated Venues "Hyperchlorination to Kill *Cryptosporidium*" available on the CDC's website: www.cdc.gov/healthyswimming/; or

(E) an equivalent product, process, or system approved by the department.

(2) Except as provided in subsections (j) and (l) of this section, water from a PIWF shall not be combined or circulated with water of other water features or pools unless:

(A) all of the water either into or from the PIWF is treated with a supplemental water treatment system prior to combining or circulating with water from other water features or pools; or

(B) all of the water in the other water features or pools that is combined or circulated with water from the PIWF is treated with a supplemental water treatment system.

(h) UV light disinfection systems shall:

(1) conform to the NSF/ANSI-50 Standard relating to Equipment for Pools, Spas, Hot Tubs, and Other Recreational Water Facilities;

(2) provide a validated dosage confirmed by a third party validation which results in a 3 log kill of *Cryptosporidium*;

(3) provide a validated dosage equivalent to 40mJ/cm² or greater at the end of lamp life;

(4) include an automatic audible alarm to warn of a UV light disinfection unit malfunction or impending shutdown;

(5) be equipped with an automatic mechanism for shutting off the power to the UV light source whenever the protective UV unit cover is removed; and

(6) be installed in an enclosure designed to protect the operator against electrical shock or excessive radiation and that provides protection from UV exposure.

(i) Ozone disinfection systems shall meet the standards in the EPA Guidance Manual for Alternative Disinfectants and Oxidants, EPA Publication 815-R-99-014, April 1999, as amended, available at: http://www.epa.gov/safewater/mdbp/alternative_disinfectants_guidance.pdf.

(j) Operators of stand-alone PIWFs constructed prior to May 1, 2010, in addition to maintaining sanitizer, cyanuric acid, and pH levels as required in this section shall:

(1) implement a supplemental water treatment system that will protect the public against infection by the parasite, *Cryptosporidium*; or

(2) test the water of the PIWF for *Cryptosporidium* every 14 days during operation.

(k) Operators of stand-alone PIWFs constructed or extensively remodeled after May 1, 2010 shall, in addition to maintaining sanitizer, cyanuric acid, and pH levels as required in this section, implement a supplemental water treatment system that will protect the public against infection by the parasite, *Cryptosporidium*.

(l) Operators of all PIWFs constructed prior to May 1, 2010, and that share a water supply, disinfection system, filtration system, circulation system or any other treatment system that allows water to co-mingle with a pool, in addition to maintaining sanitizer, cyanuric acid, and pH levels as required in this section shall:

(1) implement a supplemental water treatment system that will protect the public against infection by the parasite, *Cryptosporidium*; or

(2) test the water of the PIWF for *Cryptosporidium* every 30 days during operation.

(m) Operators of all PIWFs constructed or extensively remodeled after May 1, 2010, and that share a water supply, disinfection system, filtration system, circulation system, or any other treatment system that allows water to co-mingle with a pool, shall in addition to maintaining sanitizer, cyanuric acid, and pH levels as required in this section implement a supplemental water treatment system that will protect the public against infection by the parasite, *Cryptosporidium*.

(n) A water quality testing device or kit capable of accurately testing for and measuring pH, free and total chlorine, bromine, and cyanuric acid within the chemical ranges as required in this section shall be provided by the PIWF owner or operator.

(1) Free available chlorine and bromine levels shall be determined by use of the DPD method or its equivalent.

(2) Test reagents shall be properly stored and replaced at frequencies recommended by the manufacturer to assure accuracy of the tests.

(3) The water quality testing device or kit shall conform to the NSF/ANSI-50 Standard relating to Equipment for Pools, Spas, Hot Tubs, and Other Recreational Water Facilities.

(o) When a PIWF is open for use, tests for chlorine or bromine levels and pH shall be conducted to comply with the following:

(1) If the PIWF is equipped with automatic disinfectant and pH feed equipment that provides continuous and effective disinfection and maintains the required pH, and that system continually monitors and automatically controls chlorine or bromine levels and pH, testing for chlorine or bromine and pH of the PIWF water shall be conducted at least once during each day the PIWF is in operation.

(2) If the PIWF is not equipped with automatic disinfectant and pH feed equipment that provides continuous and effective disinfection and maintains the required pH and that continually monitors and automatically controls chlorine or bromine levels and pH, testing for chlorine or bromine and pH of the PIWF water shall be conducted at least twice a day, once immediately prior to opening the PIWF and once midway through the period of time it is open for use, during each day the PIWF is in operation.

(3) Tests for cyanuric acid levels shall be conducted at least once every 7 days of operation when chlorine containing stabilizer is in use.

(p) Records of all testing performed at a PIWF shall be kept for 2 years and, if kept on site, shall be made available during inspection by the regulatory authority. If the records are kept in a separate location off site they shall be provided to the regulatory authority within 5 working days following the inspection.

(q) If the water of a PIWF is sampled and tested for bacterial content the sample shall not:

(1) exceed 200 bacteria per milliliter as determined by heterotrophic plate count;
or

(2) indicate the presence of total coliform organisms in a 100 milliliter sample by any of the following methods:

(A) multiple tube;

(B) membrane filter; or

(C) the Minimal Medium ONPG-MUG test described in the Code of Federal Regulations, Title 40, Part 141.

§265.307. Inspections and Permitting of Public Interactive Water Features and Fountains.

(a) A county, municipality, or the department may:

(1) require that the owner or operator of a public interactive water feature or fountain (PIWF) obtain a permit for operation of the water feature or fountain;

(2) inspect a PIWF for compliance with this subchapter; and

(3) require that the PIWF is tested for *Cryptosporidium* when the illness Cryptosporidiosis is diagnosed in an individual that has used that PIWF.

(b) A department or local regulatory representative, upon presenting credentials, shall have the right to enter at all reasonable times any area or environment, including but not limited to the PIWF facility, building, storage area, equipment room, or office area to investigate for compliance with these sections, to review records, to question any person, or to locate, to identify, and to assess the condition of the PIWF facility

(c) Advance notice or permission for inspections or investigations by the department or local regulatory authority is not required.

(d) A department or local regulatory representative shall not be impeded or refused entry in the course of the representative's official duties by reason of any state or federal law or company policy. It is a violation of the Act for a person to interfere with, deny, or delay an inspection or investigation conducted by a department or local regulatory representative.

(e) A county, municipality or the department may impose and collect a reasonable fee in connection with a permit or inspection requirement.

(f) If a county or municipality imposes and collects a fee for a permit or inspection of a PIWF the following conditions shall be met:

(1) the auditor for the county or municipality shall review the program every 2 years to ensure that the fees imposed do not exceed the cost of the program; and

(2) the county or municipality shall refund the permit holders any revenue determined by the auditor to exceed the cost of the program.

§265.308. Closure of a Public Interactive Water Feature and Fountain.

(a) A county, a municipality, or the department may by order close, for the period specified in the order, a public interactive water feature or fountain (PIWF),

(1) the operation of the PIWF violates this subchapter;

(2) the operation of the PIWF violates a permitting or inspection requirement imposed under the Act, this subchapter, or as authorized by the Act or this subchapter; or

(3) the water in the PIWF tests positive for the presence of *Cryptosporidium*.

(b) The closure order is effective immediately with or without notice and without a hearing to the PIWF owner or operator.

(c) If the order is issued under this section without a hearing, the department shall conduct a hearing no later than the 10th calendar day after the closure order to affirm, modify, or set aside the order.

(d) The hearing and appeal are governed by the department's rules in 25 Texas Administrative Code, Chapter 1, Subchapter B, regarding Formal Hearing Procedures, and Government Code, Chapter 2001.

(e) A PIWF shall be considered closed when the following conditions are met:

(1) a notice is posted at the public entrance of the PIWF notifying the public that the PIWF is closed; and

(2) water is shut off to all features of the PIWF.

(f) When water from a PIWF tests positive for the presence of *Cryptosporidium* the owner or operator shall close the PIWF and notify the appropriate regulatory authority. The PIWF shall not reopen until:

(1) the PIWF is hyperchlorinated following the Center for Disease Control's (CDC) Recommendations for Aquatics Operators of Treated Venues "Hyperchlorination to Kill *Cryptosporidium*" available on the CDC's website: www.cdc.gov/healthyswimming/; and

(2) documentation verifying that proper hyperchlorination procedure was followed by methodology the same as or equivalent to the CDC's "Water Contamination Response Log" available at: www.cdc.gov/healthyswimming/ is supplied to the appropriate regulatory authority.

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PREFACE

Introduction

The *International Swimming Pool and Spa Code*® (ISPSC®) establishes minimum requirements for the design, construction, alteration, repair and maintenance of swimming pools, spas, hot tubs and aquatic facilities. This 2021 edition is fully compatible with all of the International Codes® (I-Codes®) published by the International Code Council (ICC®), including the *International Building Code*® (IBC®), *International Energy Conservation Code*® (IECC®), *International Existing Building Code*® (IEBC®), *International Fire Code*® (IFC®), *International Fuel Gas Code*® (IFGC®), *International Green Construction Code*® (IgCC®), *International Mechanical Code*® (IMC®), *International Plumbing Code*® (IPC®), *International Private Sewage Disposal Code*® (IPSDC®), *International Property Maintenance Code*® (IPMC®), *International Residential Code*® (IRC®), *International Wildland-Urban Interface Code*® (IWUIC®), *International Zoning Code*® (IZC®), *International Code Council Performance Code*® (ICCP®).

The I-Codes, including this ISPSC, are used in a variety of ways in both the public and private sectors. Most industry professionals are familiar with the I-Codes as the basis of laws and regulations in communities across the US and in other countries. However, the impact of the codes extends well beyond the regulatory arena, as they are used in a variety of nonregulatory settings, including:

- Voluntary compliance programs such as those promoting sustainability, energy efficiency and disaster resistance.
- The insurance industry, to estimate and manage risk, and as a tool in underwriting and rate decisions.
- Certification and credentialing of individuals involved in the fields of building design, construction and safety.
- Certification of building and construction-related products.
- US federal agencies, to guide construction in an array of government-owned properties.
- Facilities management.
- “Best practices” benchmarks for designers and builders, including those who are engaged in projects in jurisdictions that do not have a formal regulatory system or a governmental enforcement mechanism.
- College, university and professional school textbooks and curricula.
- Reference works related to building design and construction.

In addition to the codes themselves, the code development process brings together building professionals on a regular basis. It provides an international forum for discussion and deliberation about building design, construction methods, safety, performance requirements, technological advances and innovative products.

Development

This 2021 edition presents the code as originally issued, with changes as reflected in the 2015 and 2018 editions and further changes approved by the ICC Code Development Process through 2019. A new edition such as this is promulgated every 3 years.

This code is founded on principles intended to establish provisions consistent with the scope of a swimming pool and spa code that adequately protects public health, safety and welfare; provisions that do not unnecessarily increase construction costs; provisions that do not restrict the use of new materials, products or methods of construction; and provisions that do not give preferential treatment to particular types or classes of materials, products or methods of construction.

Maintenance

The ISPSC is kept up to date through the review of proposed changes submitted by code enforcement officials, industry representatives, design professionals and other interested parties. Proposed changes are carefully considered through an open code development process in which all interested and affected parties may participate.

The ICC Code Development Process reflects principles of openness, transparency, balance, due process and consensus, the principles embodied in OMB Circular A-119, which governs the federal government's use of private-sector standards. The ICC process is open to anyone; there is no cost to participate, and people can participate without travel cost through the ICC's cloud-based app, cdpAccess®. A broad cross section of interests are represented in the ICC Code Development Process. The codes, which are updated regularly, include safeguards that allow for emergency action when required for health and safety reasons.

In order to ensure that organizations with a direct and material interest in the codes have a voice in the process, the ICC has developed partnerships with key industry segments that support the ICC's important public safety mission. Some code development committee members were nominated by the following industry partners and approved by the ICC Board:

- Pool and Hot Tub Alliance (PHTA) [formerly The Association of Pool and Spa Professionals (APSP)]
- American Institute of Architects (AIA)

The code development committees evaluate and make recommendations regarding proposed changes to the codes. Their recommendations are then subject to public comment and council-wide votes. The ICC's governmental members—public safety officials who have no financial or business interest in the outcome—cast the final votes on proposed changes.

The contents of this work are subject to change through the code development cycles and by any governmental entity that enacts the code into law. For more information regarding the code development process, contact the Codes and Standards Development Department of the ICC.

While the I-Code development procedure is thorough and comprehensive, the ICC, its members and those participating in the development of this code disclaim any liability resulting from the publication or use of the I-Codes, or from compliance or noncompliance with their provisions. The ICC does not have the power or authority to police or enforce compliance with the contents of this code.

Code Development Committee Responsibilities (Letter Designations in Front of Section Numbers)

In each code development cycle, code change proposals to this code are considered at the Committee Action Hearing by the International Swimming Pool and Spa Code Development Committee, whose action constitutes a recommendation to the voting membership for final action on the proposed change. Code change proposals to sections of the code that are preceded by a bracketed letter designation, such as [A], will be considered by a committee other than the Swimming Pool and Spa Code Development Committee. For example, proposed changes to Section [A] 102.1 will be considered by the Administrative Code Development Committee during the Committee Action Hearings in the 2022 (Group B) code development cycle.

The bracketed letter designations for committees responsible for portions of this code are as follows:

[A] = Administrative Code Development Committee; and

[BS] = IBC—Structural Code Development Committee

For the development of the 2024 edition of the I-Codes, there will be two groups of code development committees and they will meet in separate years, as shown in the following Code Development Hearings Table. Note that these are tentative groupings.

Code change proposals submitted for code sections that have a letter designation in front of them will be heard by the respective committee responsible for such code sections. Because different com-

committees hold Committee Action Hearings in different years, proposals for this code will be heard by committees in both the 2021 (Group A) and the 2022 (Group B) code development cycles.

Note that every section of Chapter 1 of this code is designated as the responsibility of the Administrative Code Development Committee, and that committee is part of the Group B portion of the code hearings. This committee will hold its code development hearings in 2022 to consider all code change proposals for Chapter 1 of this code and proposals for Chapter 1 of all I-Codes except the IECC, IRC and IgCC. Therefore, any proposals received for Chapter 1 of this code will be assigned to the Administrative Code Development Committee for consideration in 2022.

It is very important that anyone submitting code change proposals understand which code development committee is responsible for the section of the code that is the subject of the code change proposal. For further information on the code development committee responsibilities, please visit the ICC website at www.iccsafe.org/current-code-development-cycle.

CODE DEVELOPMENT HEARINGS

Group A Codes (Heard in 2021, Code Change Proposals Deadline: January 11, 2021)	Group B Codes (Heard in 2022, Code Change Proposals Deadline: January 10, 2022)
International Building Code – Egress (Chapters 10, 11, Appendix E) – Fire Safety (Chapters 7, 8, 9, 14, 26) – General (Chapters 2–6, 12, 27–33, Appendices A, B, C, D, K, N)	Administrative Provisions (Chapter 1 of all codes except IECC, IRC and IgCC; IBC Appendix O; the appendices titled “Board of Appeals” for all codes except IECC, IRC, IgCC, ICCPC and IZC; administrative updates to currently referenced standards; and designated definitions)
International Fire Code	International Building Code – Structural (Chapters 15–25, Appendices F, G, H, I, J, L, M)
International Fuel Gas Code	International Existing Building Code
International Mechanical Code	International Energy Conservation Code—Commercial
International Plumbing Code	International Energy Conservation Code—Residential – IECC—Residential – IRC—Energy (Chapter 11)
International Property Maintenance Code	International Green Construction Code (Chapter 1)
International Private Sewage Disposal Code	International Residential Code – IRC—Building (Chapters 1–10, Appendices AE, AF, AH, AJ, AK, AL, AM, AO, AQ, AR, AS, AT, AU, AV, AW)
International Residential Code – IRC—Mechanical (Chapters 12–23) – IRC—Plumbing (Chapters 25–33, Appendices AG, AI, AN, AP)	
International Swimming Pool and Spa Code	
International Wildland-Urban Interface Code	
International Zoning Code	

Note: Proposed changes to the ICCPC will be heard by the code development committee noted in brackets [] in the text of the ICCPC.

Marginal Markings

Solid vertical lines in the margins within the body of the code indicate a technical change from the requirements of the 2018 edition. Deletion indicators in the form of an arrow (➡) are provided in the margin where an entire section, exception or table has been deleted or an item in a list of items or row of a table has been deleted.

A single asterisk [*] placed in the margin indicates that text or a table has been relocated within the code. A double asterisk [**] placed in the margin indicates that the text or table immediately following it has been relocated there from elsewhere in the code. The following table indicates such relocations in the 2021 edition of the ISPC.

RELOCATIONS

2021 LOCATION	2018 LOCATION
104.8	103.4
104.8.1	103.4.1
106.2	105.5.6
108.1	105.6
108.4	105.6.1
107.1	106.17
107.2	106.17.2
109.2	106.18
109.1	106.19
110.1 - 110.16	106.1 - 106.16
113	107
111.2	108.1
A101.3 - A101.3.2	108.2 - 108.2.2
A101.3.4	108.2.3
A101.3.6	108.2.4
A101.3.5	108.2.5
A101.3.7	108.2.6
A101.5	108.3
A101.5.1	108.4
A101.4	108.4.1
A101.5.3	108.5

Coordination of the International Codes

The coordination of technical provisions is one of the strengths of the ICC family of model codes. The codes can be used as a complete set of complementary documents, which will provide users with full integration and coordination of technical provisions. Individual codes can also be used in subsets or as stand-alone documents. To make sure that each individual code is as complete as possible, some technical provisions that are relevant to more than one subject area are duplicated in some of the model codes. This allows users maximum flexibility in their application of the I-Codes.

Italicized Terms

Terms italicized in code text, other than document titles, are defined in Chapter 2. The terms selected to be italicized have definitions that the user should read carefully to better understand the code. Where italicized, the Chapter 2 definition applies. If not italicized, common-use definitions apply.

Adoption

The ICC maintains a copyright in all of its codes and standards. Maintaining copyright allows ICC to fund its mission through sales of books, in both print and electronic formats. The ICC welcomes adoption of its codes by jurisdictions that recognize and acknowledge the ICC's copyright in the code, and further acknowledge the substantial shared value of the public/private partnership for code development between jurisdictions and the ICC.

The ICC also recognizes the need for jurisdictions to make laws available to the public. All I-Codes and I-Standards, along with the laws of many jurisdictions, are available for free in a nondownloadable form on the ICC's website. Jurisdictions should contact the ICC at adoptions@iccsafe.org to learn how to adopt and distribute laws based on the ISPSC in a manner that provides necessary access, while maintaining the ICC's copyright.

To facilitate adoption, several sections of this code contain blanks for fill-in information that needs to be supplied by the adopting jurisdiction as part of the adoption legislation. For this code, please see:

Section 101.1. Insert: [NAME OF JURISDICTION]

Section 103.1. Insert: [INSERT NAME OF DEPARTMENT]

Section 113.4. Insert: [SPECIFY OFFENSE], [AMOUNT], and [NUMBER OF DAYS]

Effective Use of the International Swimming Pool and Spa Code

The ISPSC is a model code that regulates the minimum requirements for the design, construction, alteration, repair and maintenance of swimming pools, spas, hot tubs and aquatic facilities. This includes public swimming pools, public spas, public exercise spas, aquatic recreation facilities, onground storable residential pools, permanent inground residential pools, permanent residential spas, permanent residential exercise spas, portable residential spas and portable residential exercise spas.

In many jurisdictions, in addition to code officials having the responsibility for reviewing plans and inspecting the construction of pools and spas, environmental health officials also have a responsibility for oversight of the operation of pools and spas. In order to prevent disease and injuries, environmental health officials conduct operational evaluations (inspections). This may include water chemistry, credentials and training of pool operators and lifeguards, proper water circulation, facility staff's preparedness to respond to injuries and accidents, and proper sanitation and safety of the facility.

Code officials and environmental health officials commonly work closely in the plan review and inspection of pools and spas. This collaboration between departments to jointly review plans and inspect pools and spas is critical in order to achieve a safe and healthy environment for all that utilize these facilities.

The Pool and Hot Tub Alliance (PHTA) [formerly The Association of Pool & Spa Professionals (APSP)], a cooperating sponsor with ICC in the development and update of the ISPSC, further notes: "While it is recognized that proper construction and installation are essential, safe use of pools and spas requires common sense, including constant adult supervision of children and proper operation and maintenance. It is assumed and intended that pool users will exercise appropriate personal judgment and responsibility and that owners and operators of public and residential pools and spas will create and enforce rules and warning appropriate for their facilities."

ARRANGEMENT AND FORMAT OF THE 2021 ISPSC

The format of the ISPSC allows each chapter to be devoted to a particular subject with the exception of Chapter 3, which contains general compliance subject matter that is coordinated with the provisions for each type of pool and spa regulated in Chapters 4–10.

The following table shows how the ISPSC is divided. The ensuing chapter-by-chapter synopsis details the scope and intent of the provisions of the ISPSC.

Chapter Topics	
Chapters	Subjects
1	Scope and Administration
2	Definitions
3	General Compliance
4	Public Swimming Pools
5	Public Spas and Public Exercise Spas
6	Aquatic Recreation Facilities
7	Onground Storable Residential Swimming Pools
8	Permanent Inground Residential Swimming Pools
9	Permanent Residential Spas and Permanent Residential Exercise Spas
10	Portable Residential Spas and Portable Residential Exercise Spas
11	Referenced Standards
Appendix A	Board of Appeals

Chapter 1 Scope and Administration

This chapter contains provisions for the application, enforcement and administration of subsequent requirements of the code. Chapter 1 identifies which swimming pools and spas come under its purview. It is largely concerned with maintaining “due process of law” in enforcing the design and construction criteria contained in the body of the code. Only through careful observation of the administrative provisions can the code official reasonably expect to demonstrate that “equal protection under the law” has been provided.

Chapter 2 Definitions

Terms that are defined in the code are listed alphabetically in Chapter 2. While a defined term may be used in one chapter or another, the meaning provided in Chapter 2 is applicable throughout the code.

Where understanding of a term’s definition is especially key to or necessary for the understanding of a particular code provision, the term is shown in *italics* wherever it appears in the code. This is true only for those terms that have a meaning that is unique to the code. In other words, the generally understood meaning of a term or phrase might not be sufficient or consistent with the meaning prescribed by the code; therefore, it is essential that the code-defined meaning be known.

Guidance regarding tense, gender and plurality of defined terms as well as guidance regarding terms not defined in this code is provided.

Chapter 3 General Compliance

Chapter 3 is broad in scope. It includes a variety of requirements for pools and spas. This chapter provides requirements that are intended to maintain a minimum level of safety and sanitation for both the general public and the users of pools or spas. Chapter 3 provides specific criteria for electrical, plumbing, mechanical and fuel gas requirements; energy savings requirements; construction in flood hazard areas; barrier requirements; decks around pools and spas; general design; dimensional design; equipment; suction entrapment avoidance; circulation systems; filters; pumps and motors; return and suction fittings; skimmers; heaters; air blowers and air induction systems; water supply; sanitizing equipment; wastewater disposal; lighting; ladders and recessed treads; and safety. It is important to note that Chapter 3 is intended to provide general requirements not found in Chapters 4–10. Chapters 4–10 specifically reference Chapter 3 in order to coordinate the general provisions with the specific provisions based on the type of pool or spa.

Chapter 4 Public Swimming Pools

The purpose of Chapter 4 is to set forth specific requirements in the code for public swimming pools with regard to diving equipment, bather load limitations, rest ledges, wading pools, decks, deck equipment, filters, dressing and sanitary facilities, special features and signage. The term “public swimming pool” is defined in Chapter 2 and includes the different classes of pools (Class A – Class F).

Chapter 5 Public Spas and Public Exercise Spas

Chapter 5 establishes the specific criteria for public spas and public exercise spas with regard to materials, structure and design, pumps and motors, return and suction fittings, heater and temperature requirements, water supply, sanitation, oxidation equipment and chemical feeders, and safety features. The term “spa” is defined in Chapter 2.

Chapter 6 Aquatic Recreation Facilities

The purpose of Chapter 6 is to establish specific requirements for aquatic recreation facilities with regard to floors, markings and indications, circulation systems, handholds and ropes, depths, barriers, number of occupants, toilet rooms and bathrooms, special features and signage. The term “aquatic recreation facility” is defined in Chapter 2 and includes wave pools, leisure rivers, inner tube rides and body slides, to name a few.

Chapter 7 Onground Storable Residential Swimming Pools

The purpose of Chapter 7 is to establish specific requirements for onground storable residential swimming pools with regard to ladders and stairs, decks and circulation systems. The term “onground storable pool” is defined in Chapter 2. This chapter applies to what has been commonly referred to in past standards and codes as onground or above-ground pools. The application of the provisions for onground residential pools is limited to pools associated with detached one- and two-family dwellings and townhouses not more than three stories high in accordance with the definition of the term “residential” in Chapter 2.

Chapter 8 Permanent Inground Residential Swimming Pools

The purpose of Chapter 8 is to establish specific requirements for permanent inground residential swimming pools with regard to design, construction tolerances, diving water envelopes, walls, offset ledges, pool floors, diving equipment, special features, circulation systems and safety features. The application of the provisions for inground residential pools is limited to pools associated with detached one- and two-family dwellings and townhouses not more than three stories high in accordance with the definition of the term “residential” in Chapter 2.

Chapter 9 Permanent Residential Spas and Permanent Residential Exercise Spas

The purpose of Chapter 9 is to establish specific requirements for permanent residential spas and permanent residential exercise spas with regard to safety features. The application of the provisions for residential spas ("spa" is defined in Chapter 2) is limited to spas associated with detached one- and two-family dwellings and townhouses not more than three stories high in accordance with the definition of the term "residential" in Chapter 2.

Chapter 10 Portable Residential Spas and Portable Residential Exercise Spas

The purpose of Chapter 10 is to establish specific requirements for portable residential spas and portable residential exercise spas with regard to standards that the equipment must meet. The application of the provisions for residential spas ("spa" is defined in Chapter 2) is limited to spas associated with detached one- and two-family dwellings and townhouses not more than three stories high in accordance with the definition of the term "residential" in Chapter 2.

Chapter 11 Referenced Standards

The code contains numerous references to standards that are used to regulate materials and methods of construction. Chapter 11 contains a comprehensive list of all standards that are referenced in the code. The standards are part of the code to the extent of the reference to the standard. Compliance with the referenced standard is necessary for compliance with this code. By providing specifically adopted standards, the construction and installation requirements necessary for compliance with the code can be readily determined. The basis for code compliance is, therefore, established and available on an equal basis to the code official, contractor, designer and owner.

Chapter 11 is organized in a manner that makes it easy to locate specific standards. It lists all of the referenced standards, alphabetically, by acronym of the promulgating agency of the standard. Each agency's standards are then listed in either alphabetical or numeric order based on the standard identification. The list also contains the title of the standard; the edition (date) of the standard referenced; any addenda included as part of the ICC adoption; and the section or sections of this code that reference the standard.

Appendix A Board of Appeals

Section 111 of Chapter 1 requires the establishment of a board of appeals to hear appeals regarding determinations made by the code official. Appendix A provides qualification standards for members of the board as well as operational procedures of such board.

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CHAPTER 1

SCOPE AND ADMINISTRATION

User note:

About this chapter: Chapter 1 establishes the limits of applicability of this code and describes how the code is to be applied and enforced. Chapter 1 is in two parts: Part 1—Scope and Application (Sections 101–102) and Part 2—Administration and Enforcement (Sections 103–114). Section 101 identifies which buildings and structures come under its purview and references other I-Codes as applicable. Standards and codes are scoped to the extent referenced (see Section 102.7).

This code is intended to be adopted as a legally enforceable document and it cannot be effective without adequate provisions for its administration and enforcement. The provisions of Chapter 1 establish the authority and duties of the code official appointed by the authority having jurisdiction and also establish the rights and privileges of the design professional, contractor and property owner.

This chapter was extensively reorganized for the 2021 edition. For clarity, the relocation marginal markings have not been included. For complete information, see the Relocations Table in the Preface of this code.

PART 1—SCOPE AND APPLICATION

SECTION 101 SCOPE AND GENERAL REQUIREMENTS

[A] 101.1 Title. These regulations shall be known as the Swimming Pool and Spa Code of [NAME OF JURISDICTION], hereinafter referred to as “this code.”

[A] 101.2 Scope. The provisions of this code shall apply to the construction, alteration, movement, renovation, replacement, repair and maintenance of aquatic recreation facilities, pools and spas. The pools and spas covered by this code are either permanent or temporary, and shall be only those that are designed and manufactured to be connected to a circulation system and that are intended for swimming, bathing or wading.

101.2.1 Flotation tanks. Flotation tank systems intended for sensory deprivation therapy shall not be considered to be included in the scope of this code.

[A] 101.3 Purpose. The purpose of this code is to establish minimum requirements to provide a reasonable level of safety, health, property protection and general welfare by regulating and controlling the design, construction, installation, quality of materials, location and maintenance or use of pools and spas.

[A] 101.4 Severability. If any section, subsection, sentence, clause or phrase of this code is for any reason held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this code.

SECTION 102 APPLICABILITY

[A] 102.1 General. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall govern. Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern.

[A] 102.2 Existing installations. Any pool or spa and related mechanical, electrical and plumbing systems lawfully in existence at the time of the adoption of this code shall be permitted to have their use and maintenance continued if the use, maintenance or repair is in accordance with the original design and no hazard to life, health or property is created.

[A] 102.3 Maintenance. Pools and spas and related mechanical, electrical and plumbing systems, both existing and new, and parts thereof, shall be maintained in proper operating condition in accordance with the original design in a safe and sanitary condition. Devices or safeguards that are required by this code shall be maintained in compliance with the edition of the code under which they were installed.

The owner or the owner’s authorized agent shall be responsible for maintenance of systems. To determine compliance with this provision, the *code official* shall have the authority to require any system to be reinspected.

[A] 102.4 Additions, alterations or repairs. Additions, alterations, renovations or repairs to any pool, spa or related system shall conform to that required for a new system without requiring the existing systems to comply with the requirements of this code. Additions, alterations or repairs shall not cause existing systems to become unsafe, insanitary or overloaded.

Minor additions, alterations, renovations and repairs to existing systems shall be permitted in the same manner and arrangement as in the existing system, provided that such repairs or replacement are not hazardous and are *approved*.

[A] 102.5 Historic buildings. The provisions of this code relating to the construction, alteration, repair, enlargement, restoration, relocation or moving of pools, spas or systems shall not be mandatory for existing pools, spas or systems identified and classified by the state or local jurisdiction as part of a historic structure where such pools, spas or systems are judged by the *code official* to be safe and in the public interest of health, safety and welfare regarding any proposed construction, alteration, repair, enlargement, restoration, relocation or moving of such pool or spa.

SCOPE AND ADMINISTRATION

[A] 102.6 Moved pools and spas. Except as determined by Section 102.2, systems that are a part of a pool, spa or system moved into or within the jurisdiction shall comply with the provisions of this code for new installations.

[A] 102.7 Referenced codes and standards. The codes and standards referenced in this code shall be those that are listed in Chapter 11 and such codes and standards shall be considered to be part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between provisions of this code and the referenced standards, the provisions of this code shall be the minimum requirements.

[A] 102.7.1 Application of the International Codes. Where the *International Residential Code* is referenced in this code, the provisions of the *International Residential Code* shall apply to related systems in detached one- and two-family dwellings and townhouses not more than three stories in height. Other related systems shall comply with the applicable International Code or referenced standard.

[A] 102.8 Requirements not covered by code. Any requirements necessary for the strength, stability or proper operation of an existing or proposed system, or for the public safety, health and general welfare, not specifically covered by this code shall be determined by the *code official*.

[A] 102.9 Other laws. The provisions of this code shall not be deemed to nullify any provisions of local, state or federal law.

[A] 102.10 Application of references. References to chapter or section numbers, or to provisions not specifically identified by number, shall be construed to refer to such chapter, section or provision of this code.

PART 2—ADMINISTRATION AND ENFORCEMENT

SECTION 103 CODE COMPLIANCE AGENCY

[A] 103.1 Creation of agency. The [NAME OF DEPARTMENT] is hereby created and the official in charge thereof shall be known as the *code official*. The function of the agency shall be the implementation, administration and enforcement of the provisions of this code.

[A] 103.2 Appointment. The *code official* shall be appointed by the chief appointing authority of the jurisdiction.

[A] 103.3 Deputies. In accordance with the prescribed procedures of this jurisdiction and with the concurrence of the appointing authority, the *code official* shall have the authority to appoint a deputy *code official*, other related technical officers, inspectors and other employees. Such employees shall have powers as delegated by the *code official*.

SECTION 104

DUTIES AND POWERS OF THE CODE OFFICIAL

[A] 104.1 General. The *code official* is hereby authorized and directed to enforce the provisions of this code. The *code official* shall have the authority to render interpretations of this code and to adopt policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be in compliance with the intent and purpose of this code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this code.

[A] 104.2 Applications and permits. The *code official* shall receive applications, review construction documents and issue permits for the erection, alteration, demolition and moving of pools, spas and related mechanical, electrical and plumbing systems. The *code official* shall inspect the premises for which such permits have been issued and enforce compliance with the provisions of this code.

[A] 104.3 Notices and orders. The *code official* shall issue necessary notices or orders to ensure compliance with this code.

[A] 104.4 Inspections. The *code official* shall make the required inspections, or the *code official* shall have the authority to accept reports of inspection by *approved* agencies or individuals. Reports of such inspections shall be in writing and be certified by a responsible officer of such *approved* agency or by the responsible individual. The *code official* is authorized to engage such expert opinion as deemed necessary to report on unusual technical issues that arise, subject to the approval of the appointing authority.

[A] 104.5 Identification. The *code official* shall carry proper identification when inspecting structures or premises in the performance of duties under this code.

[A] 104.6 Right of entry. Where it is necessary to make an inspection to enforce the provisions of this code, or where the *code official* has reasonable cause to believe that there exists in a structure or on a premises a condition that is contrary to or in violation of this code that makes the structure or premises unsafe, dangerous or hazardous, the *code official* is authorized to enter the structure or premises at reasonable times to inspect or to perform the duties imposed by this code, provided that if such structure or premises be occupied that credentials be presented to the occupant and entry requested. If such structure or premises is unoccupied, the *code official* shall first make a reasonable effort to locate the owner, the owner's authorized agent or other person having charge or control of the structure or premises and request entry. If entry is refused, the *code official* shall have recourse to the remedies provided by law to secure entry.

[A] 104.7 Department records. The *code official* shall keep official records of applications received, permits and certificates issued, fees collected, reports of inspections, and notices and orders issued. Such records shall be retained in the official records for the period required for retention of public records.

[A] 104.8 Liability. The *code official*, member of the board of appeals or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered civilly or criminally liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties.

[A] 104.8.1 Legal defenses. Any suit or criminal complaint instituted against an officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by legal representatives of the jurisdiction until the final termination of the proceedings. The *code official* or any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of this code.

[A] 104.9 Modifications. Where there are practical difficulties involved in carrying out the provisions of this code, the *code official* shall have the authority to grant modifications for individual cases, upon application of the owner or owner's authorized agent, provided that the *code official* shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code and that such modification does not lessen sustainability, health, accessibility, life safety and structural requirements. The details of action granting modifications shall be recorded and entered in the files of the department of building safety.

[A] 104.10 Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any design or material or to prohibit any method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the *code official* finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code in quality, strength, effectiveness, durability and safety. Where the alternative material, design or method of construction is not *approved*, the *code official* shall respond in writing, stating the reasons why the alternative was not *approved*.

[A] 104.11 Required testing. Where there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, the *code official* shall have the authority to require tests as evidence of compliance to be made at no expense to the jurisdiction.

[A] 104.11.1 Test methods. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized and accepted test methods, the *code official* shall approve the testing procedures.

[A] 104.11.2 Testing agency. Tests shall be performed by an *approved* agency.

[A] 104.11.3 Test reports. Reports of tests shall be retained by the *code official* for the period required for retention of public records.

[A] 104.12 Alternative engineered design. The design, documentation, inspection, testing and approval of an alternative engineered design shall comply with Sections 104.12.1 through 104.12.6.

[A] 104.12.1 Design criteria. An alternative engineered design shall conform to the intent of the provisions of this code and shall provide an equivalent level of quality, strength, effectiveness, durability and safety. Material, equipment or components shall be designed and installed in accordance with the manufacturer's instructions.

[A] 104.12.2 Submittal. The registered design professional shall indicate on the permit application that the system is an alternative engineered design. The permit and permanent permit records shall indicate that an alternative engineered design was part of the *approved* installation.

[A] 104.12.3 Technical data. The registered design professional shall submit sufficient technical data to substantiate the proposed alternative engineered design and to prove that the performance meets the intent of this code.

[A] 104.12.4 Construction documents. The registered design professional shall submit to the *code official* two complete sets of signed and sealed construction documents for the alternative engineered design.

[A] 104.12.5 Design approval. Where the *code official* determines that the alternative engineered design conforms to the intent of this code, the system shall be *approved*. If the alternative engineered design is not *approved*, the *code official* shall notify the registered design professional in writing, stating the reasons why the alternative was not *approved*.

[A] 104.12.6 Inspection and testing. The alternative engineered design shall be tested and inspected in accordance with the requirements of Section 110.12.

[A] 104.13 Material and equipment reuse. Materials, equipment and devices shall not be reused unless such elements have been reconditioned, tested, placed in good and proper working condition and *approved*.

SECTION 105 PERMITS

[A] 105.1 When required. Any owner, or owner's authorized agent who desires to construct, enlarge, alter, repair, move, or demolish a pool or spa or to erect, install, enlarge, alter, repair, remove, convert or replace any system, the installation of which is regulated by this code, or to cause any such work to be performed, shall first make application to the *code official* and obtain the required permit for the work.

SCOPE AND ADMINISTRATION

[A] 105.2 Application for permit. Each application for a permit, with the required fee, shall be filed with the *code official* on a form furnished for that purpose and shall contain a general description of the proposed work and its location. The application shall be signed by the owner or the owner's authorized agent. The permit application shall contain such other information required by the *code official*.

[A] 105.3 Time limitation of application. An application for a permit for any proposed work shall be deemed to have been abandoned 180 days after the date of filing unless such application has been pursued in good faith or a permit has been issued; except that the *code official* is authorized to grant one or more extensions of time for additional periods not exceeding 180 days each. The extension shall be requested in writing and justifiable cause demonstrated.

[A] 105.4 Permit issuance. The application, construction documents and other data filed by an applicant for permit shall be reviewed by the *code official*. If the *code official* finds that the proposed work conforms to the requirements of this code and laws and ordinances applicable thereto, and that the fees specified in Section 108.1 have been paid, a permit shall be issued to the applicant.

[A] 105.4.1 Approved construction documents. When the *code official* issues the permit where construction documents are required, the construction documents shall be endorsed in writing and stamped "APPROVED." Such *approved* construction documents shall not be changed, modified or altered without authorization from the *code official*. Work shall be done in accordance with the *approved* construction documents.

The *code official* shall have the authority to issue a permit for the construction of a part of a system before the entire construction documents for the whole system have been submitted or *approved*, provided that adequate information and detailed statements have been filed complying with pertinent requirements of this code. The holders of such permit shall proceed at their own risk without assurance that the permit for the entire system will be granted.

[A] 105.4.2 Validity. The issuance of a permit or approval of construction documents shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or any other ordinance of the jurisdiction. Any permit presuming to give authority to violate or cancel the provisions of this code shall not be valid.

The issuance of a permit based on construction documents and other data shall not prevent the *code official* from thereafter requiring the correction of errors in said construction documents and other data or from preventing building operations being carried on thereunder where in violation of this code or of other ordinances of this jurisdiction.

[A] 105.4.3 Expiration. Every permit issued shall become invalid unless the work authorized by such permit is commenced within 180 days after its issuance, or if the work authorized by such permit is suspended or abandoned for a period of 180 days after the time the

work is commenced. The *code official* is authorized to grant, in writing, one or more extensions of time, for a period not more than 180 days. The extension shall be requested in writing and justifiable cause demonstrated.

[A] 105.4.4 Extensions. Any permittee holding an unexpired permit shall have the right to apply for an extension of the time within which the permittee will commence work under that permit when work is unable to be commenced within the time required by this section for good and satisfactory reasons. The *code official* shall extend the time for action by the permittee for a period not exceeding 180 days if there is reasonable cause. The fee for an extension shall be one-half the amount required for a new permit for such work.

[A] 105.4.5 Suspension or revocation of permit. The *code official* shall revoke a permit or approval issued under the provisions of this code in case of any false statement or misrepresentation of fact in the application or on the construction documents on which the permit or approval was based.

SECTION 106 CONSTRUCTION DOCUMENTS

[A] 106.1 Construction documents. Construction documents, engineering calculations, diagrams and other such data shall be submitted in two or more sets with each application for a permit. The *code official* shall require construction documents, computations and specifications to be prepared and designed by a registered design professional where required by state law. Construction documents shall be drawn to scale and shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that the work conforms to the provisions of this code.

[A] 106.2 Retention of construction documents. One set of *approved* construction documents shall be retained by the *code official* for a period of not less than 180 days from date of completion of the permitted work, or as required by state or local laws. One set of *approved* construction documents shall be returned to the applicant, and said set shall be kept on the site of the building or work at all times during which the work authorized thereby is in progress.

SECTION 107 NOTICE OF APPROVAL

[A] 107.1 Approval. After the prescribed tests and inspections indicate that the work complies in all respects with this code, a notice of approval shall be issued by the *code official*.

[A] 107.2 Revocation. The *code official* is authorized to, in writing, suspend or revoke a notice of approval issued under the provisions of this code wherever the notice is issued in error, or on the basis of the incorrect information supplied, or where it is determined that the building or structure, premise, system or portion thereof is in violation of any ordinance or regulation or any of the provisions of this code.

SECTION 108 FEES

[A] 108.1 Fees. A permit shall not be valid until the fees prescribed by law have been paid. An amendment to a permit shall not be released until the additional fee, if any, has been paid.

[A] 108.2 Schedule of permit fees. Where work requires a permit, a fee for each permit shall be paid as required, in accordance with the schedule as established by the applicable governing authority

[A] 108.3 Permit valuations. The applicant for a permit shall provide an estimated permit value at time of application. Permit valuations shall include total value of work, including materials and labor, for which the permit is being issued, such as mechanical equipment and permanent systems. If, in the opinion of the *code official*, the valuation is underestimated on the application, the permit shall be denied, unless the applicant can show detailed estimates to meet the approval of the *code official*. Final building permit valuation shall be set by the *code official*.

[A] 108.4 Work commencing before permit issuance. Any person who commences any work on a mechanical system before obtaining the necessary permits shall be subject to a fee as established by the *code official* that shall be in addition to the required permit fees.

[A] 108.5 Related fees. The payment of the fee for the construction, alteration, removal or demolition for work done in connection to or concurrently with the work authorized by a permit shall not relieve the applicant or holder of the permit from the payment of other fees that are prescribed by law.

[A] 108.6 Refunds The *code official* is authorized to establish a refund policy.

SECTION 109 SERVICE UTILITIES

[A] 109.1 Connection of service utilities. A person shall not make connections from a utility, source of energy, fuel, power, water system or sewer system to any building or system that is regulated by this code for which a permit is required until authorized by the *code official*.

[A] 109.2 Temporary connection. The *code official* shall have the authority to authorize the temporary connection of the building or system to the utility, source of energy, fuel, power, water system or sewer system for the purpose of testing systems or for use under a temporary approval.

[A] 109.3 Authority to disconnect service utilities. The *code official* shall have the authority to authorize disconnection of utility service to the building, structure or system regulated by this code and the referenced codes and standards in case of emergency where necessary to eliminate an immediate hazard to life or property or where such utility connection has been made without the approval required by Section 108.2 or 108.3. The *code official* shall notify the serving utility, and wherever possible the owner or the owner's authorized agent and occupant of the building,

structure or service system of the decision to disconnect prior to taking such action. If not notified prior to disconnecting, the owner, the owner's authorized agent or occupant of the building, structure or service system shall be notified in writing, as soon as practical thereafter.

SECTION 110 INSPECTIONS

[A] 110.1 General. Construction or work for which a permit is required shall be subject to inspection by the *code official* and such construction or work shall remain visible and able to be accessed for inspection purposes until *approved*. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction. Inspections presuming to give authority to violate or cancel the provisions of this code or of other ordinances of the jurisdiction shall not be valid. It shall be the duty of the permit applicant to cause the work to remain accessible and exposed for inspection purposes. Neither the *code official* nor the jurisdiction shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.

[A] 110.2 Preliminary inspection. Before issuing a permit, the *code official* is authorized to examine or cause to be examined buildings, structures and sites for which an application has been filed.

[A] 110.3 Required inspections and testing. Pool and spa installations or alterations thereto, including equipment, piping, and appliances related thereto, shall be inspected by the *code official* to ensure compliance with the requirements of this code.

[A] 110.4 Other inspections. In addition to the inspections specified in Sections 110.2 and 110.3, the *code official* is authorized to make or require other inspections of any construction work to ascertain compliance with the provisions of this code and other laws that are enforced.

[A] 110.5 Inspection request. It shall be the duty of the holder of the permit or their duly authorized agent to notify the *code official* when work is ready for inspection. It shall be the duty of the permit holder to provide access to and means for inspections of such work that are required by this code.

[A] 110.6 Approval required. Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of the *code official*. The *code official*, upon notification, shall make the requested inspection and shall either indicate the portion of the construction that is satisfactory as completed, or notify the permit holder or his or her agent wherein the same fails to comply with this code. Any portions that do not comply shall be corrected and such portion shall not be covered or concealed until authorized by the *code official*.

[A] 110.7 Approved agencies. Test reports submitted to the *code official* for consideration shall be developed by *approved* agencies that have satisfied the requirements as to qualifications and reliability.

SCOPE AND ADMINISTRATION

[A] 110.8 Evaluation and follow-up inspection services. Prior to the approval of a closed, prefabricated system and the issuance of a permit, the *code official* shall require the submittal of an evaluation report on each prefabricated system indicating the complete details of the system, including a description of the system and its components, the basis on which the system is being evaluated, test results and similar information, and other data as necessary for the *code official* to determine conformance to this code.

[A] 110.9 Evaluation service. The *code official* shall designate the evaluation service of an *approved* agency as the evaluation agency, and review such agency's evaluation report for adequacy and conformance to this code.

[A] 110.10 Follow-up inspection. Except where ready access is provided to systems, service equipment and accessories for complete inspection at the site without disassembly or dismantling, the *code official* shall conduct the frequency of in-plant inspections necessary to ensure conformance to the *approved* evaluation report or shall designate an independent, *approved* inspection agency to conduct such inspections. The inspection agency shall furnish the *code official* with the follow-up inspection manual and a report of inspections on request, and the system shall have an identifying label permanently affixed to the system indicating that factory inspections have been performed.

[A] 110.11 Test and inspection records. Required test and inspection records shall be available to the *code official* at all times during the fabrication of the system and the installation of the system, or such records as the *code official* designates shall be filed.

[A] 110.12 Special inspections. Special inspections of alternative engineered design systems shall be conducted in accordance with Sections 110.12.1 and 110.12.2.

[A] 110.12.1 Periodic inspection. The registered design professional or designated inspector shall periodically inspect and observe the alternative engineered design to determine that the installation is in accordance with the *approved* construction documents. Discrepancies shall be brought to the immediate attention of the contractor for correction. Records shall be kept of inspections.

[A] 110.12.2 Written report. The registered design professional shall submit a final report in writing to the *code official* upon completion of the installation, certifying that the alternative engineered design conforms to the *approved* construction documents. A notice of approval for the system shall not be issued until a written certification has been submitted.

[A] 110.13 Testing. Systems shall be tested as required by this code. Tests shall be made by the permit holder and the *code official* shall have the authority to witness such tests.

[A] 110.14 New, altered, extended or repaired systems. New systems and parts of existing systems that have been altered, extended or repaired shall be tested as prescribed by this code.

[A] 110.15 Equipment, material and labor for tests. Equipment, material and labor required for testing a system or part thereof shall be furnished by the permit holder.

[A] 110.16 Reinspection and testing. Where any work or installation does not pass any initial test or inspection, the necessary corrections shall be made to comply with this code. The work or installation shall then be resubmitted to the *code official* for inspection and testing.

SECTION 111 MEANS OF APPEAL

[A] 111.1 General. In order to hear and decide appeals of orders, decisions or determinations made by the *code official* relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The board of appeals shall be appointed by the applicable governing authority and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business and shall render all decisions and findings in writing to the appellant with a duplicate copy to the *code official*.

[A] 111.2 Limitations on authority. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equivalent or better form of construction is proposed. The board shall not have authority to waive requirements of this code or interpret the administration of this code.

[A] 111.3 Qualifications. The board of appeals shall consist of members who are qualified by experience and training and are not employees of the jurisdiction.

[A] 111.4 Administration. The *code official* shall take immediate action in accordance with the decision of the board.

SECTION 112 BOARD OF APPEALS

[A] 112.1 Membership of board. The board of appeals shall consist of five members appointed by the chief appointing authority as follows: one for 5 years, one for 4 years, one for 3 years, one for 2 years and one for 1 year. Thereafter, each new member shall serve for 5 years or until a successor has been appointed.

SECTION 113 VIOLATIONS

[A] 113.1 Unlawful acts. It shall be unlawful for any person, firm or corporation to erect, construct, alter, repair, remove, demolish or utilize any system, or cause same to be done, in conflict with or in violation of any of the provisions of this code.

[A] 113.2 Notice of violation. The *code official* shall serve a notice of violation or order to the person responsible for the erection, installation, alteration, extension, repair, removal or demolition of work in violation of the provisions of this code, or in violation of a detail statement or the *approved* construction documents there under, or in violation of a permit or certificate issued under the provisions of this code. Such order shall direct the discontinuance of the illegal action or condition and the abatement of the violation.

[A] 113.3 Prosecution of violation. If the notice of violation is not complied with promptly, the *code official* shall request the legal counsel of the jurisdiction to institute the appropriate proceeding at law or in equity to restrain, correct or abate such violation, or to require the removal or termination of the unlawful pool or spa in violation of the provisions of this code or of the order or direction made pursuant thereto.

[A] 113.4 Violation penalties. Any person who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter or repair a pool or spa in violation of the *approved* construction documents or directive of the *code official*, or of a permit or certificate issued under the provisions of this code, shall be guilty of a **[SPECIFY OFFENSE]**, punishable by a fine of not more than **[AMOUNT]** dollars or by imprisonment not exceeding **[NUMBER OF DAYS]**, or both such fine and imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

[A] 113.5 Abatement of violation. The imposition of the penalties herein prescribed shall not preclude the legal officer of the jurisdiction from instituting appropriate action to prevent violation, or to prevent illegal use of a pool or spa, or to stop an illegal act, conduct, business or utilization of the plumbing on or about any premises.

[A] 113.6 Unsafe systems. Any system regulated by this code that is unsafe or that constitutes a fire or health hazard, insanitary condition, or is otherwise dangerous to human life is hereby declared unsafe. Any use of a system regulated by this code constituting a hazard to safety, health or public welfare by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, disaster, damage or abandonment is hereby declared an unsafe use. Any such unsafe system is hereby declared to be a public nuisance and shall be abated by repair, rehabilitation, demolition or removal.

[A] 113.6.1 Authority to condemn a system. Where the *code official* determines that any system, or portion thereof, regulated by this code has become hazardous to life, health or property or has become insanitary, the *code official* shall order in writing that such system either be removed or restored to a safe or sanitary condition. A time limit for compliance with such order shall be specified in the written notice. A person shall not use or maintain a defective system after receiving such notice.

Where such a system is to be disconnected, written notice as prescribed in Section 113.2 shall be given. In cases of immediate danger to life or property, such disconnection shall be made immediately without such notice.

[A] 113.6.2 Authority to disconnect service utilities. The *code official* shall have the authority to authorize disconnection of utility service to the pool or spa regulated by the technical codes in case of an emergency, where necessary, to eliminate an immediate danger to life or property. Where possible, the owner or the owner's authorized agent and occupant of the building where the pool or spa is located shall be notified of the decision to disconnect utility service prior to taking such action. If not notified prior to disconnecting, the owner, the owner's authorized agent or the occupant of the building shall be notified in writing, as soon as practical thereafter.

[A] 113.6.3 Connection after order to disconnect. A person shall not make connections from any energy, fuel, power supply or water distribution system, or supply energy, fuel or water to any equipment regulated by this code that has been disconnected or ordered to be disconnected by the *code official* or the use of which has been ordered to be discontinued by the *code official* until the *code official* authorizes the reconnection and use of such equipment.

When any system is maintained in violation of this code, and in violation of any notice issued pursuant to the provisions of this section, the *code official* shall institute any appropriate action to prevent, restrain, correct or abate the violation.

SECTION 114 STOP WORK ORDER

[A] 114.1 Authority. Where the *code official* finds any work regulated by this code being performed in a manner contrary to the provisions of this code or in a dangerous or unsafe manner, the *code official* is authorized to issue a stop work order.

[A] 114.2 Issuance. The stop work order shall be in writing and shall be given to the owner of the property, the owner's authorized agent or the person performing the work. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order and the conditions under which the cited work is authorized to resume.

[A] 114.3 Emergencies. Where an emergency exists, the *code official* shall not be required to give a written notice prior to stopping the work.

[A] 114.4 Failure to comply. Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be subject to fines established by the authority having jurisdiction.

CHAPTER 2

DEFINITIONS

User note:

About this chapter: Codes, by their very nature, are technical documents. Every word, term and punctuation mark can add to or change the meaning of a technical requirement. It is necessary to maintain a consensus on the specific meaning of each term contained in the code. Chapter 2 performs this function by stating clearly what specific terms mean for the purpose of the code.

SECTION 201 GENERAL

201.1 Scope. Unless otherwise expressly stated, the following words and terms shall, for the purposes of this code, have the meanings shown in this chapter.

201.2 Interchangeability. Words used in the present tense include the future; words stated in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural, the singular.

201.3 Terms defined in other codes. Where terms are not defined in this code and are defined in the *International Building Code*, *International Energy Conservation Code*, *International Fire Code*, *International Fuel Gas Code*, *International Mechanical Code*, *International Plumbing Code* or *International Residential Code*, such terms shall have the meanings ascribed to them as in those codes.

201.4 Terms not defined. Where terms are not defined through the methods authorized by this section, such terms shall have ordinarily accepted meanings such as the context implies.

SECTION 202 DEFINITIONS

ACCESSIBLE. Signifies access that requires the removal of an access panel or similar removable obstruction.

ACTIVITY POOL. A pool designed primarily for play activity that uses constructed features and devices including lily pad walks, flotation devices, small slide features, and similar attractions.

AIR INDUCTION SYSTEM. A system whereby a volume of air is introduced into hollow ducting built into a spa floor, bench, or hydrotherapy jets.

[A] ALTERATION. Any construction or renovation to an existing pool or spa other than repair.

[A] APPROVED. Acceptable to the code official or authority having jurisdiction.

[A] APPROVED AGENCY. An established and recognized agency regularly engaged in conducting tests or furnishing inspection services, or furnishing product certification where such agency has been *approved* by the *code official*.

AQUATIC RECREATION FACILITY. A facility that is designed for free-form aquatic play and recreation. The facilities may include, but are not limited to, wave or surf action

pools, leisure rivers, sand bottom pools, vortex pools, activity pools, inner tube rides, body slides and interactive play attractions.

BACKWASH. The process of cleansing the filter medium or elements by the reverse flow of water through the filter.

BACKWASH CYCLE. The time required to backwash the filter medium or elements and to remove debris in the pool or spa filter.

BARRIER. A permanent fence, wall, building wall, or combination thereof that completely surrounds the pool or spa and obstructs the access to the pool or spa. The term “permanent” shall mean not being able to be removed, lifted, or relocated without the use of a tool.

BATHER. A person using a pool, spa or hot tub and adjoining deck area for the purpose of water sports, recreation, therapy or related activities.

BATHER LOAD. The number of persons in the pool or spa water at any given moment or during any stated period of time.

BEACH ENTRY. Sloping entry starting above the waterline at deck level and ending below the waterline. The presence of sand is not required. Also called “zero entry.”

CHEMICAL FEEDER. A floating or mechanical device for adding a chemical to pool or spa water.

CHEMICAL STORAGE SPACE. A space in an aquatic facility used for the storage of pool or spa chemicals such as acids, salt, or corrosive or oxidizing chemicals.

CIRCULATION EQUIPMENT. The components of a circulation system.

CIRCULATION SYSTEM. The mechanical components that are a part of a recirculation system on a pool or spa. Circulation equipment may be, but is not limited to, categories of pumps, hair and lint strainers, filters, valves, gauges, meters, heaters, surface skimmers, inlet fittings, outlet fittings and chemical feeding devices. The components have separate functions, but where connected to each other by piping, perform as a coordinated system for purposes of maintaining pool or spa water in a clear and sanitary condition.

[A] CODE OFFICIAL. The officer or other designated authority charged with the administration and enforcement of this code, or a duly authorized representative.

DEFINITIONS

[A] CONSTRUCTION DOCUMENTS. Written, graphic and pictorial documents prepared or assembled for describing the design, location and physical characteristics of the elements of a project necessary for obtaining a building permit.

COPPER ALLOY. A homogeneous mixture of not less than two metals where not less than 50 percent of the finished metal is copper.

DECK. An area immediately adjacent to or attached to a pool or spa that is specifically constructed or installed for sitting, standing, or walking.

DEEP AREA. Water depth areas exceeding 5 feet (1524 mm).

DESIGN PROFESSIONAL. An individual who is registered or licensed to practice his or her respective design profession as defined by the statutory requirements of the professional registration or licensing laws of the state or jurisdiction in which the project is to be constructed.

DESIGN RATE OF FLOW. The rate of flow used for design calculations in a system.

DESIGN WATERLINE. The centerline of the *skimmer* or other point as defined by the designer of the pool or spa.

DIVING AREA. The area of a swimming pool that is designed for diving.

DIVING BOARD. A flexible board secured at one end that is used for diving such as a spring board or a jump board.

DIVING PLATFORM. A stationary platform designed for diving.

DIVING STAND. Any supporting device for a springboard, jump board or diving board.

EQUIPMENT ROOM. A space intended for the operation of pool pumps, filters, heaters, and controllers. This space is not intended for the storage of hazardous pool or spa chemicals.

EXERCISE SPA (Also known as a swim spa). Variants of a spa in which the design and construction includes specific features and equipment to produce a water flow intended to allow recreational physical activity including, but not limited to, swimming in place. Exercise spas can include peripheral jetted seats intended for water therapy, heater, circulation and filtration system, or can be a separate distinct portion of a combination spa/exercise spa and can have separate controls. These spas are of a design and size such that they have an unobstructed volume of water large enough to allow the 99th Percentile Man as specified in APSP 16 to swim or exercise in place.

EXISTING POOL OR SPA. A pool or spa constructed prior to the date of adoption of this code, or one for which a legal building permit has been issued.

FILTER. A device that removes undissolved particles from water by recirculating the water through a porous substance such as filter medium or elements.

FILTRATION. The process of removing undissolved particles from water by recirculating the water through a porous substance such as filter medium or elements.

[BS] FLOOD HAZARD AREA. The greater of the following two areas:

1. The area within a flood plain subject to a 1-percent or greater chance of flooding in any year.
2. The area designated as a *flood hazard area* on a community's flood hazard map, or otherwise legally designated.

FLUME. A trough-like or tubular structure, generally recognized as a water slide, that directs the path of travel and the rate of descent by the rider.

GUTTER. Overflow trough in the perimeter wall of a pool that is a component of the circulation system or flows to waste.

HAIR AND LINT STRAINER. A device attached on or in front of a pump to which the influent line (suction line) is connected for the purpose of entrapping lint, hair, or other debris that could damage the pump.

HANDHOLD. That portion of a pool or spa structure or a specific element that is at or above the design waterline that users in the pool grasp onto for support.

HANDRAIL. A support device that is intended to be gripped by a user for the purpose of resting or steadying, typically located within or at exits to the pool or spa or as part of a set of steps.

HYDROTHERAPY JET. A fitting that blends air and water, creating a high-velocity turbulent stream of air-enriched water.

INDOOR AQUATIC FACILITY. A physical place that contains one or more pools or spas and the surrounding bather and spectator/stadium seating areas within a structure that meets the definition of "Building" in the *International Building Code*. It does not include equipment, chemical storage, or bather hygiene rooms or any other rooms with a direct opening to the aquatic facility. Also known as a natatorium.

INTERACTIVE WATER PLAY FEATURES. Any indoor or outdoor structure designed to allow for public recreational activities with recirculated, filtered, and treated water that includes sprayed, jetted or other water sources contacting bathers and not incorporating standing or captured water as part of the bather activity area. These installations are also known as splash pads, spray pads, and wet decks.

JUMP BOARD. A manufactured diving board that has a coil spring, leaf spring, or comparable device located beneath the board that is activated by the force exerted by jumping on the board's end.

[A] JURISDICTION. The governmental unit that has adopted this code.

[A] LABEL. An identification applied on a product by the manufacturer that contains the name of the manufacturer, the function and performance characteristics of the product or material, and the name and identification of an *approved* agency and that indicates that the representative sample of the product or material has been tested and evaluated by an *approved* agency.

[A] LABELED. Equipment, materials or products to which has been affixed a label, seal, symbol or other identifying mark of a nationally recognized testing laboratory, *approved* agency or other organization concerned with product evaluation that maintains periodic inspection of the production of the above-labeled items and whose *labeling* indicates either that the equipment, material or product meets identified standards or has been tested and found suitable for a specified purpose.

LADDER. A structure for ingress and egress that usually consists of two long parallel side pieces joined at intervals by crosspieces such as treads.

Type A double access ladder. An “A-Frame” ladder that straddles the pool wall of an above-ground pool and provides ingress and egress and is intended to be removed when not in use.

Type B limited access ladder. An “A-Frame” ladder that straddles the pool wall of an above-ground/onground pool. Type B ladders are removable and have a built-in feature that prevents entry to the pool when the pool is not in use.

Type C ladder. A “ground to deck” staircase ladder that allows access to an above-ground pool deck and has a built-in entry-limiting feature.

Type D in-pool ladder. Located in the pool to provide a means of ingress and egress from the pool to the deck.

Type E or F in-pool staircase ladder. Located in the pool to provide a means of ingress and egress from the pool to the deck.

LIFELINE. An anchored line thrown to aid in rescue.

[A] LISTED. Equipment, materials, products or services included in a list published by an organization acceptable to the code official and concerned with evaluation of products or services that maintains periodic inspection of production of *listed* equipment or materials or periodic evaluation of services and whose listing states either that the equipment, material, product or service meets identified standards or has been tested and found suitable for a specified purpose.

MAINTAINED ILLUMINATION. The value, in foot-candles or equivalent units, below which the average illuminance on a specified surface is not allowed to fall. *Maintained illumination* equals the initial average illuminance on the specified surface with new lamps, multiplied by the light loss factor (LLF), to account for reduction in lamp intensity over time.

NEGATIVE EDGE. See “*Vanishing edge*.”

NONENTRY AREA. An area of the deck from which entry into the pool or spa is prohibited.

ONGROUND STORABLE POOL. A pool that can be disassembled for storage or transport. This includes portable pools with flexible or nonrigid walls that achieve their structural integrity by means of uniform shape, a support frame or a combination thereof, and that can be disassembled for storage or relocation.

OVERFLOW GUTTER. The *gutter* around the top perimeter of the pool or spa, which is used to skim the surface.

[A] OWNER. Any person, agent, operator, entity, firm or corporation having any legal or equitable interest in the property; or recorded in the official records of the state, county or municipality as holding an interest or title to the property; or otherwise having possession or control of the property, including the guardian of the estate of any such person, and the executor or administrator of the estate of such person if ordered to take possession of real property by a court.

[A] PERMIT. An official document or certificate issued by the authority having jurisdiction that authorizes performance of a specified activity.

POOL. See “*Public swimming pool*” and “*Residential swimming pool*.”

POWER SAFETY COVER. A pool cover that is placed over the water area, and is opened and closed with a motorized mechanism activated by a control switch.

PUBLIC SWIMMING POOL (Public Pool). A pool, other than a *residential* pool, that is intended to be used for swimming or bathing and is operated by an owner, lessee, operator, licensee or concessionaire, regardless of whether a fee is charged for use. Public pools shall be further classified and defined as follows:

Class A competition pool. A pool intended for use for accredited competitive aquatic events such as Federation Internationale De Natation (FINA), USA Swimming, USA Diving, USA Synchronized Swimming, USA Water Polo, National Collegiate Athletic Association (NCAA), or the National Federation of State High School Associations (NFHS).

Class B public pool. A pool intended for public recreational use that is not identified in the other classifications of public pools.

Class C semi-public pool. A pool operated solely for and in conjunction with lodgings such as hotels, motels, apartments or condominiums.

Class D-1 wave action pool. A pool designed to simulate breaking or cyclic waves for purposes of general play or surfing.

Class D-2 activity pool. A pool designed for casual water play ranging from simple splashing activity to the use of attractions placed in the pool for recreation.

Class D-3 catch pool. A body of water located at the termination of a manufactured waterslide attraction. The body of water is provided for the purpose of terminating the slide action and providing a means for exit to a deck or walkway area.

Class D-4 leisure river. A manufactured stream of water of near-constant depth in which the water is moved by pumps or other means of propulsion to provide a river-like flow that transports bathers over a defined path that may include water features and play devices.

Class D-5 vortex pool. A circular pool equipped with a method of transporting water in the pool for the purpose of propelling riders at speeds dictated by the velocity of the moving stream of water.

DEFINITIONS

Class D-6 interactive play attraction. A manufactured water play device or a combination of water-based play devices in which water flow volumes, pressures or patterns can be varied by the bather without negatively influencing the hydraulic conditions for other connected devices. These attractions incorporate devices or activities such as slides, climbing and crawling structures, visual effects, user-actuated mechanical devices and other elements of bather-driven and bather-controlled play.

Class E. Pools used for instruction, play or therapy and with temperatures above 86°F (30°C).

Class F. Class F pools are wading pools and are covered within the scope of this code as set forth in Section 405.

Public pools are either a diving or nondiving type. Diving types of public pools are classified into types as an indication of the suitability of a pool for use with diving equipment.

Type O. A nondiving public pool.

Types VI–IX. Public pools suitable for the installation of diving equipment by type.

RECESSED TREADS. A series of vertically spaced cavities in a pool or spa wall creating tread areas for step holes.

RECIRCULATION SYSTEM. See “*Circulation system.*”

[A] REPAIR. The reconstruction or renewal of any part of a pool or spa for the purpose of its maintenance or to correct damage.

RESIDENTIAL. For purposes of this code, *residential* applies to detached one- and two-family dwellings and townhouses not more than three stories in height.

RESIDENTIAL SWIMMING POOL (Residential Pool). A pool intended for use that is accessory to a *residential* setting and available only to the household and its guests. Other pools shall be considered to be public pools for purposes of this code.

Type O. A nondiving *residential* pool.

Types I–V. *Residential* pools suitable for the installation of diving equipment by type.

RETURN INLET. The aperture or fitting through which the water under positive pressure returns into a pool.

RING BUOY. A ring-shaped floating buoy capable of supporting a user, usually attached to a throwing line.

ROPE AND FLOAT LINE. A continuous line not less than 1/4 inch (6 mm) in diameter that is supported by buoys and attached to opposite sides of a pool to separate the deep and shallow ends.

RUNOUT. A continuation of water slide flume surface where riders are intended to decelerate and come to a stop.

SAFETY COVER. A structure, fabric or assembly, along with attendant appurtenances and anchoring mechanisms, that is temporarily placed or installed over an entire pool, spa or hot tub and secured in place after all bathers are absent from the water.

SHALL. The term, where used in the code, is construed as mandatory.

SHALLOW AREAS. Portions of a pool or spa with water depths less than 5 feet (1524 mm).

SKIMMER. A device installed in the pool or spa that permits the removal of floating debris and surface water to the filter.

SLIP RESISTANT. A surface that has been treated or constructed to significantly reduce the chance of a user slipping. The surface shall not be an abrasion hazard.

SLOPE BREAK. Occurs at the point where the slope of the pool floor changes to a greater slope.

SPA. A product intended for the immersion of persons in temperature-controlled water circulated in a closed system, and not intended to be drained and filled with each use. A spa usually includes a filter, an electric, solar or gas heater, a pump or pumps, and a control, and can include other equipment, such as lights, blowers, and water-sanitizing equipment.

Nonself-contained spa. A factory-built *spa* in which the water heating and circulating equipment is not an integral part of the product. Nonself-contained spas may employ separate components such as an individual filter, pump, heater and controls, or they can employ assembled combinations of various components.

Permanent residential spa. A spa, intended for use that is accessory to a *residential* setting and available to the household and its guests and where the water heating and water-circulating equipment is not an integral part of the product. The spa is intended as a permanent plumbing fixture and not intended to be moved.

Portable residential spa. A spa intended for use that is accessory to a *residential* setting and available to the household and its guests and where it is either self-contained or nonself-contained.

Public spa. A spa other than a permanent *residential* spa or portable *residential* spa that is intended to be used for bathing and is operated by an owner, licensee or concessionaire, regardless of whether a fee is charged for use.

Self-contained spa. A factory-built spa in which all control, water heating and water-circulating equipment is an integral part of the product. Self-contained spas may be permanently wired or cord connected.

SPRAY POOL. A pool or basin occupied by construction features that spray water in various arrays for the purpose of wetting the persons playing in the spray streams.

SUBMERGED VACUUM FITTING. A fitting intended to provide a point of connection for suction side automatic swimming pool, *spa*, and hot tub cleaners.

SUCTION OUTLET. A submerged fitting, fitting assembly, cover/grate and related components that provide a localized low-pressure area for the transfer of water from a swimming pool, spa or hot tub. Submerged suction outlets have been referred to as main drains.

SURFACE SKIMMING SYSTEM. A device or system installed in the pool or spa that permits the removal of floating debris and surface water to the filter.

DEFINITIONS

SURGE CAPACITY. The storage volume in a surge tank, gutter, and plumbing lines.

SURGE TANK. A storage vessel within the pool recirculating system used to contain the water displaced by bathers.

SWIMOUT. An underwater seat area that is placed completely outside of the diving envelope of the pool. Where located at the deep end, swimouts are permitted to be used as the deep-end means of entry or exit to the pool.

TUBE RIDE. A gravity flow attraction found at a waterpark designed to convey riders on an inner-tube-like device through a series of chutes, channels, flumes or pools.

TURNOVER RATE. The period of time, usually in hours, required to circulate a volume of water equal to the pool or spa capacity.

UNDERWATER BENCH. An underwater seat that can be recessed into the pool wall or placed completely inside the perimeter shape of the pool.

UNDERWATER LEDGE. A narrow shelf projecting from the side of a vertical structure whose dimensions are defined in the appropriate standard.

VANISHING EDGE. Water-feature detail in which water flows over the edge of not fewer than one of the pool walls and is collected in a catch basin. Also called “Negative edge.”

WATERLINE. See “*Design waterline.*”

WAVE POOL CAISSON. A large chamber used in wave generation. This chamber houses pulsing water and air surges in the wave generation process and is not meant for human occupancy.

ZERO ENTRY. See “*Beach entry.*”

CHAPTER 3

GENERAL COMPLIANCE

User note:

About this chapter: Chapter 3 covers general regulations for pool and spa installations. As many of these requirements would need to be repeated in Chapters 3 through 10, placing such requirements in only one location eliminates code development coordination issues with the same requirement in multiple locations. These general requirements can be superseded by more specific requirements for certain applications in Chapters 3 through 10.

SECTION 301 GENERAL

301.1 Scope. The provisions of this chapter shall govern the general design and construction of public and *residential* pools and spas and related piping, equipment, and materials. Provisions that are unique to a specific type of pool or spa are located in Chapters 4 through 10.

301.1.1 Application of Chapters 4 through 10. Where differences occur between the provisions of this chapter and the provisions of Chapters 4 through 10, the provisions of Chapters 4 through 10 shall apply.

SECTION 302 ELECTRICAL, PLUMBING, MECHANICAL AND FUEL GAS REQUIREMENTS

302.1 Electrical. Electrical requirements for aquatic facilities shall be in accordance with NFPA 70 or the *International Residential Code*, as applicable in accordance with Section 102.7.1.

Exception: Internal wiring for portable *residential* spas and portable *residential* exercise spas.

302.2 Water service and drainage. Piping and fittings used for water service, makeup and drainage piping for pools and spas shall comply with the *International Plumbing Code*. Fittings shall be *approved* for installation with the piping installed.

302.3 Pipe, fittings and components. Pipe, fittings and components shall be *listed* and *labeled* in accordance with NSF 50 or NSF 14. Plastic jets, fittings, and outlets used in public spas shall be *listed* and *labeled* in accordance with NSF 50.

Exceptions:

1. Portable *residential* spas and portable *residential* exercise spas *listed* and *labeled* in accordance with UL 1563 or CSA C22.2 No. 218.1.
2. *Onground storable pools* supplied by the pool manufacturer as a kit that includes all pipe, fittings and components.

302.4 Concealed piping inspection. Piping, including process piping, that is installed in trenches, shall be inspected prior to backfilling.

302.5 Backflow protection. Water supplies for pools and spas shall be protected against backflow in accordance with the *International Plumbing Code* or the *International Residential Code*, as applicable in accordance with Section 102.7.1.

302.6 Wastewater discharge. Where wastewater from pools or spas, such as backwash water from filters and water from deck drains discharge to a building drainage system, the connection shall be through an air gap in accordance with the *International Plumbing Code* or the *International Residential Code* as applicable in accordance with Section 102.7.1.

302.7 Tests. Tests on water piping systems constructed of plastic piping shall not use compressed air for the test.

302.8 Maintenance. Pools and spas shall be maintained in a clean and sanitary condition, and in good repair.

302.8.1 Manuals. An operating and maintenance manual in accordance with industry-accepted standards shall be provided for each piece of equipment requiring maintenance.

SECTION 303 ENERGY

303.1 Energy consumption of pools and permanent spas. The energy consumption of pools and permanent spas shall be controlled by the requirements in Sections 303.1.1 through 303.1.3.

303.1.1 Heaters. The electric power to heaters shall be controlled by a readily accessible on-off switch that is an integral part of the heater, mounted on the exterior of the heater or external to and within 3 feet (914 mm) of the heater. Operation of such switch shall not change the setting of the heater thermostat. Such switches shall be in addition to a circuit breaker for the power to the heater. Gas-fired heaters shall not be equipped with continuously burning ignition pilots.

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303.1.2 Time switches. Time switches or other control methods that can automatically turn off and on heaters and pump motors according to a preset schedule shall be installed for heaters and pump motors. Heaters and pump motors that have built-in time switches shall be in compliance with this section.

Exceptions:

1. Where public health standards require 24-hour pump operation.
2. Pumps that operate solar- or waste-heat recovery pool heating systems.

303.1.3 Covers. Outdoor heated pools and outdoor permanent spas shall be provided with a vapor-retardant cover or other *approved* vapor-retardant means in accordance with Section 104.12.

Exception: Where more than 70 percent of the energy for heating, computed over an operating season, is from a heat pump or solar energy source, covers or other vapor-retardant means shall not be required.

303.2 Portable spas. The energy consumption of electric-powered portable spas shall be controlled by the requirements of APSP 14.

303.3 Residential pools and permanent residential spas. The energy consumption of *residential* swimming pools and permanent *residential* spas shall be controlled in accordance with the requirements of APSP 15.

SECTION 304 FLOOD HAZARD AREAS

304.1 General. The provisions of Section 304 shall control the design and construction of pools and spas installed in *flood hazard areas*.

[BS] 304.2 Determination of impacts based on location. Pools and spas located in *flood hazard areas* indicated within the *International Building Code* or the *International Residential Code* shall comply with Section 304.2.1 or 304.2.2.

Exception: Pools and spas located in riverine *flood hazard areas* that are outside of designated floodways and pools and spas located in *flood hazard areas* where the source of flooding is tides, storm surges or coastal storms.

[BS] 304.2.1 Pools and spas located in designated floodways. Where pools and spas are located in designated floodways, documentation shall be submitted to the *code official* that demonstrates that the construction of the pools and spas will not increase the design flood elevation at any point within the jurisdiction.

[BS] 304.2.2 Pools and spas located where floodways have not been designated. Where pools and spas are located where design flood elevations are specified but floodways have not been designated, the applicant shall provide a floodway analysis that demonstrates that the proposed pool or spa and any associated grading and fill-

ing, will not increase the design flood elevation more than 1 foot (305 mm) at any point within the jurisdiction.

[BS] 304.3 Pools and spas in coastal high-hazard areas. Pools and spas installed in coastal high-hazard areas shall be designed and constructed in accordance with ASCE 24.

[BS] 304.4 Protection of equipment. Equipment shall be elevated to or above the design flood elevation or be anchored to prevent flotation and protected to prevent water from entering or accumulating within the components during conditions of flooding.

304.5 GFCI protection. Electrical equipment installed below the design flood elevation shall be supplied by branch circuits that have ground-fault circuit interrupter protection for personnel.

SECTION 305 BARRIER REQUIREMENTS

305.1 General. The provisions of this section shall apply to the design of barriers for restricting entry into areas having pools and spas. Where spas or hot tubs are equipped with a lockable *safety cover* complying with ASTM F1346 and swimming pools are equipped with a powered *safety cover* that complies with ASTM F1346, the areas where those spas, hot tubs or pools are located shall not be required to comply with Sections 305.2 through 305.7.

305.1.1 Construction fencing required. The construction sites for in-ground swimming pools and spas shall be provided with construction fencing to surround the site from the time that any excavation occurs up to the time that the permanent barrier is completed. The fencing shall be not less than 4 feet (1219 mm) in height.

305.2 Outdoor swimming pools and spas. Outdoor pools and spas and indoor swimming pools shall be surrounded by a barrier that complies with Sections 305.2.1 through 305.7.

305.2.1 Barrier height and clearances. Barrier heights and clearances shall be in accordance with all of the following:

1. The top of the barrier shall be not less than 48 inches (1219 mm) above grade where measured on the side of the barrier that faces away from the pool or spa. Such height shall exist around the entire perimeter of the barrier and for a distance of 3 feet (914 mm) measured horizontally from the outside of the required barrier.
2. The vertical clearance between grade and the bottom of the barrier shall not exceed 2 inches (51 mm) for grade surfaces that are not solid, such as grass or gravel, where measured on the side of the barrier that faces away from the pool or spa.
3. The vertical clearance between a surface below the barrier to a solid surface, such as concrete, and the bottom of the required barrier shall not exceed 4 inches (102 mm) where measured on the side of the required barrier that faces away from the pool or spa.

4. Where the top of the pool or spa structure is above grade, the barrier shall be installed on grade or shall be mounted on top of the pool or spa structure. Where the barrier is mounted on the top of the pool or spa, the vertical clearance between the top of the pool or spa and the bottom of the barrier shall not exceed 4 inches (102 mm).

305.2.2 Openings. Openings in the barrier shall not allow passage of a 4-inch-diameter (102 mm) sphere.

305.2.3 Solid barrier surfaces. Solid barriers that do not have openings shall not contain indentations or protrusions that form handholds and footholds, except for normal construction tolerances and tooled masonry joints.

305.2.4 Mesh fence as a barrier. Mesh fences, other than chain link fences in accordance with Section 305.2.7, shall be installed in accordance with the manufacturer's instructions and shall comply with the following:

1. The bottom of the mesh fence shall be not more than 1 inch (25 mm) above the deck or installed surface or grade.
2. The maximum vertical clearance from the bottom of the mesh fence and the solid surface shall not permit the fence to be lifted more than 4 inches (102 mm) from grade or decking.
3. The fence shall be designed and constructed so that it does not allow passage of a 4-inch (102 mm) sphere under any mesh panel. The maximum vertical clearance from the bottom of the mesh fence and the solid surface shall be not greater than 4 inches (102 mm) from grade or decking.
4. An attachment device shall attach each barrier section at a height not lower than 45 inches (1143 mm) above grade. Common attachment devices include, but are not limited to, devices that provide the security equal to or greater than that of a hook-and-eye-type latch incorporating a spring-actuated retaining lever such as a safety gate hook.
5. Where a hinged gate is used with a mesh fence, the gate shall comply with Section 305.3.
6. Patio deck sleeves such as vertical post receptacles that are placed inside the patio surface shall be of a nonconductive material.
7. Mesh fences shall not be installed on top of onground *residential* pools.

305.2.4.1 Setback for mesh fences. The inside of a mesh fence shall be not closer than 20 inches (508 mm) to the nearest edge of the water of a pool or spa.

305.2.5 Closely spaced horizontal members. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches (1143 mm), the horizontal members shall be located on the pool or spa side of the fence. Spacing between vertical members shall not exceed $1\frac{3}{4}$ inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed $1\frac{3}{4}$ inches (44 mm) in width.

305.2.6 Widely spaced horizontal members. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches (1143 mm) or more, spacing between vertical members shall not exceed 4 inches (102 mm). Where there are decorative cutouts within vertical members, the interior width of the cutouts shall not exceed $1\frac{3}{4}$ inches (44 mm).

305.2.7 Chain link dimensions. The maximum opening formed by a chain link fence shall be not more than $1\frac{3}{4}$ inches (44 mm). Where the fence is provided with slats fastened at the top and bottom that reduce the openings, such openings shall be not greater than $1\frac{3}{4}$ inches (44 mm).

305.2.8 Diagonal members. Where the barrier is composed of diagonal members, the maximum opening formed by the diagonal members shall be not greater than $1\frac{3}{4}$ inches (44 mm). The angle of diagonal members shall be not greater than 45 degrees (0.79 rad) from vertical.

305.2.9 Clear zone. Where equipment, including pool equipment such as pumps, filters and heaters, is on the same lot as a pool or spa and such equipment is located outside of the barrier protecting the pool or spa, such equipment shall be located not less than 36 inches (914 mm) from the outside of the barrier.

305.3 Doors and gates. Doors and gates in barriers shall comply with the requirements of Sections 305.3.1 through 305.3.3 and shall be equipped to accommodate a locking device. Pedestrian access doors and gates shall open outward away from the pool or spa, shall be self-closing and shall have a self-latching device.

305.3.1 Utility or service doors and gates. Doors and gates not intended for pedestrian use, such as utility or service doors and gates, shall remain locked when not in use.

305.3.2 Double or multiple doors and gates. Double doors and gates or multiple doors and gates shall have not fewer than one leaf secured in place and the adjacent leaf shall be secured with a self-latching device.

305.3.3 Latch release. For doors and gates in barriers, the door and gate latch release mechanisms shall be in accordance with the following:

1. Where door and gate latch release mechanisms are accessed from the outside of the barrier and are not of the self-locking type, such mechanism shall be located above the finished floor or ground surface in accordance with the following:
 - 1.1. At public pools and spas, not less than 52 inches (1219 mm) and not greater than 54 inches (1372 mm).
 - 1.2. At residential pools and spas, not less 54 inches (1372 mm).
2. Where door and gate latch release mechanisms are of the self-locking type such as where the lock is operated by means of a key, an electronic opener or the entry of a combination into an integral combination lock, the lock operation control and

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the latch release mechanism shall be located above the finished floor or ground surface in accordance with the following:

- 2.1. At public pools and spas, not less than 34 inches and not greater than 48 inches (1219 mm).
- 2.2. At residential pools and spas, at not greater than 54 inches (1372 mm).
3. At private pools, where the only latch release mechanism of a self-latching device for a gate is located on the pool and spa side of the barrier, the release mechanism shall be located at a point that is at least 3 inches (76 mm) below the top of the gate.

305.3.4 Barriers adjacent to latch release mechanisms.

Where a latch release mechanism is located on the inside of a barrier, openings in the door, gate and barrier within 18 inches (457 mm) of the latch shall not be greater than $\frac{1}{2}$ inch (12.7 mm) in any dimension.

305.4 Structure wall as a barrier. Where a wall of a dwelling or structure serves as part of the barrier and where doors, gates or windows provide direct access to the pool or spa through that wall, one of the following shall be required:

1. Operable windows having a sill height of less than 48 inches (1219 mm) above the indoor finished floor, doors and gates shall have an alarm that produces an audible warning when the window, door or their screens are opened. The alarm shall be *listed* and labeled as a water hazard entrance alarm in accordance with UL 2017.
2. In dwellings not required to be Accessible units, Type A units or Type B units, the operable parts of the alarm deactivation switches shall be located at not less than 54 inches (1372 mm) above the finished floor.
3. In dwellings that are required to be Accessible units, Type A units or Type B units, the operable parts of the alarm deactivation switches shall be located not greater than 54 inches (1372 mm) and not less than 48 inches (1219 mm) above the finished floor.
4. In structures other than dwellings, the operable parts of the alarm deactivation switches shall be located not greater than 54 inches (1372 mm) and not less than 48 inches (1220 mm) above the finished floor.
5. A *safety cover* that is *listed* and *labeled* in accordance with ASTM F1346 is installed for the pools and spas.
6. An *approved* means of protection, such as self-closing doors with self-latching devices, is provided. Such means of protection shall provide a degree of protection that is not less than the protection afforded by Item 1 or 2.

305.5 Onground residential pool structure as a barrier.

An onground *residential* pool wall structure or a barrier mounted on top of an onground *residential* pool wall structure shall serve as a barrier where all of the following conditions are present:

1. Where only the pool wall serves as the barrier, the bottom of the wall is on grade, the top of the wall is

not less than 48 inches (1219 mm) above grade for the entire perimeter of the pool, the wall complies with the requirements of Section 305.2 and the pool manufacturer allows the wall to serve as a barrier.

2. Where a barrier is mounted on top of the pool wall, the top of the barrier is not less than 48 inches (1219 mm) above grade for the entire perimeter of the pool, and the wall and the barrier on top of the wall comply with the requirements of Section 305.2.
3. Ladders or steps used as means of access to the pool are capable of being secured, locked or removed to prevent access except where the ladder or steps are surrounded by a barrier that meets the requirements of Section 305.
4. Openings created by the securing, locking or removal of ladders and steps do not allow the passage of a 4-inch (102 mm) diameter sphere.
5. Barriers that are mounted on top of onground *residential* pool walls are installed in accordance with the pool manufacturer's instructions.

305.6 Natural barriers. In the case where the pool or spa area abuts the edge of a lake or other natural body of water, public access is not permitted or allowed along the shoreline, and required barriers extend to and beyond the water's edge not less than 18 inches (457 mm), a barrier is not required between the natural body of water shoreline and the pool or spa.

305.7 Natural topography. Natural topography that prevents direct access to the pool or spa area shall include but not be limited to mountains and natural rock formations. A natural barrier *approved* by the governing body shall be acceptable provided that the degree of protection is not less than the protection afforded by the requirements of Sections 305.2 through 305.5.

305.8 Means of egress. Outdoor public pools provided with barriers shall have means of egress as required by Chapter 10 of the *International Building Code*.

SECTION 306 DECKS

306.1 General. The structural design and installation of decks around pools and spas shall be in accordance with the *International Residential Code* or the *International Building Code*, as applicable in accordance with Section 102.7 and this section.

306.2 Slip resistant. Decks, ramps, coping, and similar step surfaces shall be slip resistant and cleanable. Special features in or on decks such as markers, brand insignias, and similar materials shall be slip resistant.

306.3 Step risers and treads. Step risers for decks of public pools and spas shall be uniform and have a height not less than $3\frac{3}{4}$ inches (95 mm) and not greater than $7\frac{1}{2}$ inches (191 mm). The tread distance from front to back shall be not less than 11 inches (279 mm). Step risers for decks of *residential* pools and spas shall be uniform and shall have a height not exceeding $7\frac{1}{2}$ inches (191 mm). The tread

distance from front to back shall be not less than 10 inches (254 mm).

306.4 Deck steps handrail required. Public pool and spa deck steps having three or more risers shall be provided with a handrail.

306.5 Slope. The minimum slope of decks shall be in accordance with Table 306.5 except where an alternative drainage method is provided that prevents the accumulation or pooling of water. The slope for decks, other than wood decks, shall be not greater than $\frac{1}{2}$ inch per foot (1 mm per 24 mm) except for ramps. The slope for wood and wood/plastic composite decks shall be not greater than $\frac{1}{4}$ inch per 1 foot (1 mm per 48 mm). Decks shall be sloped so that standing water will not be deeper than $\frac{1}{8}$ inch (3.2 mm), 20 minutes after the cessation of the addition of water to the deck.

TABLE 306.5
MINIMUM DRAINAGE SLOPES FOR DECK SURFACES

SURFACE	MINIMUM DRAINAGE SLOPE (INCH PER FOOT)
Carpet	$\frac{1}{2}$
Exposed aggregate	$\frac{1}{4}$
Textured, hand-finished concrete	$\frac{1}{8}$
Travertine/brick-set pavers, public pools or spas	$\frac{3}{8}$
Travertine/brick-set pavers, residential pools or spas	$\frac{1}{8}$
Wood	$\frac{1}{8}$
Wood/plastic composite	$\frac{1}{8}$

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

306.6 Gaps. Gaps shall be provided between deck boards in wood and wood/plastic composite decks. Gaps shall be consistent with *approved* engineering methods with respect to the type of wood used and shall not cause a tripping hazard.

306.6.1 Maximum gap. The open gap between pool decks and adjoining decks or walkways, including joint material, shall be not greater than $\frac{3}{4}$ inch (19.1 mm). The difference in vertical elevation between the pool deck and the adjoining sidewalk shall be not greater than $\frac{1}{4}$ inch (6.4 mm).

306.7 Concrete joints. Isolation joints that occur where the pool coping meets the concrete deck shall be water tight.

306.7.1 Joints at coping. Joints that occur where the pool coping meets the concrete deck shall be installed to protect the coping and its mortar bed from damage as a result of the anticipated movement of adjoining deck.

306.7.2 Crack control. Joints in a deck shall be provided to minimize visible cracks outside of the control joints caused by imposed stresses or movement of the slab.

306.7.3 Movement control. Areas where decks join existing concrete work shall be provided with a joint to protect the pool from damage caused by relative movement.

306.8 Deck edges. The edges of decks shall be radiused, tapered, or otherwise designed to eliminate sharp corners.

306.9 Valves under decks. Valves installed in or under decks shall be accessible for operation, service, and maintenance. Where access through the deck walking surface is required, an access cover shall be provided for the opening in the deck. Such access covers shall be slip resistant and secured.

306.9.1 Hose bibbs. Hose bibbs shall be provided for rinsing down the entire deck and shall be installed in accordance with the *International Plumbing Code* or *International Residential Code*, as applicable in accordance with Section 102.7.1, and shall be located not greater than 150 feet (45 720 mm) apart. Water-powered devices, such as water-powered lifts, shall have a dedicated hose bibb water source.

Exception: *Residential* pools and spas shall not be required to have hose bibbs located at 150-foot (45 720 mm) intervals, or have a dedicated hose bibb for waterpowered devices.

SECTION 307 GENERAL DESIGN

307.1 General design requirements. Sections 307.1.1 through 307.1.4 shall apply to all pools and spas.

307.1.1 Glazing in hazardous locations. Hazardous locations for glazing shall be as defined in the *International Building Code* or the *International Residential Code*, as applicable in accordance with Section 102.7.1 of this code. Where glazing is determined to be in a hazardous location, the requirements for the glazing shall be in accordance with those codes, as applicable.

307.1.2 Colors and finishes. For other than *residential* pools and *residential* spas, the colors, patterns, or finishes of the pool and spa interiors shall not obscure objects or surfaces within the pool or spa.

307.1.2.1 Munsell color value. Finishes shall be not less than 6.5 on the Munsell color value scale.

Exceptions: The following shall not be required to comply with this section:

1. Competitive lane markings.
2. Floors of dedicated competitive diving wells.
3. Step or bench edge markings.
4. Pools shallower than 24 inches (609.6 mm).
5. Water line tiles.
6. Wave and surf pool depth change indicator tiles.
7. Depth change indicator tiles where a rope and float line is provided.
8. Features such as rock formations, as *approved*.

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307.1.3 Roofs or canopies. Roofs or canopies over pools and spas shall be in accordance with the *International Building Code* or *International Residential Code*, as applicable in accordance with Section 102.7.1 and shall be constructed so as to prevent water runoff into the pool or spa.

307.1.4 Accessibility. An accessible route to public pools and spas shall be provided in accordance with the *International Building Code*. Accessibility within public pools and spas shall be provided as required by the accessible recreational facilities provisions of the *International Building Code*. Pool and spa lifts providing an accessible means of entry into the water shall be *listed* and labeled in accordance with UL 60335-2-1000 and be installed in accordance with ICC A117.1 and NFPA 70.

307.2 Specific design and material requirements. Sections 307.2.1 through 307.2.4 shall apply to all pools and spas except for *listed* and *labeled* portable *residential* spas, and *listed* and *labeled* portable *residential* exercise spas.

307.2.1 Materials. Pools and spas and appurtenances thereto shall be constructed of materials that are nontoxic to humans and the environment; that are generally or commonly regarded to be impervious and enduring; that will withstand the design stresses; and that will provide a watertight structure with a smooth and easily cleanable surface without cracks or joints, excluding structural joints, or that will provide a watertight structure to which a smooth, easily cleaned surface/finish is applied or attached. Material surfaces that come in contact with the user shall be finished, so that they do not constitute a cutting, pinching, puncturing or abrasion hazard under casual contact and intended use.

307.2.1.1 Beach pools. Clean sand or similar material, where used in a beach pool environment, shall be used over an impervious surface. The sand area shall be designed and controlled so that the circulation system, maintenance, safety, sanitation, and operation of the pool are not adversely affected.

307.2.1.2 Compatibility. Assemblies of different materials shall be chemically and mechanically compatible for their intended use and environment.

307.2.2 Materials and structural design. Pools and spas shall conform to one or more of the standards indicated in Table 307.2.2. The structural design of pools and spas shall be in accordance with the *International Building Code* or the *International Residential Code*, as applicable in accordance with Section 102.7.1 of this code.

307.2.2.1 Installation. Equipment for pools and spas shall be supported to prevent damage from misalignment and settling and located so as to allow access for inspection, servicing, removal and repair of component parts.

307.2.3 Freeze protection. In climates subject to freezing temperatures, outdoor pool and spa shells and appurte-

nances, piping, filter systems, pumps and motors, and other components shall be designed and constructed to provide protection from damage from freezing.

307.2.4 Surface condition. The surfaces within public pools and spas intended to provide footing for users shall be slip resistant and shall not cause injury during normal use.

307.2.5 Plaster. The plastering of pools and permanently installed concrete spas shall be in accordance with APSP/NPC/ICC-12.

SECTION 308 DIMENSIONAL DESIGN

308.1 Floor slope. The slope of the floor from the point of the first slope change to the deep area shall not exceed one unit vertical in three units horizontal (33-percent slope).

Exception: Portable *residential* spas and portable *residential* exercise spas.

308.2 Walls. Walls shall intersect with the floor at an angle or a transition profile. Where a transitional profile is provided at water depths of 3 feet (914 mm) or less, a transitional radius shall not exceed 6 inches (152 mm) and shall be tangent to the wall and is permitted to be tangent to or intersect the floor.

Exceptions:

1. Portable *residential* spas and portable *residential* exercise spas.
2. *Onground storable pools*.

308.3 Shape. This code is not intended to regulate the shape of a pool or spa other than to take into account the effect that a given shape will have on the safety of the occupants and to maintain the minimum required level of circulation to ensure sanitation.

308.4 Waterline. The *design waterline* shall have a maximum construction tolerance at the time of completion of the work of plus or minus $\frac{1}{4}$ inch (6.4 mm) for pools and spas with adjustable weir surface skimming systems, and plus or minus $\frac{1}{8}$ inch (3.2 mm) for pools and spas with nonadjustable surface skimming systems.

TABLE 307.2.2
RESERVOIRS AND SHELLS

MATERIAL	STANDARD
Fiberglass reinforced plastic	IAPMO Z124.7
Plastic	IAPMO Z124.7
Stainless steel (Types 316, 316L, 304, 304L)	ASTM A240
Tile	ANSI A108/A118/A136.1
Vinyl	ASTM D1593

SECTION 309 EQUIPMENT

309.1 Electrically operated equipment. Electrically operated equipment shall be *listed* and *labeled* in accordance with applicable product standards.

Exception: Portable *residential* spas and portable *residential* exercise spas *listed* and *labeled* in accordance with UL 1563 or CSA C22.2 No. 218.1.

309.2 Treatment and circulation system equipment. Treatment and circulation system equipment for public pools and spas shall be *listed* and *labeled* in accordance with NSF 50 and other applicable standards.

SECTION 310 SUCTION ENTRAPMENT AVOIDANCE

310.1 General. Suction entrapment avoidance for pools and spas shall be provided in accordance with APSP 7 (ANSI/PHTA/ICC 7).

Exceptions:

1. Portable spas and portable exercise spas *listed* and *labeled* in accordance with UL 1563 or CSA C22.2 No. 218.1.
2. Suction entrapment avoidance for wading pools shall be provided in accordance with Section 405.

SECTION 311 CIRCULATION SYSTEMS

311.1 General. The provisions of this section shall apply to circulation systems for pools and spas.

Exceptions:

1. Portable *residential* spas and portable *residential* exercise spas.
2. *Onground storable pools* supplied by the pool manufacturer as a kit that includes circulation system equipment that is in accordance with Section 704.

311.2 System design. A circulation system consisting of pumps, piping, return inlets and outlets, filters, and other necessary equipment shall be provided for the complete circulation of water. Wading pools and spas shall have separate dedicated filtering systems.

Exception: Separate filtering systems are not required for *residential* pools and spas.

311.2.1 Turnover rate. The equipment shall be sized to turn over the volume of water that the pool or spa is capable of containing as specified in this code for the specific installation.

311.2.2 Servicing. Circulation system components that require replacement or servicing shall be provided with access for inspection, repair, or replacement and shall be installed in accordance with the manufacturer's specifications.

311.2.3 Equipment anchorage. Pool and spa equipment and related piping shall be designed and installed in accordance with the manufacturer's instructions.

311.3 Water velocity. The water velocity in suction and return piping shall comply with either Section 311.3.1 or 311.3.2. The water velocity in copper and copper alloy piping shall not exceed 8 fps (2.4 mps). All water velocity calculations shall be based on the design flow rate specified for each recirculation system.

311.3.1 Public pools and spas. For public pools and spas, suction piping water velocity shall not exceed 6 fps (1.8 mps) and return piping water velocity shall not exceed 8 fps (2.4 mps).

311.3.2 Residential pools and spas. For *residential* pools and spas, the water velocity in suction piping and return piping shall not exceed 8 fps (2.4 mps).

311.4 Piping and fittings. Plastic pipe and fittings used in circulation systems shall be nontoxic and shall be able to withstand the design operating pressures and conditions of the pool or spa. Plastic pipe shall be *listed* and *labeled* as complying with NSF 14. Circulation system piping shall be *listed* and *labeled* as complying with one of the standards in Table 311.4.

311.4.1 Fittings. Fittings used in circulation systems shall be *listed* and *labeled* as complying with one of the standards in Table 311.4.1.

Exceptions:

1. Suction outlet fitting assemblies and manufacturer-provided components certified in accordance with APSP 16.
2. Skimmers and manufacturer-provided components.
3. *Gutter* overflow grates and fittings installed above or outside of the overflow point of the pool or spa.

TABLE 311.4
CIRCULATION SYSTEM PIPE MATERIAL STANDARD

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D1527
Chlorinated polyvinyl chloride (CPVC) plastic pipe and tubing	ASTM D2846; CSA B137.6
Copper or copper-alloy tubing	ASTM B88; ASTM B447
Polyvinyl chloride (PVC) hose	ASTM D1785; ASTM D2241; ASTM D2672; CSA B137.3
Polyvinyl chloride (PVC) plastic pipe	ASTM D1785; CSA B137.3
Stainless steel pipe, Types 304, 304L, 316, 316L	ASTM A312

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TABLE 311.4.1
CIRCULATION SYSTEM FITTINGS

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D1527
Chlorinated polyvinyl chloride (CPVC) plastic pipe and tubing	ASTM D2846; ASTM F437; ASTM F438; ASTM F439; CSA B137.6
Copper or copper-alloy tubing	ASME B16.15
Polyvinyl chloride (PVC) plastic pipe	ASTM D2464; ASTM D2466; ASTM D2467; CSA B137.2; CSA B137.3
Stainless steel pipe, Types 304, 304L, 316, 316L	ASTM A182; ASTM A403

311.4.2 Joints. Joints shall be made in accordance with manufacturer's instructions.

311.4.3 Piping subject to freezing. Piping subject to damage by freezing shall have a uniform slope in one direction and shall be equipped with valves for drainage or shall be capable of being evacuated to remove the water.

311.4.4 Suction outlet fitting assemblies. Suction outlet fitting assemblies shall be *listed* and *labeled* in compliance with APSP 16.

311.5 System draining. Equipment shall be designed and fabricated to drain the water from the equipment, together with exposed face piping, by removal of drain plugs, manipulating valves, or by other methods. Drainage shall be in accordance with manufacturer's specifications.

311.6 Pressure or vacuum gauge. Gauges shall be provided on the circulation system for public pools. Gauges shall be provided with ready access.

1. A pressure gauge shall be located downstream of the pump and between the pump and filter.
2. A vacuum gauge shall be located between the pump and filter and upstream of the pump.

311.7 Flow measurement. Public swimming pools and wading pools shall be equipped with a flow-measuring device that indicates the rate of flow through the filter system. The flow rate measuring device shall indicate gallons per minute (lpm) and shall be selected and installed to be accurate within plus or minus 10 percent of actual flow.

311.8 Instructions. Written operation and maintenance instructions shall be provided for the circulation system of public pools.

311.9 Hydrostatic pressure test. Circulation system piping, other than that integrally included in the manufacture of the pool or spa, shall be subjected to a hydrostatic pressure test of 25 pounds per square inch (psi) (172.4 kPa). This pressure shall be held for not less than 15 minutes.

SECTION 312 FILTERS

312.1 General. The provisions of this section apply to filters for pools and spas.

Exceptions:

1. Portable *residential* spas and portable *residential* exercise spas.

2. *Onground storable pools* supplied by the pool manufacturer as a kit that includes a filter that is in accordance with Section 704.

312.2 Design. Filters shall have a flow rating equal to or greater than the design flow rate of the system. Filters shall be installed in accordance with the manufacturer's instructions. Filters shall be designed so that filtration surfaces can be inspected and serviced.

312.3 Internal pressure. For pressure-type filters, a means shall be provided to allow the release of internal pressure.

312.3.1 Air release. Filters incorporating an automatic means of internal air release as the principal means of air release shall have one or more lids that provide a slow and safe release of pressure as a part of the design and shall have a manual air release in addition to an automatic release.

312.3.2 Separation tanks. A separation tank used in conjunction with a filter tank shall have a manual method of air release or a lid that provides for a slow and safe release of pressure as it is opened.

SECTION 313 PUMPS AND MOTORS

313.1 General. The provisions of this section apply to pumps and motors for pools and spas.

Exceptions:

1. Portable *residential* spas and portable *residential* exercise spas.
2. *Onground storable pools* supplied by the pool manufacturer as a kit that includes a pump and motor that is in accordance with Section 704.

313.2 Performance. A pump shall be provided for circulation of the pool water. The pump shall be capable of providing the flow required for filtering the pool water and filter cleaning, if applicable, against the total dynamic head developed by the complete system.

313.3 Intake protection. A cleanable strainer, skimmer basket, or screen shall be provided for pools and spas, upstream or as an integral part of circulation pumps, to remove solids, debris, hair, and lint on pressure filter systems.

313.4 Location. Pumps and motors shall be accessible for inspection and service in accordance with the manufacturer's specifications.

313.5 Safety. The design, construction, and installation of pumps and component parts shall be in accordance with the manufacturer's specifications.

313.6 Isolation valves. Shutoff valves shall be installed on the suction and discharge sides of pumps that are located below the waterline. Such valves shall be provided with access.

313.7 Emergency shutoff switch. An emergency shutoff switch shall be provided to disconnect power to recirculation and jet system pumps and air blowers. Emergency shutoff switches shall be: provided with access; located within sight of the pool or spa; and located not less than 5 feet (1524 mm) horizontally from the inside walls of the pool or spa.

Exception: *Onground storable pools*, permanent inground *residential* swimming pools, *residential* spas and *residential* water features.

313.8 Motor performance. Motors shall comply with UL 1004-1, UL 1081, CSA C22.2 No. 108 or the relevant motor requirements of UL 1563 or CSA C22.2 No. 218.1, as applicable.

SECTION 314 RETURN AND SUCTION FITTINGS

314.1 General. The provisions of this section apply to return and suction fittings for pools and spas

Exception: Portable *residential* spas and portable *residential* exercise spas.

314.2 Entrapment avoidance. Entrapment avoidance means shall be provided in accordance with Section 310.

314.3 Flow distribution. The suction outlet fitting assemblies, where installed, and the skimming systems shall each be designed to accommodate 100 percent of the circulation turnover rate.

314.3.1 Multiple systems. Where multiple systems are used in a single pool to meet this requirement, each subsystem shall proportionately be designed such that the maximum design flow rates cannot be exceeded during normal operation.

314.4 Return inlets. One return inlet shall be provided for every 300 square feet (27.9 m²) of pool surface area, or fraction thereof.

Exception: *Onground storable pools*.

314.4.1 Design. Return and suction fittings for the circulation system shall be designed so as not to constitute a hazard to the bather.

314.5 Vacuum fittings. Where installed, *submerged vacuum fittings* shall be accessible and shall be located not greater than 12 inches (305 mm) below the water level.

SECTION 315 SKIMMERS

315.1 General. The provisions of this section apply to skimmers for pools and spas.

Exceptions:

1. Portable *residential* spas and portable *residential* exercise spas.
2. *Onground storable pools* supplied by the pool manufacturer as a kit that includes a skimming system that is in accordance with Section 704.

315.2 Required. A surface skimming system shall be provided for public pools and spas. Surface skimming systems shall be *listed* and *labeled* in accordance with NSF 50. Either a surface skimming system or perimeter overflow system shall be provided for permanent inground *residential* pools and permanent *residential* spas. Where installed, surface skimming systems shall be designed and constructed to create a skimming action on the pool water surface when the water level in the pool is within operational parameters.

Exceptions:

1. Class D public pools designed in accordance with Chapter 6.
2. Skimmers that are an integral part of a spa that has been *listed* and *labeled* in accordance with UL1563 shall not be required to be *listed* and *labeled* in accordance with NSF 50.

315.2.1 Circulation systems. Public pool circulation systems shall be designed to process not less than 100 percent of the turnover rate through skimmers.

315.3 Skimmer sizing. Where automatic surface skimmers are used as the sole overflow system, not less than one surface skimmer shall be provided for the square foot (square meter) areas, or fractions thereof, indicated in Table 315.3. Skimmers shall be located to maintain effective skimming action.

TABLE 315.3
SKIMMER SIZING TABLE

POOL OR SPA	AREA PER SKIMMER (SQ. FT)
Public pool	500
Residential pool	800
Spas (all types)	150

For SI: 1 square foot = 0.0929 m².

315.4 Perimeter coverage. Where a perimeter-type surface skimming system is used as the sole surface skimming system, the system shall extend around not less than 50 percent of the pool or spa perimeter.

315.4.1 Surge capacity. Where perimeter surface skimming systems are used, they shall be connected to a

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circulation system with a system surge capacity of not less than 1 gallon for each square foot (40.7 liters per square meter) of water surface. The capacity of the perimeter overflow system and related piping is permitted to be considered as a portion of the surge capacity.

315.5 Equalizers. Equalizers on skimmers shall be prohibited.

315.6 Hazard. Skimming devices shall be designed and installed so as not to create a hazard to the user.

SECTION 316 HEATERS

316.1 General. The provisions of this section apply to heaters for pools and spas.

Exception: Portable *residential* spas and portable *residential* exercise spas.

316.2 Certification. Heaters and hot water storage tanks shall be *listed* and *labeled* in accordance with the applicable standard indicated in Table 316.2(1). Hot water heating systems and components shall comply with the applicable standard indicated in Table 316.2(2).

316.3 Sizing. Heaters shall be sized in accordance with the manufacturer's specifications.

316.4 Installation. Heaters shall be installed in accordance with the manufacturer's specifications and the *International Fuel Gas Code*, *International Mechanical Code*, *International Energy Conservation Code*, NFPA 70 or *International Residential Code*, as applicable in accordance with Section 102.7.1. Solar water heating systems shall be installed in accordance with Section 316.6.

316.4.1 Temperature. A means shall be provided to monitor water temperature.

316.4.2 Access prohibited. For public pools and spas, public access to controls shall be prohibited.

316.5 Heater circulation system. Heater circulation systems shall comply with Sections 316.5.1 and 316.5.2.

316.5.1 Water flow. Water flow through the heater bypass piping, back-siphonage protection, and the use of heat sinks shall be in accordance with the heater manufacturer's specifications.

316.5.2 Pump delay. Where required by the manufacturer, heaters shall be installed with an automatic device that will ensure that the pump continues to run after the heater shuts off for the time period specified by the manufacturer.

316.6 Solar thermal water heaters. Solar thermal water heating systems utilized for pools and spas shall comply with Sections 316.6.1 through 316.6.3.

316.6.1 Installation. Solar thermal water heaters shall be installed in accordance with the *International Mechanical Code* or *International Residential Code*, as applicable in accordance with Section 102.7.1.

316.6.2 Certification of collectors. Solar thermal collectors shall be *listed* and *labeled* in accordance with ICC 901/SRCC 100.

316.6.3 Marking of collectors and modules. Solar thermal collectors and photovoltaic modules shall be permanently marked with the manufacturer's name, model number, and serial number. Such markings shall be located on each collector in a position that is readily viewable after installation.

SECTION 317 AIR BLOWER AND AIR INDUCTION SYSTEM

317.1 General. This section applies to devices and systems that induce or allow air to enter Class A and residential pools and spas either by means of a powered pump or passive design.

317.2 Backflow prevention. Air blower systems shall be equipped with backflow protection as specified in UL 1563 or CSA C22.2 No. 218.1.

317.3 Air intake source. Air intake sources shall not induce water, dirt or contaminants.

317.4 Sizing. Air induction systems shall be sized in accordance with the manufacturer's specifications.

317.5 Inspection and service. Air blowers shall be provided with access for inspection and service.

TABLE 316.2(1)
WATER HEATERS

DEVICE	STANDARD
Electric water heater	UL 1261, UL 1563 or CSA C22.2 No. 218.1
Gas-fired water heater	ANSI Z21.56/CSA 4.7a
Heat exchanger	AHRI 400
Heat pump water heater	AHRI 1160 and one of the following: CSA C22.2 No. 236, UL 1995, or UL/CSA 60335-2-40

TABLE 316.2(2)
WATER HEATING SYSTEMS AND COMPONENTS

SYSTEM	STANDARD
Solar water heater	ICC/APSP 902/SRCC 400

SECTION 318 WATER SUPPLY

318.1 Makeup water. Makeup water to maintain the water level and water used as a vehicle for sanitizers or other chemicals, for pump priming, or for other such additions, shall be from a potable water source.

318.2 Protection of potable water supply. Potable water supply systems shall be designed, installed and maintained so as to prevent contamination from nonpotable liquids, solids or gases being introduced into the potable water supply through cross-connections or other piping connections to the system. Means of protection against backflow in the potable water supply shall be provided through an air gap complying with ASME A112.1.2 or by a backflow prevention assembly in accordance with the *International Residential Code* or the *International Plumbing Code*, as applicable in accordance with Section 102.7.1.

318.3 Over-the-rim spouts. Over-the-rim spouts shall be located under a diving board, adjacent to a ladder, or otherwise shielded so as not to create a hazard. The open end of such spouts shall not have sharp edges and shall not protrude more than 2 inches (51 mm) beyond the edge of the pool. The open end shall be separated from the water by an air gap of not less than 1.5 pipe diameters measured from the pipe outlet to the rim.

SECTION 319 SANITIZING EQUIPMENT

319.1 Equipment standards. Sanitizing equipment installed in public pools and spas shall be capable of introducing the quantity of sanitizer necessary to maintain the appropriate levels under all conditions of intended use.

319.2 Chemical feeders. Where installed, chemical feed systems shall be installed in accordance with the manufacturer's specifications. Chemical feed pumps shall be wired so that they cannot operate unless there is adequate return flow to disburse the chemical throughout the pool or spa as designed.

SECTION 320 WASTEWATER DISPOSAL

320.1 Backwash water or draining water. Backwash water and draining water shall be discharged to the sanitary or storm sewer, or into an *approved* disposal system on the premise, or shall be disposed of by other means *approved* by the state or local authority. Direct connections shall not be made between the end of the backwash line and the disposal system. Drains shall discharge through an air gap.

320.2 Water salvage. Filter backwash water shall not be returned to the vessel except where the backwash water has been filtered to remove particulates, treated to eliminate coli form bacteria and waterborne pathogens, and such return has been *approved* by the state or local authority.

320.3 Waste post treatment. Where necessary, filter backwash water and drainage water shall be treated chemically or

through the use of settling tanks to eliminate or neutralize chemicals, diatomaceous earth, and contaminants in the water that exceed the limits set by the state or local effluent discharge requirements.

SECTION 321 LIGHTING

321.1 General. The provisions of Sections 321.2 and 321.3 shall apply to lighting for public pools and spas. The provisions of Section 321.4 shall apply to lighting for *residential* pools and spas.

321.2 Artificial lighting required. When a pool is open during periods of low natural illumination, artificial lighting shall be provided so that all areas of the pool, including all suction outlets on the bottom of the pool, will be visible. Illumination shall be sufficient to enable a lifeguard or other persons standing on the deck or sitting on a lifeguard stand adjacent to the pool edge to determine if a pool user is lying on the bottom of the pool and that the pool water is transparent and free from cloudiness.

These two conditions shall be met when all suction outlets are visible from the edge of the deck at all times when artificial lighting is illuminated and when an 8-inch-diameter (152 mm) black disk, placed at the bottom of the pool in the deepest point, is visible from the edge of the pool deck at all times when artificial lighting is illuminated.

321.2.1 Pool and deck illumination. Overhead lighting, underwater lighting or both shall be provided to illuminate the pool and adjacent deck areas. The lighting shall be *listed* and *labeled*. The lighting shall be installed in accordance with NFPA 70.

321.2.2 Illumination intensity. For outdoor pools, any combination of overhead and underwater lighting shall provide *maintained illumination* not less than 10 horizontal foot-candles (10 lumens per square foot) [108 lux] at the pool water surface. For indoor pools, any combination of overhead and underwater lighting shall provide *maintained illumination* of not less than 30 horizontal foot-candles (30 lumens per square foot) [323 lux] at the pool water surface. Deck area lighting for both indoor and outdoor pools shall provide *maintained illumination* of not less than 10 horizontal foot-candles (10 lumens per square foot) [108 lux] at the walking surface of the deck.

321.2.3 Underwater lighting. Underwater lighting shall provide not less than 8 lamp lumens per square foot of pool water surface area.

Exception: The requirement of this section shall not apply where overhead lighting provides not less than 15 foot-candles (15 lumens per square foot) [161 lux] of *maintained illumination* at the pool water surface, the overhead lighting provides visibility, without glare, of all areas of the pool, and the requirements of Section 321.2.2 are met or exceeded.

321.3 Emergency illumination. Public pools and public pool areas that operate during periods of low illumination shall be provided with emergency lighting that will automat-

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ically turn on to permit evacuation of the pool and securing of the area in the event of power failure. Emergency lighting facilities shall be arranged to provide initial illumination that is not less than 0.1 foot-candle (0.1 lumen per square foot) [1 lux] measured at any point on the water surface and at any point on the walking surface of the deck, and not less than an average of 1 foot-candle (1 lumen per square foot) [11 lux]. At the end of the emergency lighting time duration, the illumination level shall be not less than 0.06 foot-candle (0.06 lumen per square foot) [0.65 lux] measured at any point on the water surface and at any point on the walking surface of the deck, and not less than an average of 0.6 foot-candle (0.6 lumen per square foot) [6.46 lux]. A maximum-to-minimum illumination uniformity ratio of 40 to 1 shall not be exceeded.

321.4 Residential pool and deck illumination. Where lighting is installed for, and in, *residential* pools and permanent *residential* spas, such lighting shall be installed in accordance with NFPA 70 or the *International Residential Code*, as applicable in accordance with Section 102.7.1.

SECTION 322 LADDERS AND RECESSED TREADS

322.1 General. Ladders and recessed treads shall comply with the provisions of this section and the applicable provisions of Chapters 4 through 10 based on the type of pool or spa.

322.2 Outside diving envelope. Where installed, steps and ladders shall be located outside of the minimum diving water envelope as indicated in Figure 322.2.

322.3 Ladders. Ladder treads shall have a uniform horizontal depth of not less than 2 inches (51 mm). There shall be a uniform distance between ladder treads, with a distance of not less than 7 inches (178 mm) and not greater than 12 inches (305 mm). The top tread of a ladder shall be located not greater than 12 inches (305 mm) below the top of the deck or coping. Ladder treads shall have slip-resistant surfaces.

322.3.1 Wall clearance. There shall be a clearance of not less than 3 inches (76 mm) and not greater than 4 inches (101.6 mm) between the pool wall and the ladder.

322.3.2 Handrails and handholds. Ladders shall be provided with two handholds or two handrails. The clear distance between ladder handrails shall be not less than 17 inches (432 mm) and not greater than 24 inches (610 mm).

322.4 Recessed treads. Recessed treads shall have a minimum depth of not less than 5 inches (127 mm) and a width of not less than 12 inches (305 mm). The vertical distance between the pool coping edge, deck, or step surface and the uppermost recessed tread shall be not greater than 12 inches (305 mm). Recessed treads shall have slip-resistant surfaces.

322.4.1 Vertical spacing. Recessed treads at the centerline shall have a uniform vertical spacing of not less than 7 inches (178 mm) and not greater than 12 inches (305 mm).

322.4.2 Drainage. Recessed treads shall drain into the pool.

322.4.3 Handrails and grab rails. Recessed treads shall be provided with a handrail or grab rail on each side of the treads. The clear distance between handrails and grab rails shall be not less than 17 inches (432 mm) and not greater than 24 inches (610 mm).

SECTION 323 SAFETY

323.1 Handholds required. Where the depth below the *design waterline* of a pool or spa exceeds 42 inches (1067 mm), handholds along the perimeter shall be provided. Handholds shall be located at the top of deck or coping.

Exceptions:

1. Handholds shall not be required where an underwater bench, seat or swimout is installed.
2. Handholds shall not be required for wave action pools and action rivers.

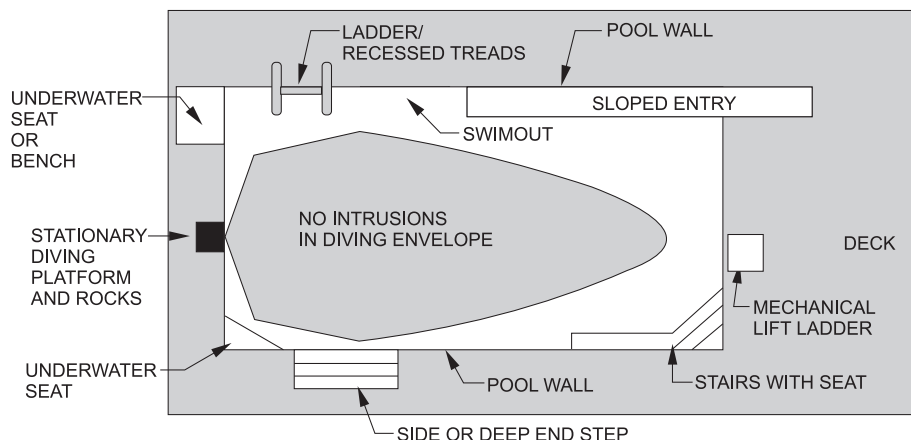


FIGURE 322.2
MINIMUM WATER DIVING ENVELOPE

323.1.1 Height above water. Handholds shall be located not more than 12 inches (305 mm) above the *design waterline*.

323.1.2 Handhold type. Handholds shall be one or more of the following:

1. Top of pool deck or coping.
2. Secured rope.
3. Rail.
4. Rock.
5. Ledge.
6. Ladder.
7. Stair step.
8. Any design that allows holding on with one hand while at the side of the pool.

323.1.3 Handhold spacing. Handholds shall be horizontally spaced not greater than 4 feet (1219 mm) apart.

323.2 Handrails. Where handrails are installed, they shall conform to this section.

323.2.1 Height. The top of the gripping surface of handrails for public pools and public spas shall be 34 inches (864 mm) to 38 inches (965 mm) above the ramp or step surface as measured at the nosing of the step or finished surface of the slope. The top of the gripping surface of handrails for *residential* pools and *residential* spas shall be 30 inches (762 mm) to 38 inches (965 mm) above the ramp or step surface as measured at the nosing of the step or finished surface of the slope.

323.2.2 Material. Handrails shall be made of corrosion-resistant materials.

323.2.3 Nonremovable. Handrails shall be installed so that they cannot be removed without the use of tools.

323.2.4 Leading edge distance. The leading edge of handrails for stairs, pool entries and exits shall be located not greater than 18 inches (457 mm) from the vertical face of the bottom riser.

323.2.5 Diameter. The outside diameter or width of *handrails* shall be not less than 1¹/₄ inches (32 mm) and not greater than 2 inches (51 mm).

323.3 Obstructions and entrapment avoidance. There shall not be obstructions that can cause the user to be entrapped or injured. Types of entrapment include, but are not limited to, wedge or pinch-type openings and rigid, nongiving cantilevered protrusions.

SECTION 324 EQUIPMENT ROOMS

324.1 General. The provisions of this section apply to public pools and spas and aquatic recreation facilities.

324.2 Requirements. The equipment area or room floor shall be of concrete or other suitable material having a smooth slip-resistant finish and have positive drainage, including a sump drain pump, if necessary. Floors shall have a slope toward the floor drain or sump drain pump adequate

to prevent standing water at all times. The opening to the equipment room or area shall be designed to provide access for all anticipated equipment. At least one hose bibb with backflow preventer shall be located in the equipment room or be accessible within an adequate distance of the equipment room so that a hose can service the entire room.

324.3 Construction. The size of the equipment room or area shall provide working space to perform routine operations and equipment service. Equipment rooms also intended for storage shall have adequate space provided for such storage, without reducing the working spaces. Equipment rooms or areas shall be lighted to provide 30 foot-candles (323 lux) of illumination at floor level.

324.4 Electrical. All electrical wiring shall be installed in accordance with NFPA 70.

324.5 Ventilation. Equipment room ventilation shall address all of the following:

1. Combustion requirements.
2. Heat dissipation from equipment.
3. Humidity from surge or balance tanks.
4. Ventilation to the outside.
5. Air quality.

324.6 Markings. All piping in the equipment room shall be permanently identified by its use and the pool or spa it serves. Identification shall be provided for all of the following:

1. Main drains and skimmer lines.
2. Filtered water.
3. Make-up water
4. Chlorine (or disinfection) feeds.
5. Acid (or pH) feeds.
6. Compressed air lines.
7. Gutter lines.
8. Chemical sample piping.
9. Pool heating lines.

All piping shall be marked with directional arrows as necessary to determine flow direction and all valves shall be clearly identified by number with a brass tag, plastic laminate tag or permanently affixed alternative. Valves shall be described as to their function and referenced in the operating instruction manual.

324.7 Separation from chemical storage spaces. Combustion equipment, air-handling equipment, and electrical equipment shall not be exposed to air contaminated with corrosive chemical fumes or vapors. Spaces containing combustion equipment, air-handling equipment or electrical equipment and spaces sharing air distribution with spaces containing such equipment shall not be used as chemical storage spaces at the same time unless the equipment is *listed* and *labeled* for use in that atmosphere. Spaces containing combustion equipment, air-handling equipment, or electrical equipment and spaces sharing air distribution with spaces containing such equipment shall be isolated from chemical storage space air.

324.7.1 Doors and openings. A door or doors shall not be installed in a wall between such equipment rooms and an interior chemical storage space. There shall be no ducts, grilles, pass-throughs, or other openings connecting such equipment rooms to chemical storage spaces, except as permitted by the *International Fire Code*.

Spaces containing combustion equipment, air-handling equipment, or electrical equipment and spaces sharing air distribution with spaces containing such equipment shall be isolated from indoor aquatic facility air unless the equipment is *listed* for the atmosphere. There shall be no ducts, grilles, pass-throughs, or other openings connecting such spaces to an indoor aquatic facility.

Ducts that connect the indoor aquatic facility to the duct connections of air handlers shall not be construed as connecting the air-handler space to the indoor aquatic facility unless HVAC equipment is rated for indoor aquatic facility atmosphere and serves only that indoor aquatic facility.

Where building construction leaves any openings or gaps between floors and walls, or between walls and other walls, or between walls and ceilings, such gaps shall be permanently sealed against air leakage.

324.7.2 Indoor aquatic facility access. Where a door or doors are installed in a wall between an equipment room and an indoor aquatic facility, the floor of the equipment room shall slope back into the equipment room in such a way as to prevent any equipment room spills from running under the door into the indoor aquatic facility. This requirement shall be accomplished by one of the following:

1. A floor all of which is at least 4 inches (102 mm) below the level of the nearest part of the indoor aquatic facility floor.
2. A continuous dike not less than 4 inches (102 mm) high located entirely within the equipment room, which will prevent spills from reaching the indoor aquatic facility floor.

324.7.2.1 Automatic closer and lock. A door between an equipment room and an indoor aquatic facility shall be equipped with an automatic closer and automatic lock. The door, frame, and automatic closer shall be installed so as to ensure that the door closes completely and latches without human assistance. The automatic lock shall require a key or combination to open from the indoor aquatic facility side. The lock shall be designed and installed to be opened by one hand from the inside of the room under all circumstances, without the use of a key or tool.

Such doors shall be equipped with permanent signage warning against unauthorized entry. All sides of such doors shall be equipped with a gasket. The gasket shall be installed to prevent the passage of air, fumes, or vapors when the door is closed.

324.8 Chemical storage space. A least one space dedicated to chemical storage space shall be provided to allow safe

storage of pool and spa chemicals. In all chemical storage spaces, an emergency eyewash station shall be provided. The construction of a chemical storage space shall take into account foreseeable hazards and protect the stored materials against tampering, wildfires, unintended exposure to water and the transfer of fumes into any interior space of a building intended for occupation. Any walls, floors, doors, ceilings, and other building surfaces of an interior chemical storage space shall join each other tightly.

If chemicals are to be stored outdoors, they shall be stored in a well-ventilated protective area with an installed barrier to prevent unauthorized access. Exterior chemical storage spaces not joined to a wall of a building shall be completely enclosed by fencing that is at least 6 feet high (1829 mm). Fencing shall be equipped with a self-closing and self-latching gate having a permanent locking device.

324.8.1 Chemical storage space doors. All doors opening into chemical storage spaces shall be equipped with permanent signage having all of the following:

1. A warning against unauthorized entry.
2. Statement of the expected hazards.
3. Statement of the location of the associated safety data sheet forms.
4. Product chemical hazard NFPA chart.

Where a single door is the only means of egress from a chemical storage space, the door shall be equipped with an emergency-egress device. Where a chemical storage space door must open to an interior space, spill containment shall be provided to prevent spilled chemicals from leaving the chemical storage space and the door shall not open to a space containing combustion equipment, air-handling equipment, or electrical equipment.

324.8.1.1 Interior opening doors. Where a chemical storage space door must open to an interior space, such door shall have all of the following requirements:

1. Constructed of corrosion-resistant materials.
2. Equipped with a corrosion-resistant, automatic lock to prevent unauthorized entry.
 - 2.1. Such lock shall require a key or combination to open from the outside into the chemical storage space.
 - 2.2. Such lock shall be designed and installed as to be capable of being opened by one hand from the inside of the chemical storage space without the use of a key or tool.
3. Supported on corrosion-resistant hinges, tracks, or other supports.
4. Equipped with suitable gaskets or seals on the top and all sides to minimize air leakage between the door and the door frame.
5. Equipped with a floor or threshold seal to minimize air leakage between the door and the floor or threshold.

6. Equipped with an automatic door closer that will completely close the door and latch without assistance and against the specified difference in air pressure.
7. Equipped with a limit switch and an alarm that will sound if the door remains open for more than 30 minutes. The alarm shall have a minimum output level of 85 dbA at 10 feet (2028 mm).

324.8.2 Interior chemical storage spaces. There shall be no transfer grille, pass-through grille, louver, or other device or opening that will allow air movement from the chemical storage space into any other interior space of a building intended for occupancy or into another chemical storage space.

Interior chemical storage spaces that share any building surface with any other interior space shall be equipped with a ventilation system that operates continuously and ensures that all air movement is from all other interior space and toward the chemical storage space.

Interior chemical storage spaces that share an electrical conduit system with any other interior space shall be equipped with a ventilation system that operates continuously and ensures that all air movement is from all other interior spaces and toward the chemical storage space. This pressure difference shall be maintained by a continuously operated exhaust system used for no other purpose than to remove air from that one chemical storage space.

Where more than one chemical storage space is present, a separate exhaust system shall be provided for each chemical storage space. The exhaust airflow rate shall be the amount specified in the *International Mechanical Code*. The function of this exhaust system shall be monitored continuously by an audible differential-pressure alarm system that shall sound if the specified differential air pressure is not maintained for a period of 30 minutes. This alarm shall have a minimum output level of 85 dbA at 10 feet (3048 mm) and shall require manual reset to silence it.

324.8.2.1 Air ducts in interior chemical storage spaces. No duct shall allow air movement from the chemical storage space into any other interior space of a building intended for occupation or into any other chemical storage space.

Air ducts shall not enter or pass through an interior chemical storage space unless it is a corrosion-resistant duct used for no other purpose than to exhaust air from the chemical storage space. This corrosion-resistant duct must exhaust to the exterior and must end at a point on the exterior of the building, at least 20 feet (6096 mm) from any air intake for breathing air, cooling air, or combustion air.

A duct used for no other purpose than to supply makeup air to the chemical storage area shall be acceptable. This makeup air supply duct must end at a point on the exterior of the building, at least 20 feet

(6096 mm) from any air intake for breathing air, cooling air, or combustion air.

Any other ducts specifically allowable by the *International Mechanical Code* where such ducts are corrosion resistant and free-of-joints to the extent feasible shall be acceptable.

324.8.2.2 Pipes and tubes in interior chemical storage spaces. Pipes and tubes shall not enter or pass through an interior chemical storage space.

Exceptions:

1. As required to service devices integral to the function of the chemical storage space, such as pumps, vessels, controls, freeze protection, and safety devices.
2. As required to allow for automatic fire suppression.
3. As required for drainage.

Piping, tubes, drain bodies, grates, and attachment and restraint devices shall be corrosion resistant and rated for the chemical environment(s) present, including floor drain bodies and grates. All wall penetrations shall be sealed air tight and commensurate with the rating of the wall assembly. Sealing materials shall be compatible with the wall assembly and the chemical environment(s) present.

324.8.2.3 Combustion equipment in interior chemical storage. No combustion device or appliance shall be installed in a chemical storage space, or in any other place where it will be exposed to the air from a chemical storage space.

Exceptions: A combustion device or appliance that meets all of the following requirements shall be acceptable:

1. The device or appliance is required for one or more processes integral to the function of the room, such as space heat.
2. The device is listed for such use.
3. The device as installed is *approved*.

324.9 Ozone rooms. An ozone equipment room shall not be used for storage of chemicals, solvents, or any combustible materials, other than those required for the operation of the recirculation and ozone-generating equipment. Rooms that are designed to include ozone equipment shall be equipped with an emergency ventilation system capable of 6 air changes per hour. The exhaust intake shall be located 6 inches (152 mm) from the floor, on the opposite side of the room from the make-up air intake.

The emergency ventilation system shall be so arranged as to run on command of an ozone-leak alarm or on command of a manual switch. The manual emergency ventilation switch shall be located outside the room and near the door to the ozone room.

Ozone rooms which are below grade shall be equipped with force-draft ventilation capable of 6 changes per hour. The exhaust intake shall be located 6 inches (152 mm) from

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the floor, on the opposite side of the room from the make-up air intake. Such ventilation shall be so arranged as to:

1. Run automatically concurrent with the ozone equipment and for at least a time allowing for 15 air changes after the ozone equipment is stopped.
2. Run on activation of the ozone detection and alarm system.
3. Run on command of a manual switch.

The manual ventilation switch shall be located outside the room and near the door to the ozone room.

324.9.1 Signage. In addition to the signs on all chemical storage areas, a sign shall be posted on the exterior of the entry door stating "DANGER - GASEOUS OXIDIZER -- OZONE" in lettering not less than 4 inches (102 mm) high.

324.9.2 Alarm system. Rooms containing ozone-generation equipment shall be equipped with an audible and visible ozone detection and alarm system.

The alarm system shall consist of both an audible alarm capable of producing at least 85 decibels at a 10-foot (3048 mm) distance and a visible alarm consisting of a flashing light mounted in plain view of the entrance to the ozone equipment room.

The ozone sensor shall be located at a height of 18-24 inches (457-610 mm) above floor level. The ozone sensor shall be capable of measuring ozone in the range of 0-2 ppm.

The alarm system shall activate when the ozone concentration equals or exceeds 0.1 ppm in the room. Activation of the alarm system shall shut off the ozone-generating equipment and turn on the emergency ventilation system.

324.10 Gaseous chlorination space. Use of compressed chlorine gas shall be prohibited for new construction and after substantial alteration to existing facilities.

324.11 Windows. Where windows are installed in an interior wall, ceiling, or door of a chemical storage space, such windows shall have the following components:

1. Tempered or plasticized glass.
2. A corrosion-resistant frame.
3. Incapable of being opened or operated.

Where windows are installed in an exterior wall or ceiling, such windows shall:

1. Be mounted in a corrosion-resistant frame.
2. Be protected by a roof, eave, or permanent awning as to minimize the entry of rain or snow in the event of window breakage.

324.12 Sealing and blocking materials. Materials used for sealing and blocking openings in an interior chemical storage space shall:

1. Minimize the leakage of air, vapors, or fumes from the chemical storage space.
2. Be compatible for use in the environment.
3. Be commensurate with the fire rating assembly in which they are installed.

SECTION 325 INDOOR AIR QUALITY

325.1 General. Indoor public pool and spa air-handling system design, construction, and installation shall comply with the requirements of the *International Mechanical Code* or ASHRAE 62.1.

CHAPTER 4

PUBLIC SWIMMING POOLS

User note:

About this chapter: Chapter 4 has regulations for public swimming pools. Where diving boards are present, the chapter provides information regarding the minimum diving water dimensions. Requirements for exiting pools, decks, circulation systems and depth markers are provided. Special features of pools such as rest ledges, swimouts and underwater seats and benches are regulated by this chapter.

SECTION 401 GENERAL

401.1 Scope. The provisions of this chapter shall apply only to Class A, Class B, Class C, Class E and Class F public swimming pools.

401.2 Intent. The provisions in this chapter shall govern the design, equipment, operation, warning signs, installation, sanitation, new construction, and alteration specific to the types of public swimming pools indicated in Section 401.1.

401.3 Chapter 3 compliance required. In addition to the requirements of this chapter, public swimming pools shall comply with the requirements of Chapter 3.

401.4 Dimensional tolerances. Finished pool dimensions, for other than Class A pools, shall be held within the construction tolerances shown in Table 401.4. Other dimensions, unless otherwise specified, shall have a tolerance of ± 2 inches (51 mm).

401.4.1 Class A pool tolerances. Dimensional tolerances for Class A pools shall be determined by the authority that provides the accreditation of the pool for competitive events.

401.5 Floor slope. Except where required to meet the accessibility requirements in accordance with Section 307.9, the slope of the floor in the shallow area of a pool shall not exceed 1 unit vertical in 10 units horizontal (10-percent slope) for Class C pools and 1 unit vertical in 12 units horizontal (8-percent slope) for Class B pools. The slope limit shall apply in any direction to the point of the first slope change, where a slope change exists. The point of the first

slope change shall be defined as the point at which the floor slope exceeds 1 unit vertical in 10 units horizontal (10-percent slope) for Class C pools and 1 unit vertical in 12 units horizontal (8-percent slope) for Class B pools.

401.6 Dimensions for Class A pools. Class A pools shall be designed and constructed with the dimensions determined by the authority that provides the accreditation of the pool for competitive events.

SECTION 402 DIVING

402.1 General. This section covers diving requirements for Class B, Class C, and Class E pools. Manufactured and fabricated diving equipment and appurtenances shall not be installed on Type O pools.

402.2 Manufactured and fabricated diving equipment. Manufactured and fabricated diving equipment shall be in accordance with this section and shall be designed for swimming pool use.

402.3 Installation. The installation of manufactured diving equipment shall be in accordance with Sections 402.3 through 402.14. Manufactured diving equipment shall be located in the deep area of the pool so as to provide the minimum dimensions shown in Table 402.12 and shall be installed in accordance with the manufacturer's instructions. Installation and use instructions for manufactured diving equipment shall be provided by the manufacturer and shall specify the minimum diving water envelope dimensions required for each diving board and diving stand combina-

**TABLE 401.4
CONSTRUCTION TOLERANCES**

DESIGN ASPECT	CONSTRUCTION TOLERANCE
Depth—deep area, including diving area	± 3 inches
Depth—shallow area	± 2 inches
Length—overall	± 3 inches
Step treads & risers	$\pm \frac{1}{2}$ inch
Wall slopes	± 3 degrees
Waterline—pools with adjustable weir skimmers	$\pm \frac{1}{4}$ inch
Waterline—pools with nonadjustable skimming systems (gutters)	$\pm \frac{1}{8}$ inch
Width—overall	± 3 inches
All dimensions not otherwise specified herein	± 2 inches

For SI: 1 inch = 25.4 mm, 1 degree = 0.017 radians.

PUBLIC SWIMMING POOLS

tion. The manufacturer’s instructions shall refer to the water envelope type by dimensionally relating their products to Point A on the diving water envelopes shown in Table 402.12. The diving board manufacturer shall specify which boards fit on the design pool geometry types as indicated in Table 402.12.

402.4 Slip resistance. Diving equipment shall have slip-resistant walking surfaces.

402.5 Point A. For the application of Table 402.12, Point A shall be the point from which dimensions of width, length and depth are established for the minimum diving water envelope. If the tip of the diving board or diving platform is located at a distance of WA (see Figure 804.1) or greater from the deep end wall and the water depth at that location is equal to or greater than the water depth requirement at Point A, the point on the water surface directly below the center of the tip of the diving board or diving platform shall be identified as Point A.

402.6 Location of pool features in a diving pool. Where a pool is designed for use with diving equipment, the location of steps, pool stairs, ladders, underwater benches, underwater ledges, special features and other accessory items shall be outside of the minimum diving water envelope. See Figure 322.2.

402.7 Stationary diving platforms and diving rocks. Where stationary diving platforms and diving rocks are built on site, flush with the wall and located in the diving area of

the pool, Point A shall be in front of the wall at the platform or diving rock centerline.

402.8 Location of diving equipment. Manufactured and fabricated diving equipment shall be located so that the tip of the board or platform is located directly above Point A as defined by Section 402.5.

402.9 Elevation. The maximum elevation of a diving board above the *design waterline* shall be in accordance with the manufacturer’s instructions.

402.10 Platform height above waterline. The height of an *approved* stationary diving apparatus, platform, or diving rock above the *design waterline* shall not exceed the limits of the manufacturer’s specifications or the limits of the design prepared by a design professional.

402.11 Clearance. The diving equipment manufacturer shall specify the minimum headroom required above the tip of the board.

402.12 Water envelopes. The minimum diving water envelopes shall be in accordance with Table 402.12.

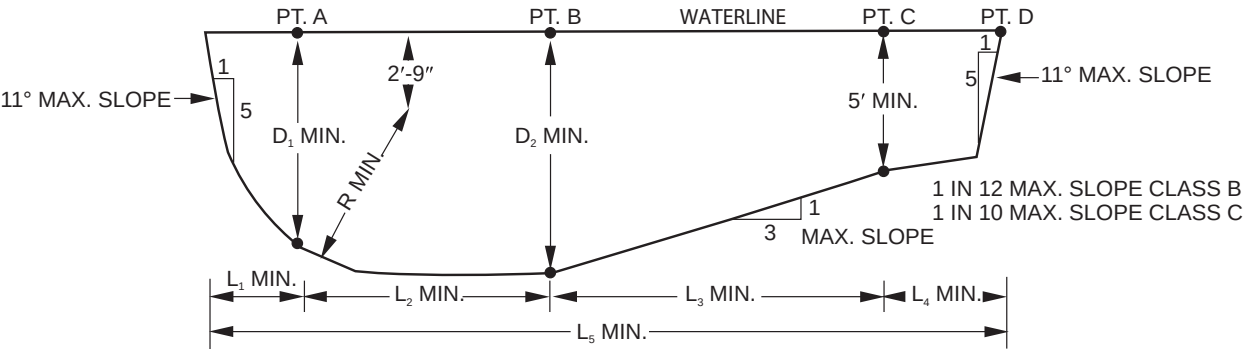
402.13 Ladders for diving equipment. Ladders shall be provided with two grab rails or two handrails. There shall be a uniform distance between ladder treads, with a 7-inch (178 mm) minimum distance and a 12-inch (305 mm) maximum distance.

Exception: The distance between treads for the top and bottom riser can vary but shall be not less than 7 inches (178 mm) and not greater than 12 inches (305 mm).

TABLE 402.12
MINIMUM DIVING WATER ENVELOPES
(See Figure 402.12)

POOL TYPE	MINIMUM DIMENSIONS								MINIMUM WIDTH OF POOL AT:		
	D ₁	D ₂	R	L ₁	L ₂	L ₃	L ₄	L ₅	Pt. A	Pt. B	Pt. C
VI	7'-0"	8'-6"	5'-6"	2'-6"	8'-0"	10'-6"	7'-0"	28'-0"	16'-0"	18'-0"	18'-0"
VII	7'-6"	9'-0"	6'-0"	3'-0"	9'-0"	12'-0"	4'-0"	28'-0"	18'-0"	20'-0"	20'-0"
VIII	8'-6"	10'-0"	7'-0"	4'-0"	10'-0"	15'-0"	2'-0"	31'-0"	20'-0"	22'-0"	22'-0"
IX	11'-0"	12'-0"	8'-6"	6'-0"	10'-6"	21'-0"	0	37'-6"	22'-0"	24'-0"	24'-0"

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.



For SI: 1 degree = 0.017 rad, 1 inch = 25.4 mm, 1 foot = 304.8 mm.

FIGURE 402.12
(MINIMUM DIVING WATER ENVELOPES)
CONSTRUCTION DIMENSIONS FOR WATER ENVELOPES FOR CLASS B AND CLASS C POOLS

402.14 Springboard fall protection guards. Springboards located at a height greater than 5 feet (1524 mm) above the pool deck shall have a fall protection guard on each side of the springboard. The design and the selection of the materials of construction of the fall protection guards shall be determined by the manufacturer of the springboard support structure. The installation and maintenance of the fall protection guards shall be in accordance with the fall protection guard manufacturer's instructions.

SECTION 403 BATHER LOAD

403.1 Maximum bather load. The maximum bather load of Class B and Class C pools shall be in accordance with Table 403.1.

SECTION 404 REST LEDGES

404.1 Rest ledges. Rest ledges along the pool walls are permitted. They shall be not less than 4 feet (1220 mm) below the water surface. Where a ledge is provided, the width of the ledge shall be not less than 4 inches (102 mm) and not greater than 6 inches (152 mm).

SECTION 405 WADING POOLS

405.1 Wading pools. Class F wading pools shall be separate pools with an independent circulation system, shall be physically separated from the main pool and shall be constructed in accordance with Sections 405.2 through 405.6.

405.2 Nonentry areas. The areas where the water depth at the edge of the pool exceeds 9 inches (229 mm) shall be considered to be nonentry areas.

405.3 Floor slope. The floors of wading pools shall be uniform and sloped with a maximum slope of 1 unit vertical in 12 units horizontal (8-percent slope).

405.4 Maximum depth. The water depth shall not exceed 18 inches (457 mm).

405.5 Distance from deck to waterline. The maximum distance from the top of the deck to the waterline shall not exceed 6 inches (152 mm).

405.6 Suction entrapment avoidance. Wading pools shall not have suction outlets. Skimmers or overflow gutters shall

be installed and shall accommodate 100 percent of the circulation system flow rate.

SECTION 406 DECKS AND DECK EQUIPMENT

406.1 General. Decks shall comply with the provisions of Section 306, except as otherwise required in this section.

406.2 Pool perimeter access. A deck or unobstructed access shall be provided for not less than 90 percent of the pool perimeter.

406.3 Deck clearance. Decking not less than 4 feet (1219 mm) in width shall be provided on the sides and rear of any diving equipment. A deck clearance of 4 feet (1219 mm) shall be provided around all other deck equipment.

406.4 Decks between pools and spas. Decks between pools, spas or any combination of pools and spas, shall have a width of not less than 6 feet (1829 mm).

406.5 Deck covering. Walking surfaces of decks within 4 feet (1219 mm) of a pool or spa shall be slip resistant.

406.6 Distances above diving boards. A completely unobstructed minimum distance above the tip of the diving board shall be specified by the diving equipment manufacturer.

406.7 Dimensional requirements. Public pools with diving equipment of 39 inches (991 mm) or greater in height, and pools designed for springboard or platform diving, shall comply with the dimensional design requirements of the diving equipment manufacturer or the authority that governs such pools.

406.8 Diving equipment. Diving equipment shall be installed in accordance with the manufacturer's specifications.

406.8.1 Label. A label shall be permanently affixed to the diving equipment or jump board in a readily visible location and shall include all of the following:

1. The minimum diving water envelope required for each diving board and diving stand combination.
2. Manufacturer's name and address.
3. Manufacturer's identification and date of manufacture.
4. The maximum allowable weight of the user.

406.8.2 Use instructions. The diving equipment manufacturer shall provide diving equipment use instructions.

TABLE 403.1
MAXIMUM BATHER LOAD

POOL/DECK AREA	SHALLOW INSTRUCTIONAL OR WADING AREAS	DEEP AREA (NOT INCLUDING THE DIVING AREA)	DIVING AREA (PER EACH DIVING BOARD)
Pools with minimum deck area	15 sq. ft. per user	20 sq. ft. per user	300 sq. ft.
Pools with deck area at least equal to water surface area	12 sq. ft. per user	15 sq. ft. per user	300 sq. ft.
Pools with deck area at least twice the water surface area	8 sq. ft. per user	10 sq. ft. per user	300 sq. ft.

For SI: 1 square foot = 0.09 square meters.

PUBLIC SWIMMING POOLS

406.8.3 Tread surface. Diving equipment shall have slip-resistant tread surfaces.

406.8.4 Supports for diving equipment. Supports, platforms, stairs, and ladders for diving equipment shall be designed to carry the anticipated loads. Stairs and ladders shall be of corrosion-resistant materials, shall be easily cleanable and shall have slip-resistant treads. Diving stands higher than 21 inches (533 mm), measured from the deck to the top back end of the board, shall be provided with stairs or a ladder. Step treads shall be self-draining.

406.8.5 Guardrails. Diving equipment 39 inches (991 mm) or greater in height shall be provided with a top guardrail. Such guardrail shall extend not less than 30 inches (762 mm) above the diving board and extend to the edge of the pool wall.

406.9 Starting blocks. In new construction or substantial alteration, starting blocks intended for competitive swimming shall be located at a water depth of not less than 5 feet (1524 mm).

406.10 Swimming pool slides. Swimming pool slides shall comply with the requirements of 16 CFR, Part 1207. The manufacturer of the slide shall provide installation and use instructions for the slide. Slides shall be installed in accordance with the manufacturer's instructions.

406.11 Play and water activity equipment. Play and water activity equipment shall be installed in accordance with the manufacturer's instructions.

SECTION 407 CIRCULATION SYSTEMS

407.1 General. Circulation systems for pools shall comply with Section 311 and the provisions of this section.

407.2 Turnover. Circulation equipment shall be sized to turn over the entire water capacity of the pool as specified in Table 407.2. The system shall be designed to provide the required turnover rate based on the maximum pressure and flow rate recommended by the manufacturer of the filter with clean filter media.

407.3 Continuous water removal. The design of a *gutter* system shall accommodate continuous removal of water from the pool's upper surface at a rate of not less than 125 percent of the required total recirculation flow rate as determined by the design professional.

407.3.1 Gutter outlets. At a *gutter* flow condition of not less than 125 percent of the total recirculation flow as determined by the design professional, *gutter* outlets such

as drop boxes, converters, return piping, or flumes shall be designed to prevent flooding of the *gutter* that would result in skimmed water re-entering the pool.

407.3.2 Adequate mixing. Pools shall have wall or floor inlets or both to provide for adequate mixing. Inlets shall be hydraulically sized to provide the design flow rates for each area of the pool proportional to the turnover rate and the area covered by the inlet.

407.4 Pool circulation. The filtration circulation system shall be designed with sufficient flexibility to achieve a hydraulic apportionment that will ensure effective distribution of treated water throughout the pool.

407.4.1 Inlets. Effective distribution of treated water shall be accomplished by either a continuous perimeter overflow system with integral inlets or by means of directionally adjustable inlets adequate in design, number, and location.

407.4.2 Adequate mixing. Pools shall have wall or floor inlets or both to provide for adequate mixing. Inlets shall be hydraulically sized to provide the design flow rates for each area of the pool proportional to the turnover rate and the area covered by the inlet.

407.4.3 Floor inlets. Floor inlets shall be required for pools that are greater than 50 feet (15.2 m) wide. The spacing between floor inlets shall not exceed 20 feet (6.1 m). Pools having only floor inlets shall have such inlets located within 15 feet (4.6 m) of the perimeter waterline. Where wall inlets are used in combination with floor inlets, the floor inlets shall be located not greater than 25 feet (7.6 m) from the nearest side walls.

407.4.4 Wall inlets. The spacing between wall inlets shall not exceed 20 feet (6.1 m), measured along the perimeter waterline.

SECTION 408 FILTERS

408.1 General. Filters shall be designed in accordance with Section 312, except as otherwise required in this section.

408.2 Air release warning. The following statement shall be posted in a conspicuous location within the areas of the air release:

DO NOT START THE SYSTEM AFTER MAINTENANCE WITHOUT FIRST PROPERLY REASSEMBLING THE FILTER AND SEPARATION TANK AND OPENING ALL AIR RELEASE VALVES.

TABLE 407.2
TURNOVER RATE

SWIMMING POOL CATEGORY	TURNOVER RATE IN HOURS
Class A, B, and C pools	Hours equal 1½ times the average depth of pool in feet not to exceed 6 hours
Wading pools	1

For SI: 1 foot = 304.8 mm.

SECTION 409 SPECIFIC SAFETY FEATURES

409.1 Handholds. Handholds shall comply with the provisions of Section 323.

409.2 Depth markers. Depth markers shall be provided in accordance with Sections 409.2.1 through 409.2.8.

409.2.1 Where required. Depth markers shall be installed at the maximum and minimum water depths and at all points of slope change. Depth markers shall be installed at water depth increments not to exceed 2 feet (607 mm). Depth markers shall be spaced at intervals not to exceed 25 feet (7620 mm).

409.2.2 Marking of depth. The depth of water in feet (meters) shall be plainly and conspicuously marked on the vertical pool wall at or above the waterline.

Exception: Pools with a vanishing edge and rim flow gutters.

409.2.3 Depth accuracy. Depth markers shall indicate the actual pool depth within ± 3 inches (76 mm), at normal operating water level where measured 3 feet (914 mm) from the pool wall or at the tangent point where the cove radius meets the floor, whichever is deeper.

409.2.4 Position on pool wall. Depth markers on the vertical pool wall shall be positioned to be read from the waterside. Depth markers shall be placed so as to allow as much of the numbers to be visible above the waterline as possible.

409.2.5 Position on deck. Depth markers on the deck shall be located within 18 inches (457 mm) of the water edge and positioned to be read while standing on the deck facing the water.

409.2.6 Horizontal markers. Horizontal depth markers shall be slip resistant.

409.2.7 Uniform distribution. Depth markers shall be distributed uniformly on both sides and both ends of the pool.

409.2.8 Numbers and letters. Depth markers shall be not less than 4 inches (102 mm) in height. The color of the numbers shall contrast with the background on which they are applied and the color shall be of a permanent nature. The lettering shall spell out the words “feet” and “inches” or abbreviate them as “Ft.” and “In.” respectively. Where displayed in meters in addition to feet and inches, the word meter shall be spelled out or abbreviated as “M.”

409.3 No diving symbol. Where the pool depth is 5 feet (1524 mm) or less, the “No Diving” symbol shall be displayed. The symbol shall be placed on the deck at intervals of not greater than 25 feet (7620 mm) and directly adjacent to a depth marker. Additional signage shall be in accordance with NEMA Z535.

409.4 Lifesaving equipment. Public pool Classes A, B, and C shall be provided with lifesaving equipment in accordance with Sections 409.4.1 through 409.4.3. Such lifesaving

equipment shall be visually conspicuous and conveniently located at all times.

409.4.1 Accessory pole. A swimming pool accessory pole not less than 12 feet (3658 mm) in length and including a body hook shall be provided.

409.4.2 Throwing rope. A throwing rope attached to a ring buoy or similar flotation device shall be provided. The rope shall be not less than $\frac{1}{4}$ inch (6.4 mm) in diameter and shall have a length of not less than $1\frac{1}{2}$ times the maximum width of the pool or 50 feet (15 240 mm), whichever is less. A ring buoy shall have an outside diameter of not less than 15 inches (381 mm).

409.4.3 Emergency response units. Pools covered by this chapter shall be provided with first aid equipment, including a first aid kit. First aid equipment and kits shall be located in an accessible location.

SECTION 410 SANITARY FACILITIES

410.1 Toilet facilities. Class A and B pools shall be provided with toilet facilities having the required number of plumbing fixtures in accordance with the *International Building Code* or the *International Plumbing Code*.

SECTION 411 SPECIAL FEATURES

411.1 Entry and exit. Pools shall have not less than two means of entry and exit that are located so as to serve both ends of a pool. Pool lifts, transfer walls and transfer systems that provide for pool entry and exit by persons with physical disabilities in accordance with Section 307.1.4 shall not be counted as the means of entry or exit that is required by this section.

411.1.1 Natural entry. Where areas have water depths of 24 inches (607 mm) or less at the pool wall, such areas shall be considered to be providing their own natural mode for entry and exit.

Exception: Wading pools as outlined in Section 405.

411.1.2 Shallow area. A means of entry and exit shall be provided in shallow areas of pools and shall consist of pool stairs, a ramp or a beach entry.

411.1.3 Deep area. The means of entry and exit in the deep area of pools shall consist of one of the following:

1. Steps/stairs.
2. Ladders.
3. Grab rails with recessed treads.
4. Ramps.
5. Beach entries.
6. Swimouts.
7. Other designs that provide the minimum utility as specified in this code.

PUBLIC SWIMMING POOLS

411.1.4 Pools greater than 30 feet wide. Swimming pools greater than 30 feet (9144 mm) in width shall be provided with entries and exits on each side of the deep area of the pool. The entries and exits on the sides of the deep area of a pool shall be located not more than 82 feet (25 m) apart.

411.1.5 Diving envelope. Where the pool is designed for use with diving equipment, the entries and exits, pool stairs, ladders, underwater benches, special features and other accessories shall be located outside of the minimum diving water envelope indicated in Figure 322.2.

411.1.6 Treads. Treads shall have slip-resistant surfaces.

411.2 Pool stairs. The design and construction of stairs extending into the pool in either shallow or deep water, including recessed pool stairs, shall comply with Sections 411.2.1 through 411.2.4.

411.2.1 Tread dimensions and area. Treads shall be not less than 24 inches (607 mm) at the leading edge. Treads shall have an unobstructed surface area of not less than 240 square inches (0.154 m²) and an unobstructed horizontal depth of not less than 10 inches (254 mm) at the centerline.

411.2.2 Risers. Risers, except for the bottom riser, shall have a uniform height of not greater than 12 inches (305 mm) measured at the centerline. The bottom riser height is allowed to vary to the floor.

411.2.3 Top tread. The vertical distance from the pool coping, deck, or step surface to the uppermost tread shall be not greater than 12 inches (305 mm).

411.2.4 Bottom tread. Where stairs are located in water depths greater than 48 inches (1219 mm), the lowest tread shall be not less than 48 inches (1219 mm) below the deck and shall be recessed in the pool wall.

411.2.5 Outlined edges. The leading horizontal and vertical edges of stair treads shall be outlined with slip-resistant contrasting tile or other permanent marking of not less than 1 inch (25.4 mm) and not greater than 2 inches (50.8 mm).

411.3 Shallow end detail for beach and sloping entries. Sloping entries used as a pool entrance shall have a maximum slope of 1 unit vertical in 10 units horizontal (10-percent slope).

411.3.1 Benches and steps. Where benches are used in conjunction with sloping entries, the vertical riser distance shall not exceed 12 inches (305 mm). Where steps are used in conjunction with sloping entries, the requirements of Section 411.2 shall apply.

411.3.2 Vertical drops. A vertical drop exceeding 12 inches (305 mm) within a sloping entry shall be provided with a handrail.

411.3.3 Surfaces. Beach and sloping entry walking surfaces at water depths up to 36 inches (914 mm) shall be slip resistant.

411.4 Pool ladder design and construction. The design and construction of ladders shall comply with Section 322.

411.5 Underwater seats, benches, and swimouts. The design and construction of underwater seats, benches, and swimouts shall comply with Sections 411.5.1 and 411.5.2.

411.5.1 Swimouts. Swimouts, located in either the deep or shallow area of a pool, shall comply with all of the following:

1. The horizontal surface shall be not greater than 20 inches (508 mm) below the waterline.
2. An unobstructed surface shall be provided that is equal to or greater than that required for the top tread of the pool stairs in accordance with Section 411.2.
3. Where used as an entry and exit access, swimouts shall be provided with steps that comply with the pool stair requirements of Section 411.2.
4. The leading edge shall be visibly set apart.

411.5.2 Underwater seats and benches. Underwater seats and benches, whether used alone or in conjunction with pool stairs, shall comply with all of the following:

1. The horizontal surface shall be not greater than 20 inches (508 mm) below the waterline.
2. An unobstructed surface shall be provided that is not less than 10 inches (254 mm) in depth and not less than 24 inches (607 mm) in width.
3. Underwater seats and benches shall not be used as the required entry and exit access.
4. Where underwater seats are located in the deep area of the pool where manufactured or constructed diving equipment is installed, such seats shall be located outside of the minimum diving water envelope for diving equipment.
5. The leading edge shall be visually set apart.
6. The horizontal surface shall be at or below the waterline.
7. A tanning ledge or sun shelf used as the required entry and exit access shall be located not greater than 12 inches (305 mm) below the waterline.

SECTION 412 SIGNAGE

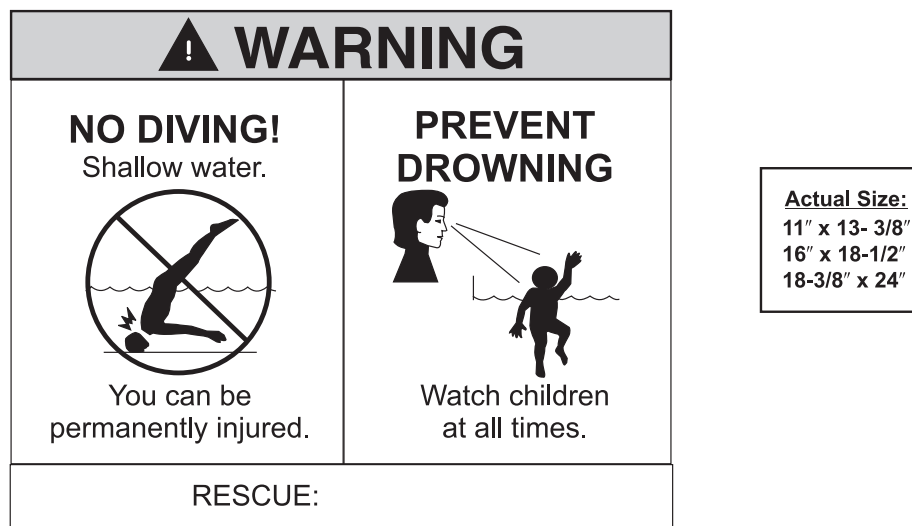
412.1 Safety signage. Safety signage advising on the danger of diving into *shallow areas* and on the prevention of drowning shall be provided as required by the authority that governs such pools. Safety signage shall be as shown in Figure 412.1 or similar thereto.

412.2 Emergency telephone signs. A sign indicating the location of the nearest landline telephone that can be used to call emergency services shall be posted within sight of the main entry into a pool facility. The sign shall indicate the telephone numbers, including area code, that can be called for emergency services including, but not limited to, police, fire, ambulance and rescue services. If “9-1-1” telephone service is available for any of those services, “9-1-1” shall be indicated next to the telephone number for such services.

The sign shall include the street address and city where the pool is located. The nearest landline telephone indicated by the sign shall be one that can be used free of charge to call for emergency services. A sign with the telephone number and address information required by this section shall be posted within sight of the landline telephone.

412.3 Sign placement. Signs shall be positioned for effective visual observation by users as required by the authority that governs such pools.

412.4 Emergency shutoff switch. Signs shall be posted that clearly indicate the location of the pump emergency shutoff switch. Such switch shall be clearly identified as the pump emergency shutoff switch.



For SI: 1 inch = 25.4 mm.

**FIGURE 412.1
SAFETY SIGN**

CHAPTER 5

PUBLIC SPAS AND PUBLIC EXERCISE SPAS

User note:

About this chapter: Chapter 5 regulates the depth, seating depth and floor slope of public pools and public exercise spas. Suction fitting, heater and depth marker requirements are also included in this chapter.

SECTION 501 GENERAL

501.1 Scope. This chapter shall govern the design, installation, construction and repair of public spas and exercise spas regardless of whether a fee is charged for use.

501.2 General. In addition to the requirements of this chapter, public spas and public exercise spas shall comply with the requirements of Chapter 3.

SECTION 502 MATERIALS

502.1 Pumps and motors. Pumps and motors shall be *listed* and *labeled* for use in spas.

SECTION 503 STRUCTURE AND DESIGN

503.1 Water depth. The maximum water depth for spas shall be 4 feet (1219 mm) measured from the *design waterline* except for spas that are designed for special purposes and *approved* by the authority having jurisdiction. The water depth for exercise spas shall not exceed 6 feet 6 inches (1981 mm) measured from the *design waterline*.

503.2 Multilevel seating. Where multilevel seating is provided, the maximum water depth of any seat or sitting bench shall be 28 inches (711 mm) measured from the *design waterline* to the lowest measurable point.

503.3 Floor slope. The slope of the floor shall not exceed 1 unit vertical in 12 units horizontal (8.3-percent slope). Where multilevel floors are provided, the change in depth shall be indicated.

SECTION 504 PUMPS AND MOTORS

504.1 Emergency shutoff switch. One emergency shutoff switch shall be provided to disconnect power to circulation and jet system pumps and air blowers. Emergency shutoff switches shall be accessible, located within sight of the spa and shall be located not less than 5 feet (1524 mm) but not greater than 10 feet (3048 mm) horizontally from the inside walls of the spa.

504.1.1 Alarms. Emergency shutoff switches shall be provided with an audible alarm rated at not less than 80

decibel sound pressure level and a light near the spa that will operate continuously until deactivated when the shutoff switch is operated. The following statements shall appear on a sign that is posted in a location that is visible from the spa:

ALARM INDICATES SPA PUMPS OFF. DO NOT
USE SPA WHEN ALARM SOUNDS AND LIGHT IS
ILLUMINATED UNTIL ADVISED OTHERWISE.

504.2 Timer. The operation of the hydrotherapy jets shall be limited by a cycle timer having a maximum setting of 10 minutes. The cycle timer shall be located not less than 5 feet (1524 mm) away, adjacent to, and within sight of the spa.

SECTION 505 RETURN AND SUCTION FITTINGS

505.1 Return fittings. Return fittings shall be provided and arranged to facilitate a uniform circulation of water and maintain a uniform sanitizer residual throughout the entire spa or exercise spa.

505.2 Suction fittings. Suction fittings shall be in accordance with Sections 505.2.1 through 505.2.4.

505.2.1 Testing and certification. Suction fittings shall be *listed* and *labeled* in accordance with APSP 16.

505.2.2 Installation. Suction fittings shall be sized and installed in accordance with the manufacturer's specifications. Spas and exercise spas shall not be used or operated if the suction outlet cover is missing, damaged, broken or loose.

505.2.3 Outlets per pump. Suction fittings shall be provided in accordance with Section 310.

505.2.4 Submerged vacuum fittings. *Submerged vacuum fittings* shall be in accordance with Section 310.

SECTION 506 HEATER AND TEMPERATURE REQUIREMENTS

506.1 General. This section pertains to fuel-fired and electric appliances used for heating spa or exercise spa water.

506.2 Water temperature controls. Components provided for water temperature controls shall be suitable for the intended application.

506.2.1 Water temperature regulating controls. Water temperature regulating controls shall comply with UL

PUBLIC SPAS AND PUBLIC EXERCISE SPAS

873 or UL 372. A means shall be provided to indicate the water temperature in the spa.

Exception: Water temperature regulating controls that are integral to the heating appliance and *listed* in accordance with the applicable end use appliance standard.

506.2.2 Water temperature limiting controls. Water temperature limiting controls shall comply with UL 873 or UL 372. Water temperature at the heater return outlet shall not exceed 140°F (60°C).

SECTION 507 WATER SUPPLY

507.1 Water temperature. The temperature of the incoming makeup water shall not exceed 104°F (40°C).

SECTION 508 SANITIZING, OXIDATION EQUIPMENT AND CHEMICAL FEEDERS

508.1 Automatic controllers. Where an automatic controller is installed on a spa or hot tub for public use, the controller shall be installed with an automatic pH and an oxidation reduction potential controller *listed* and *labeled* in compliance with NSF 50.

SECTION 509 SAFETY FEATURES

509.1 Instructions and safety signs. Instructions and safety signage shall comply with the requirements of the local jurisdiction. In the absence of local requirements, safety signs and instructions shall comply with UL 1563 or CSA C22.2 No. 218.1.

509.2 Operational signs. Operational signs shall include, but not be limited to, the following messages as required by the local jurisdiction:

1. Do not allow the use of or operate spa if the suction outlet cover is missing, damaged or loose.
2. Check spa temperature before each use. Do not enter the spa if the temperature is above 104°F (40°C).
3. Keep breakable objects out of the spa area.
4. Spa shall not be operated during severe weather conditions.
5. Never place electrical appliances within 5 feet (1524 mm) of the spa.
6. No diving.

509.3 Depth markers. Public spas shall have permanent depth markers with numbers not less than 4 inches (102 mm) in height that are plainly and conspicuously visible from obvious points of entry and in conformance to this section.

509.3.1 Number. There shall be not less than two depth markers for each spa, regardless of spa size or shape.

509.3.2 Spacing. Depth markers shall be spaced at not more than 25-foot (7620 mm) intervals and shall be uniformly located around the perimeter of the spa.

509.3.3 Marking. Spas and exercise spas shall have the maximum water depth clearly marked on the required surfaces and such markers shall be positioned on the deck within 18 inches (457 mm) of the *design waterline*. Depth markers shall be positioned to be read while standing on the deck facing the water.

509.3.4 Slip resistant. Depth markers in or on the deck surfaces shall be slip resistant.

509.4 Clock. Public facilities shall have a clock that is visible to spa users.

CHAPTER 6

AQUATIC RECREATION FACILITIES

User note:

About this chapter: Chapter 6 covers facilities commonly known as water parks. Such facilities can have a variety of pools ranging from zero depth entry wave pools to lazy rivers. This chapter includes requirements for floor slopes, steps, marking, signage, circulation systems, handholds and swimouts.

SECTION 601 GENERAL

601.1 Scope. This chapter covers public pools and water containment systems used for aquatic recreation. This chapter provides specifications for the design, equipment, operation, signs, installation, sanitation, new construction, and rehabilitation of public pools for aquatic play. This chapter covers Class D-1 through Class D-6 public pools whether they are provided as stand-alone attractions or in various combinations in a composite attraction.

601.2 Combinations. Where combinations of Class D-1 through Class D-6 pools exist within a facility, each element in the facility shall comply with the applicable code sections as if the element functioned as a part of a freestanding pool of Class D-1 through Class D-6.

601.3 General. In addition to the requirements of this chapter, aquatic recreation facilities shall comply with the requirements of Chapter 3.

SECTION 602 FLOORS

602.1 Floor slope. In water depths of less than 5 feet (1524 mm), the floor slope shall be not greater than 1 unit vertical in 12 units horizontal (8.3-percent slope) except where the function of the attraction requires greater slopes in limited areas.

Exception: The slope of the floor in Class D-3 pools shall not exceed 1 unit vertical in 7 units horizontal (14-percent slope).

SECTION 603 MARKINGS AND INDICATORS

603.1 Markings. Markings in areas of deep water shall comply with Section 409.2 except where the function of the pool dictates otherwise.

603.2 Class D-2 pools. Where a Class D-2 pool has a bather-accessible depth greater than 4½ feet (1372 mm), the floor shall have a distinctive marking at the 4½ feet (1372 mm) water depth.

603.3 Shallow-to-deep-end rope and float line. Where a pool has a water depth ranging from less than 5 feet (1524 mm) to greater than 5 feet (1524 mm), a rope and float line shall be located 1 foot (305 mm) horizontally from the 5-foot (1524 mm) depth location, toward the shallow end of the pool.

603.4 Nozzles. Pools having nonflush propulsion nozzles in the floor shall have a distinctive marking at the location of such nozzles.

SECTION 604 CIRCULATION SYSTEMS

604.1 General. A circulation system consisting of pumps, piping, return inlets and suction outlets, filters, and other necessary equipment shall be provided for complete circulation of water with the pool.

604.2 Turnover. Circulation system equipment shall be designed to turn over 100 percent of the nominal pool water volume in the amount of time specified in Table 604.2. The system shall be designed to give the required turnover time based on the manufacturer's recommended maximum pressure and flow of the filter in clean media condition.

**TABLE 604.2
TURNOVER TIME**

CLASS OF POOL	MAXIMUM TURNOVER TIME ^a (hours)
D-1	2
D-2 with less than 24 inches water depth	1
D-2 with 24 inches or greater water depth	2
D-3	1
D-4	2
D-5	1
D-6	1

For SI: 1 inch = 25.4 mm.

a. Pools with a sand bottom require a 1-hour turnover time.

AQUATIC RECREATION FACILITIES

604.2.1 24-hour circulation required. Circulation systems shall circulate treated and filtered water for 24 hours a day.

604.2.2 Reduced circulation rate. The circulation rate shall be permitted to be reduced during periods that the pool is closed for use provided that acceptable water clarity conditions are met prior to reopening the pool for public use. The reduced circulation rate shall not be zero.

604.3 Surface skimming systems. Surface skimming systems shall be in accordance with Table 604.3.

604.3.1 Class D-5 pool skimmers. The installation of skimmers in the side areas of Class D-5 pools shall be prohibited.

SECTION 605 HANDHOLDS AND ROPES

605.1 Handholds. Handholds shall be provided in accordance with Section 323.

Exception: Handholds shall not be provided for wave action and action rivers.

605.2 Rope and float line. A rope and float line shall be provided for all of the following situations:

1. Separation of activity areas.
2. Identification of a break in floor slope at water depths of less than 5 feet (1524 mm).
3. Identification of a water depth greater than 4½ feet (1372 mm) in constant floor slope in Class D-2 pools.

Exception: Class D-1 pools or any other pool where the designer indicates that such a line is not required or that the line would constitute a hazard.

605.2.1 Location. The rope and float line shall be located 1 foot (305 mm) toward the shallow end in each location.

605.3 Caisson wall rope and float line. For Class D-1 pools, a rope and float line shall be installed to restrict bather access to the wave pool caisson wall. The location of the

rope and float line shall be in accordance with the wave equipment manufacturer's instructions.

605.4 Fastening. Rope and float lines shall be securely fastened to wall anchors made of corrosion-resistant materials. Wall anchors shall be of the recessed type and shall not have projections that will constitute a hazard when the rope and float line is removed.

605.5 Size. Rope and float lines shall be not less than 5⁄8 inch (15.9 mm) in diameter and shall be made of polypropylene material.

SECTION 606 DEPTHS

606.1 Class D-6 depth. The captured or standing water depth in Class D-6 pools shall be not greater than 12 inches (305 mm).

606.2 Spray pools. The water depths in spray pools shall be not greater than 6 inches (152 mm).

SECTION 607 BARRIERS

607.1 Barriers. Multiple pools and spas within a single complex shall be permitted without barriers where a barrier separates the single complex from the surrounding property in accordance with Section 305.

SECTION 608 NUMBER OF OCCUPANTS

608.1 Occupant load. The occupant load for the pools or spas in the facility shall be calculated in accordance with Table 608.1. The occupant load shall be the combined total of the number of users based on the pool or spa water surface area and the deck area surrounding the pool or spa. The deck area occupant load shall be based on the occupant load calculated where a deck is provided or based on an assumed 4-foot-wide (1219 mm) deck surrounding the entire perimeter of the pool or spa, whichever is greater.

TABLE 604.3
SURFACE SKIMMING SYSTEMS

CLASS OF POOL	SURFACE SKIMMING SYSTEM
D-1	Zero-depth trench located at static water level or other skimming systems
D-2	Auto skimmer, zero-depth trench or <i>gutters</i>
D-3	Auto skimmer, zero-depth trench or perimeter device
D-4	Single or multiple skimmer devices for skimming flow
D-5	Skimmers prohibited in side area
D-6	Auto skimmer, zero-depth trench, or <i>gutter</i>

TABLE 608.1
OCCUPANT LOAD

	SHALLOW OR WADING AREAS	DEEP AREA (NOT INCLUDING THE DIVING AREA)	DIVING AREA (PER EACH DIVING BOARD)	DECK AREA
Vessel water surface area	8 sq. ft per user	10 sq. ft. per user	300 sq. ft. per user	—
Deck area	—	—	—	1 user per 15 sq. ft.

For SI: 1 square foot = 0.0929 m².

608.2 Facility capacity. For multiple pools and spas in a single aquatic recreation facility, the total facility occupant capacity shall not be limited by the number of occupants calculated in accordance with Section 608.1.

SECTION 609 DRESSING AND SANITARY FACILITIES

609.1 General. Dressing and sanitary facilities shall be provided in accordance with the minimum requirements of the *International Building Code* and *International Plumbing Code* and Sections 609.2 through 609.9.

609.2 Number of fixtures. The minimum number of required water closets, urinals, lavatory, and drinking fountain fixtures shall be provided as required by the *International Building Code* and *International Plumbing Code* and the dressing facilities and number of cleansing and rinse showers shall be provided in accordance with Sections 609.2.1, 609.2.2, and 609.3.1.

609.2.1 Water area less than 7500 square feet. Facilities that have less than 7500 gross square feet (697 m²) of water area available for bather access shall have dressing facilities and not less than one cleansing shower for males and one cleansing shower for females.

609.2.2 Water area 7500 square feet or more. Facilities that have 7500 gross square feet (697 m²) or more of water area available for bather access shall have dressing facilities and not less than one cleansing shower for males, and one cleansing shower for females for every 7500 square feet (697 m²) or portion thereof. Where the result of the fixture calculation is a portion of a whole number, the result shall be rounded up to the nearest whole number.

609.3 Showers. Showers shall be in accordance with Sections 609.3.1 through 609.3.3.

609.3.1 Rinse shower. In addition to the requirement for cleansing showers in Sections 609.2.1 and 609.2.2, not less than one rinse shower shall be provided on the deck of or at the entrance of each pool.

609.3.2 Water heater and mixing valve. Bather access to water heaters and thermostatically controlled mixing valves for showers shall be prohibited.

609.3.3 Temperature. At each cleansing showerhead, the heated shower water temperature shall be not less than 90°F (32°C) and not greater than 120°F (49°C). Water

supplied to rinse showers shall not be required to be heated.

609.4 Soap dispensers. Soap dispensers shall be in accordance with Sections 609.4.1 and 609.4.2.

609.4.1 Liquid or powder. Soap dispensers shall be provided at each lavatory and cleansing shower. Soap dispensers shall dispense liquid or powdered soap. Reusable cake soap is prohibited. Soap dispensers and soap shall not be provided at rinse showers.

609.4.2 Metal or plastic. Soap dispensers shall be made of metal or plastic. Glass materials shall be prohibited.

609.5 Toilet tissue holder. A toilet paper holder shall be provided at each water closet.

609.6 Lavatory mirror. Where mirrors are provided, they shall be shatter resistant.

609.7 Sanitary napkin receptacles. Sanitary napkin receptacles shall be provided in each water closet compartment for females and in the cleansing area of the showers for female use only.

609.8 Sanitary napkin dispensers. A sanitary napkin dispenser shall be provided in each toilet facility for females.

609.9 Infant care. Baby-changing tables shall be provided in toilet facilities having two or more water closets.

SECTION 610 SPECIAL FEATURES

610.1 Locations. Entry and exit locations shall be in accordance with Table 610.1. The primary means of entry and exit shall consist of ramps, beach entries, pool stairs, or ladders.

610.2 Secondary entry and exit means. Where secondary means of entry and exit are provided, they shall consist of one of the following:

1. Steps.
2. Stairs.
3. Ladders with grab rails.
4. Recessed treads.
5. Ramps.
6. Beach entries.
7. Swimouts.
8. Designs that provide the minimum utility as specified in this code.

TABLE 610.1
ENTRY AND EXIT LOCATIONS

CLASS OF POOL	ENTRY AND EXIT LOCATIONS
D-1	Entry at beach end only; exit at beach end, sides or end wall
D-2	Entry and exit determined by the pool designer
D-3	Entry prohibited from deck areas; exit by ladders, steps or ramps as determined by pool designer
D-4	Entry and exit determined by the pool designer
D-5	Entry and exit determined by the pool designer
D-6	Entry and exit determined by the pool designer

AQUATIC RECREATION FACILITIES

610.3 Provisions for diving. Where diving facilities are part of the attraction or pool complex, entries, exits, pool stairs, ladders, underwater benches, special features, and other accessories shall be located outside of the minimum diving water envelope in accordance with Figure 322.2.

610.4 Beach entry, zero-depth entry, and sloping entries. The shallow end for beach entries and sloping entries shall be in accordance with Sections 610.4.1 through 610.4.4 or the regulations of the local jurisdiction.

610.4.1 Maximum entry slope. The slope of sloping entries used as a pool entry shall not exceed 1 unit vertical in 12 units horizontal (8.3-percent slope).

610.4.2 Benches. Where benches are used in conjunction with sloping entries, the vertical riser height shall not exceed 12 inches (305 mm).

610.4.3 Steps. Where steps are used in conjunction with sloping entries, all of the requirements of Section 610.5 shall apply.

610.4.4 Slip-resistant surfaces. Beach and sloping entry walking surfaces at water depths up to 36 inches (914 mm) shall be slip resistant.

610.5 Pool steps. The design and construction of steps for stairs into the shallow end and recessed pool stairs shall be in accordance with Sections 610.5.1 through 610.5.6.

610.5.1 Uniform height of 9 inches. Except for the bottom riser, risers at the centerline shall have a maximum uniform height of 9 inches (229 mm). The bottom riser height shall be permitted to vary from the other risers.

610.5.2 Distance from coping or deck. The vertical distance from the pool coping, deck, or step surface to the uppermost tread shall be not greater than 9 inches (229 mm).

610.5.3 Color to mark leading edge. The leading edge of steps shall be distinguished by a color contrasting with the color of the steps and the pool floor.

610.5.4 Stairs in water depths over 48 inches. Stairs that are located in water depths greater than 48 inches (1219 mm) shall have the lowest tread located below the deck at a distance of not less than 48 inches (1219 mm) below the deck.

610.5.5 Tread horizontal depth. Treads shall have an unobstructed horizontal depth of not less than 11 inches (279 mm).

610.5.6 Tread surface area. Treads shall have an unobstructed surface area of not less than 240 square inches (.017 m²).

610.6 Swimouts. Swimouts shall be located completely outside of the water current or wave action of the pool or spa and can be located in shallow or deep areas of water.

610.6.1 Surface area. An unobstructed surface equal to or greater than that required for the top tread of the pool stairs shall be provided in accordance with Sections 610.5.5 and 610.5.6.

610.6.2 Step required. Where a swimout is used as an entry and exit access point, it shall be provided with a step that meets the pool stair requirements (see Section 610.5).

610.6.3 Maximum depth. The horizontal surface of a swimout shall be not greater than 20 inches (508 mm) below the waterline.

610.6.4 Color marking. The leading edge of a swimout shall be visually set apart by a stripe having a width of not less than $\frac{3}{4}$ inch (19 mm) and not greater than 2 inches (51 mm). The stripe shall be of a contrasting color to the adjacent surfaces.

610.7 Underwater benches. Underwater benches shall comply with this section.

610.7.1 Location. Underwater benches shall only be located in areas where the pool water depth does not exceed 5 feet (1.5 m).

610.7.2 Surface dimensions. Underwater benches shall have an unobstructed surface dimension of not less than 16 inches (406 mm) and not greater than 22 inches (559 mm) in depth measured front to back and not less than 26 inches (660 mm) in width.

610.7.3 Not an entry or exit. Underwater benches shall not be used as an entry or exit for a pool.

610.7.4 Depth. The horizontal surface of benches shall be not greater than 20 inches (508 mm) below the waterline.

610.7.5 Color marking. The leading edge of benches shall be visually set apart by a stripe having a width not less than $\frac{3}{4}$ inch (19 mm) and not greater than 2 inches (51 mm). The stripe shall be of a contrasting color to the adjacent surfaces.

610.7.6 Slip resistant. The top surface of benches shall be slip resistant.

610.8 Objects permitted. The design, construction, and operation of decorative objects and structures intended for climbing, walking, and hanging on by a bather are not covered by this code.

610.8.1 Floating devices. Floating devices not intended to be mobile shall be anchored in a manner to restrict movement to the range established by the designer. The anchoring of such floating devices shall be configured to minimize the possibility of entrapment of bathers, bodies, hair, limbs, and appendages should they come in contact with any element of the floating device or its anchors.

SECTION 611 SIGNAGE

611.1 Posting of signs. Signs stating rules, instructions, and warnings shall be posted. Signs for suction entrapment warning in accordance with Section 310 shall be posted. Signs shall be placed so that they squarely face approaching traffic. The center of the message panel shall be located not less than 66 inches (1676 mm) above the walking surface.

611.2 Prohibited mounting. Signs shall not be mounted on fences and gates alongside of guest walkways and staircases.

611.3 Message delivery. Messages delivered on signs shall comply with all of the following:

1. Messages shall be pertinent to the activity being performed or to be performed.
2. Messages shall be specific by providing details about the activity.
3. Messages shall be short and concise.
4. Messages shall be direct without humor or embellishments.

611.4 Text font and size. The message text shall be in a clear, bold font such as Arial. The character height shall be proportional to 1 inch (25 mm) for 10 feet (3048 mm) of intended viewing distance but not less than 1 inch (25 mm).

611.5 Distinct sign classes. Facility signs shall be categorized into four sign classes in accordance with Sections 611.5.1 through 611.5.4.

611.5.1 General information. General information signs shall be posted facility-wide and shall not be attraction specific.

611.5.2 Directional signs. Directional signs shall identify the location of services and attractions in the park and shall include directional arrows. Directional signs shall be posted at various crossroads in the facility.

611.5.3 Rule signs. Rule signs shall inform guests of the qualifications that they must meet to allow them to participate on a specific ride or attraction. Rules shall include, but are not limited to, limits for weight and height, proper attire and ride (and ride vehicle) stipulations. Rule signs shall be located at a point where the guests make the initial commitment to participate on the ride.

611.5.4 Instructional signs. Instructional signs shall inform guests of specific instructions for the use of the ride. Instructions shall include, but are not limited to, riding posture, prohibited activity, and user exit requirements at the ride termination. Instructional signs shall be located along the queue approaching the ride dispatch area.

611.6 Materials. Sign panels shall be durable for the weather conditions and shall be resistant to damage from guests. The message surface shall be clean and smooth and shall readily accept paint or precut lettering adhesives.

611.7 Shape and size consistency. The panel shape and size for each class of signs shall be the same. Where the total message to be indicated is larger than what can be placed on one sign, multiple signs of the same size shall be used to display the message.

611.8 Pictograms. Pictograms shall always be accompanied by text indicating the same message. Pictograms shall be designed to illustrate one clear and specific meaning to all individuals.

611.9 Theming or artwork. Theming or artwork applied to signs shall not invade the message panel. Signs shall have a distinct border.

611.10 Shallow water. Safety signs shall be in accordance with Section 412.

611.11 Cold water. Where a pool could have a water temperature below 70°F (21°C), a cold water warning sign shall be posted at the point of entry to the pool or at the attraction using such water.

SECTION 612 INTERACTIVE WATER PLAY FEATURES

612.1 General. Interactive water play features shall comply with Sections 612.1 through 612.7.

612.2 Safety hazards. Parts of the interactive water play feature that can be accessed by the users of the feature shall be designed and constructed to not present safety hazards to the users.

612.3 Decking. A deck of not less than 4 feet (1296 mm) in width shall be provided around the perimeter of the interactive water play feature. The deck shall be sloped away from the interactive water play feature.

612.4 Splash pad zone. The splash pad zone shall comply with Sections 612.4.1 through 612.4.4.

612.4.1 Surface. Splash pad zone surfaces shall have a slip-resistant and cleanable surface. The manufacturer of manufactured zone surfaces shall certify that such surfacing is suitable for aquatic and chlorinated environments. Direct suction outlets from interactive water play features shall be prohibited.

612.4.2 Slope and water collection. Splash pad zone surfaces shall slope to one or more drain points so that only water from the splash pad zone flows back to a gravity-fed collection tank. The slope shall prevent the accumulation or pooling of water and shall not exceed 1/2 inch per foot (41.6 mm/m).

Drain openings in the splash pad zone surfaces that can be accessed by users shall not allow a 1/2 inch (12.7 mm) diameter dowel rod to be inserted into the opening. Drain covers in splash pad zone surfaces shall be flat and flush with the zone surface and shall require tools for removal. The manufacturer of such drain covers shall certify that the covers comply with the physical testing and finger-and-limb entrapment requirements in Sections 3 and 6, respectively, of APSP 16.

612.4.3 Nozzles within the interactive water play feature splash pad zone. Nozzles that spray water from the interactive water play feature splash pad zone shall be flush with the zone surface. Openings in such nozzles shall not allow a 1/2 inch (12.7 mm) diameter dowel rod to be inserted into the opening. The water velocity from the orifice of any water nozzle shall not exceed 20 feet (6.1 m) per second.

612.4.4 Other nozzles. Nozzles, other than those on walking surfaces within the interactive water play feature splash pad zone, shall be designed to be clearly visible.

612.5 Water sanitation. The water sanitation shall consist of the equipment covered in Sections 612.5.1 through 612.5.5.

AQUATIC RECREATION FACILITIES

612.5.1 Water collection and treatment tank. Interactive water play features shall drain to a collection and treatment tank. The inside of the tank shall be accessible for cleaning and inspection. The access hatch or lid shall be locked or require a tool to open.

612.5.2 Filtration pump. The filtration pump shall be sized to turn over the surge basin capacity in 30 minutes or less. The intake for the pump shall be located to draw water from the lowest elevation in the treatment tank.

612.5.3 Spray nozzle and water feature water disinfection. Spray nozzles and water features shall be supplied by water from the water collection and treatment tank that is equipped with filtration and sanitizing equipment required by Chapter 3 and this section. Where separate water feature pumps are installed, controls shall prevent those pumps from operation when the filtration pump is not operating.

612.5.4 Disinfection system. In addition to any filtration and sanitizing equipment requirements of Chapter 3 and this chapter, all water supplied to spray nozzles or other water that can be accessed by a user shall pass through a secondary disinfection system before discharge to the user. The secondary disinfection system shall be listed and labeled to NSF 50 as having a single-pass, three-log reduction of the cryptosporidium surrogate.

612.5.5 Make-up water system. The water collection and treatment tank shall be provided with a make-up water system that is supplied with potable water.

612.6 Operating instructions. In addition to the documentation and instructions requirements of Chapters 1 and 3, the operating instructions for an interactive water play feature shall require that the circulation system be operated continuously for not less than four turnovers prior to operation of the pumps for the spray nozzles and other water features systems.

612.7 Lighting. Where a interactive water play feature will be in operation at night or during periods of inadequate natural lighting, artificial lighting shall be provided in accordance with the same requirements for pool deck area lighting in Section 321.2.1.

CHAPTER 7

ONGROUND STORABLE RESIDENTIAL SWIMMING POOLS

User note:

About this chapter: Chapter 7 concerns residential portable pools also known as onground storable residential swimming pools. These pools are manufactured for assembly on the site. The chapter's regulations include those for floor slopes, entry barrier methods, decks, stairs, safety signage and circulation systems.

SECTION 701
GENERAL

701.1 Scope. This chapter describes certain criteria for the design, manufacturing, and testing of *onground storable pools* intended for *residential* use. This includes portable pools with flexible or nonrigid side walls that achieve their structural integrity by means of uniform shape, support frame or a combination thereof, and that can be disassembled for storage or relocation. This chapter includes what has been commonly referred to in past standards or codes as onground or above-ground pools.

701.1.1 Permanent inground residential swimming pool. This chapter does not apply to permanent inground *residential* pools, as defined in Chapter 8.

701.2 General. In addition to the requirements of this chapter, onground storable *residential* swimming pools shall comply with the requirements of Chapter 3.

701.3 Floor slopes. Floor slopes shall be uniform and in accordance with Sections 701.3.1 through 701.3.4.

701.3.1 Shallow end. The slope of the floor from the shallow end wall towards the deep area shall not exceed 1 unit vertical in 7 units horizontal (14-percent slope) to the point of the first slope change.

701.3.2 Transition. The slope of the floor from the point of the first slope change towards the deepest point shall not exceed 1 unit vertical in 3 units horizontal (33-percent slope).

701.3.3 Adjacent. The slope adjacent to the shallow area shall not exceed 1 unit vertical in 3 units horizontal (33-percent slope) and the slope adjacent to the side walls shall not exceed 1 unit vertical in 1 unit horizontal (100-percent slope).

701.3.4 Change point. The point of the first slope change shall be defined as the point at which the shallow area slope exceeds 1 unit vertical in 7 units horizontal (14-percent slope) and is not less than 6 feet (1889 mm) from the shallow end wall of the pool.

701.4 Identification. For onground storable *residential* pools with a vinyl liner, the manufacturer's name and the liner identification number shall be affixed to the liner. For onground storable *residential* pools without a liner, the manufacturer's name and identification number shall be affixed to the exterior of the pool structure.

701.5 Installation. *Onground storable pools* shall be installed in accordance with the manufacturer's instructions.

SECTION 702
LADDERS AND STAIRS

702.1 Ladders and stairs. Pools shall have a means of entry and exit consisting of not less than one ladder or a ladder and staircase combination.

702.2 Type A and Type B ladders. Type A, double access, and Type B, limited access, A-frame ladders shall comply with Sections 702.2.1 through 702.2.7. See Figure 702.2.

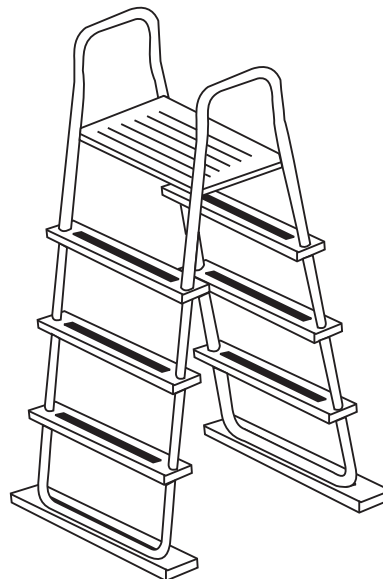


FIGURE 702.2
TYPICAL A-FRAME LADDER, TYPES A AND B

702.2.1 Barrier required. Ladders in the pool shall have a physical barrier to prevent children from swimming through the riser openings or behind the ladder.

Exception: Barriers for ladders shall not be required where the ladder manufacturer provides a certification statement that the ladder complies with the ladder entrapment test requirements of APSP 4.

702.2.2 Platform. Where an A-frame ladder has a platform between the handrails, the platform shall have a width of not less than 12 inches (305 mm) and a length of not less than 12 inches (305 mm). The platform shall be at or above the highest ladder tread. The walking surface of the platform shall be slip resistant.

ONGROUND STORABLE RESIDENTIAL SWIMMING POOLS

702.2.3 Handrails or handholds. A-frame ladders shall have two handrails or handholds that serve all treads. The height of the handrails and handholds shall be not less than 20 inches (508 mm) above the platform or uppermost tread, whichever is higher.

702.2.4 Diameter. The outside diameter of handrails and handholds shall be not less than 1 inch (25 mm) and not greater than 1.9 inches (48 mm).

702.2.5 Clear distance. The clear distance between ladder handrails shall be not less than a space of 12 inches (305 mm).

702.2.6 Treads. Ladder treads shall have a horizontal uniform depth of not less than 2 inches (51 mm).

702.2.7 Riser height. Risers, other than the bottom riser, shall be of uniform height that is not less than 7 inches (178 mm) and not greater than 12 inches (305 mm). The bottom riser height shall be not less than 7 inches (178 mm) and not greater than 12 inches (305 mm). The vertical distance from the platform or top of the pool structure to the uppermost tread shall be the same as the uniform riser heights.

702.3 Type C staircase ladders (ground to deck). Type C staircase ladders shall comply with Sections 702.3.1 through 702.3.6. See Figure 702.3.

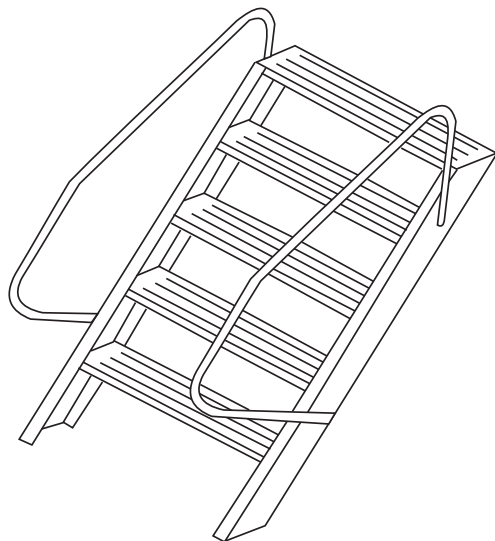


FIGURE 702.3
TYPICAL STAIRCASE LADDER, TYPE C

702.3.1 Handrails or handholds. Staircase ladders shall have not less than two handrails or handholds that serve all treads. The height of the handrails and handholds shall be not less than 20 inches (508 mm) above the platform or uppermost tread, whichever is higher.

702.3.2 Diameter. The outside diameter of handrails and handholds shall be not less than 1 inch (25 mm) and not greater than 1.9 inches (48 mm).

702.3.3 Treads. Ladder treads shall have a horizontal uniform depth of not less than 4 inches (102 mm).

702.3.4 Riser height. Risers, other than the bottom riser, shall be of uniform height that is not less than 7 inches (178 mm) and not greater than 12 inches (305 mm). The bottom riser height shall be not less than 7 inches (178 mm) and not greater than 12 inches (305 mm). The vertical distance from the platform or top of the pool structure to the uppermost tread shall be the same as the uniform riser heights.

702.3.5 Top step. The top step of a staircase ladder shall be flush with the deck or 7 inches (178 mm) to 12 inches (305 mm) below the deck level.

702.3.6 Width. Steps shall have a minimum unobstructed width of 19 inches (483 mm) between the side rails.

702.4 Type D in-pool ladders. Type D in-pool ladders shall be in accordance with Sections 702.4.1 through 702.4.7. See Figure 702.4.

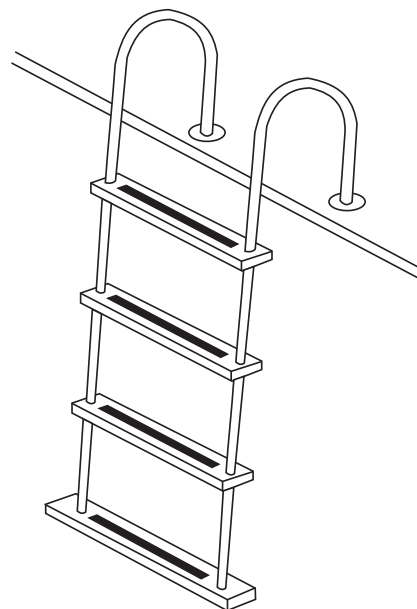


FIGURE 702.4
TYPICAL IN-POOL LADDER, TYPE D

702.4.1 Clearance. There shall be a clearance of not less than 3 inches (76 mm) and not greater than 6 inches (152 mm) between the pool wall and the ladder.

702.4.2 Handrails or handholds. Ladders shall be equipped with two handrails or handholds that extend above the platform or deck not less than 20 inches (508 mm).

702.4.3 Clear distance. The clear distance between ladder handrails shall be not less than 12 inches (305 mm).

702.4.4 Diameter. The outside diameter of handrails and handholds shall be not less than 1 inch (25 mm) and not greater than 1.9 inches (48 mm).

702.4.5 Riser height. Risers, other than the bottom riser, shall be of uniform height that is not less than 7 inches (178 mm) and not greater than 12 inches (305 mm). The

bottom riser height shall be not less than 7 inches (178 mm) and not greater than 12 inches (305 mm).

702.4.6 Top tread. The vertical distance from the pool coping, deck, or step surface to the uppermost tread shall be not less than 7 inches (178 mm) and not greater than 12 inches (305 mm) and uniform with other riser heights.

702.4.7 Tread depth. Ladder treads shall have a horizontal uniform depth of not less than 2 inches (51 mm).

702.5 Type E protruding in-pool stairs. Type E protruding in-pool stairs shall be in accordance with Sections 702.5.1 through 702.5.7. See Figure 702.5.

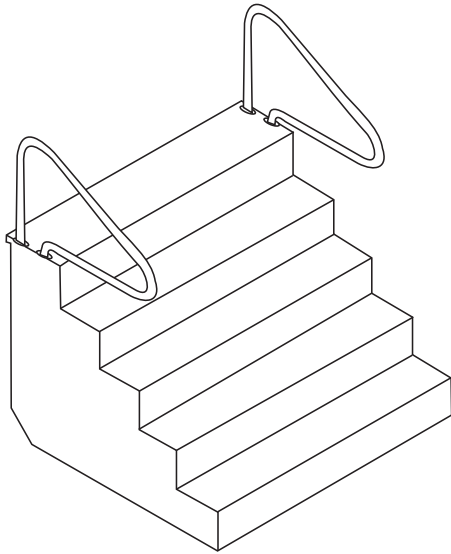


FIGURE 702.5
TYPICAL IN-POOL STAIRCASE TYPES, E AND F

702.5.1 Barrier required. In-pool stairs shall have a physical barrier to prevent children from swimming through the riser openings or behind the in-pool stairs.

702.5.2 Handrails or handholds. In-pool stairs shall be equipped with not less than one handrail or handhold that serves all treads with a height of not less than 20 inches (508 mm) above the platform or uppermost tread, whichever is higher.

702.5.3 Removable handrails. Where handrails are removable, they shall be installed such that they cannot be removed without the use of tools.

702.5.4 Leading edge distance. The leading edge of handrails shall be 18 inches (457 mm) $\pm$ 3 inches ($\pm$ 76 mm), horizontally from the vertical plane of the bottom riser.

702.5.5 Diameter. The outside diameter of handrails and handholds shall be not less than 1 inch (25 mm) and not greater than 1.9 inches (48 mm).

702.5.6 Tread width and depth. Treads shall have an unobstructed horizontal depth of not less than 10 inches (254 mm) and an unobstructed surface area of not less than 240 square inches (0.15 m²).

702.5.7 Uniform riser height. Risers, other than the bottom riser, shall be of uniform height that is not less than 7 inches (178 mm) and not greater than 12 inches (305 mm). The bottom riser height shall be not less than 7 inches (178 mm) and not greater than 12 inches (305 mm). The vertical distance from the pool coping, deck or step surface to the uppermost tread of the stairs shall be the same as the uniform riser heights.

702.6 Type F recessed in-pool stairs. Type F recessed in-pool stairs shall be in accordance with Sections 702.6.1 through 702.6.7. See Figure 702.5.

702.6.1 Barrier required. In-pool stairs shall have a physical barrier to prevent children from swimming through the riser openings or behind the in-pool stairs.

702.6.2 Handrails or handholds. In-pool stairs shall be equipped with not less than one handrail or handhold that serves all treads with a height of not less than 20 inches (508 mm) above the platform or uppermost tread, whichever is higher.

702.6.3 Removable handrails. Where handrails are removable, they shall be installed such that they cannot be removed without the use of tools.

702.6.4 Leading edge distance. The leading edge of handrails shall be 18 inches (457 mm) $\pm$ 3 inches ($\pm$ 76 mm), horizontally from the vertical plane of the bottom riser.

702.6.5 Diameter. The outside diameter of handrails and handholds shall be not less than 1 inch (25 mm) and not greater than 1.9 inches (48 mm).

702.6.6 Tread width and depth. Treads shall have an unobstructed horizontal depth of not less than 10 inches (254 mm) at all points and an unobstructed surface area of not less than 240 square inches (0.15 m²).

702.6.7 Uniform riser height. Risers, other than the bottom riser, shall be of uniform height that is not less than 7 inches (178 mm) and not greater than 12 inches (305 mm). The bottom riser height shall be not less than 7 inches (178 mm) and not greater than 12 inches (305 mm). The vertical distance from the pool coping, deck or step surface to the uppermost tread of the stairs shall be the same as the uniform riser heights.

SECTION 703 DECKS

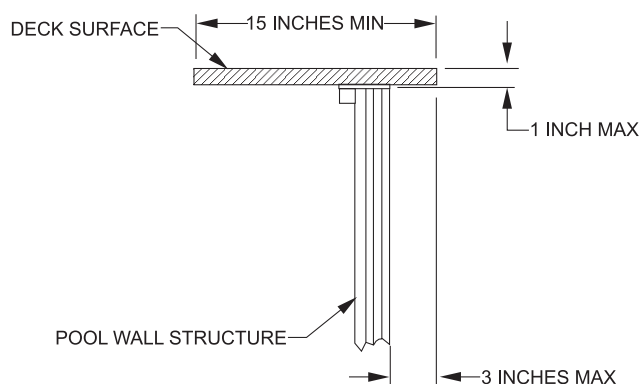
703.1 General. Decks provided by the pool manufacturer shall be installed in accordance with the manufacturer's instructions. Decks fabricated on-site shall be in accordance with the *International Residential Code*.

703.2 Cantilevered. The top surface of a cantilevered deck shall be not greater than 1 inch (25 mm) higher than the top of the pool wall. See Figure 703.4. The top surface of a noncantilevered deck shall be not higher than the top of the pool wall.

ONGROUND STORABLE RESIDENTIAL SWIMMING POOLS

703.3 No gaps. Decks that are installed flush with the top rail of the pool shall have all gap openings between the deck and top rails closed-off or capped.

703.4 Extension over pool. Where a deck extends inside the top rail of the pool, it shall extend not more than 3 inches (76 mm) beyond the inside of the top rail of the pool in accordance with Figure 703.4 and shall have a smooth finish.

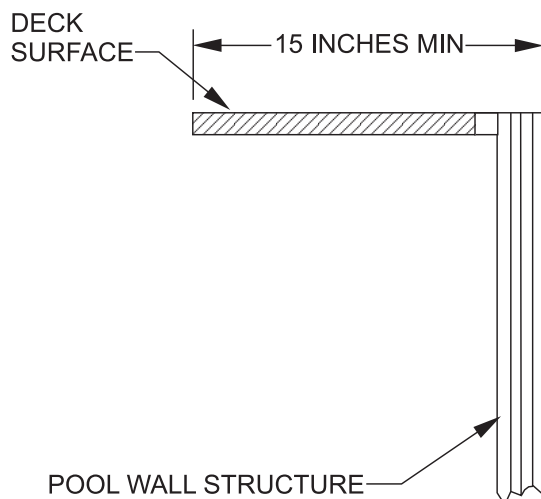


For SI: 1 inch = 25.4 mm.

FIGURE 703.4
TYPICAL CANTILEVERED DECK SUPPORT

703.5 Slip resistant. The deck walking surface shall be slip resistant.

703.6 Walk-around decks. Walk-around decks shall have a level walking surface of not less than 15 inches (381 mm) in width, as measured from the inside edge of the pool top rail to the outside of the pool walk-around. See Figure 703.6.



For SI: 1 inch = 25.4 mm.

FIGURE 703.6
WALK-AROUND DECK WIDTH

SECTION 704 CIRCULATION SYSTEM

704.1 General. A circulation system consisting of pumps, hoses, tubing, piping, return inlets, suction outlets, filters and other related equipment that provides for the circulation of water throughout the pool shall be located so that such items cannot be used by young children as a means of access to the pool.

704.2 Installation and support. Circulation equipment shall be installed, mounted and supported in accordance with the manufacturer's instructions.

704.3 Draining the system. In climates subject to freezing, circulation system equipment shall be designed and fabricated to drain the pool water from the equipment and exposed piping, by removal of drain plugs and manipulating valves or by other methods in accordance with the manufacturer's instructions.

704.4 Turnover. A pump including a motor shall be provided for circulation of the pool water. The equipment shall be sized to provide a turnover of the pool water not less than once every 12 hours. The system shall be designed to provide the required turnover rate based on the manufacturer's specified maximum flow rate of the filter, with a clean media condition of the filter. The system flow shall not exceed the filter manufacturer's maximum filter flow rate.

704.5 Piping and fittings. The process piping of the circulation system, including but not limited to hoses, tubing, piping, and fittings, shall be made of nontoxic material and shall be capable of withstanding an internal pressure of not less than $1\frac{1}{2}$ times the rated pressure of the pump. Piping on the suction side of the pump shall not collapse when flow into such piping is blocked.

704.6 Filters. Pressure-type filters shall have an automatic internal means or a manual external means to relieve accumulated air pressure inside the filter tank. Filter tanks composed of upper and lower tank lids that are held in place by a perimeter clamp shall have a perimeter clamp that provides for a slow and safe release of air pressure before the clamp disengages the lids.

704.6.1 Automatic internal air relief. Filter tanks incorporating an automatic internal air relief as the principal means of air release shall be designed with a means to provide for a slow and safe release of pressure.

704.6.2 Separation tank. A separation tank used in conjunction with a filter tank shall have a manual air release or the tank shall be designed to provide for a slow and safe release of pressure when the tank is opened.

704.7 Pumps. Pool pumps shall be tested and certified by a nationally recognized testing laboratory in accordance with UL 1081.

704.7.1 Cleanable strainer. Where a pressure-type filter is installed, a cleanable strainer or screen that captures materials such as solids, debris, hair and lint shall be provided upstream of the circulation pump.

704.7.2 Accessible pumps and motors. Pumps and motors shall be accessible for inspection and service in accordance with the pump and motor manufacturer's instructions.

704.7.3 Pump shutoff valves. An *accessible* means of shut off of the suction and discharge piping for the pump shall be provided for maintenance and removal of the pump.

704.8 Outlets and return inlets. Outlets or suction outlets and return inlets shall be provided and arranged to produce uniform circulation of water so that sanitizer residual is maintained throughout the pool. Where installed, submerged suction outlets shall conform to APSP 16.

704.9 Surface skimmer systems. The surface skimming system provided shall be designed and constructed to skim the pool surface where the water level is maintained between the minimum and maximum fill level of the pool.

704.9.1 Coverage where used as a sole outlet. Where surface skimmers are used as the only pool water outlet system, not less than one skimmer shall be provided for each 800 square feet (74.3 m²), or fraction thereof, of the water surface area.

704.9.2 Coverage where used in combination with other outlets. Where surface skimmers are not the only outlet for pool water, they shall be considered to cover only that fraction of the 800 square feet (74.3 m²).

704.9.3 Location and venting. Skimmers shall be equipped with a vent that serves as a vacuum break.

SECTION 705 SAFETY SIGNS

705.1. Signs to be installed prior to final inspection. Safety signage such as "NO DIVING" signs and other safe use instruction signs that are provided by the pool and ladder manufacturer shall be posted in accordance with the manufacturer's instructions prior to final inspection.

705.2 Safety signs for ladders. Safety signage for ladders shall be in accordance with Sections 705.2.1 through 705.2.3.2.

705.2.1 A-frame ladders. Safety signage for A-frame ladders shall be in accordance with Sections 705.2.1.1 through 705.2.1.4.1. The words on the signage shall be readable by persons standing in the pool and standing outside of the pool as applicable for the required location of each sign.

705.2.1.1 No diving warning. A-frame ladders shall have the following words posted on the in-pool side of the ladder and on the pool entry side of the ladder: "NO DIVING." The location of the words shall be above the elevation of the design water level of the pool.

705.2.1.2 Entrapment warning. A-frame ladders shall have the following words posted on the pool side of the ladder: "TO PREVENT ENTRAPMENT OR

DROWNING DO NOT SWIM THROUGH, BEHIND, OR AROUND LADDER."

705.2.1.3 Type A, A-frame ladders. Type A double access A-frame ladders shall have the following words posted on the ladder: "REMOVE AND SECURE LADDER WHEN POOL IS NOT OCCUPIED."

705.2.1.4 Type B, A-frame ladders. Type B limited access A-frame ladders shall have the following words posted on the ladder: "SECURE LADDER WHEN POOL IS NOT OCCUPIED."

705.2.1.4.1 Swing up or slide up secured ladders.

Type B limited access A-frame ladders that utilize swing-up or slide-up sections for limiting access to the pool shall have the following words posted on the ladder as applicable for the type of securing method:

1. "WHEN POOL IS NOT OCCUPIED, SWING UP AND SECURE."
2. "WHEN POOL IS NOT OCCUPIED, LIFT OFF."
3. "WHEN POOL IS NOT OCCUPIED, SLIDE UP AND SECURE."

705.2.2 Type C staircase ladders. Type C staircase ladders that swing up to limit access to the pool or that are removed to limit access to the pool shall have the following words posted on the ladder: "WHEN NOT IN USE SWING UP AND SECURE OR REMOVE."

705.2.3 Type D in-pool ladder. Safety signage for Type D in-pool ladders shall be in accordance with Sections 705.2.3.1 and 705.2.3.2. The words on the signage shall be readable by persons standing in the pool or standing outside the pool as applicable for the required location of each sign.

705.2.3.1 No diving warning. Type D in-pool ladders shall have the following words posted on the in-pool side of the ladder and on the pool entry side of the ladder: "NO DIVING." The location of the words shall be above the elevation of the design water level of the pool.

705.2.3.2 Entrapment warning. Type D in-pool ladders shall have the following words posted on the ladder: "WARNING: TO PREVENT ENTRAPMENT OR DROWNING, DO NOT SWIM THROUGH, BEHIND, OR AROUND LADDER."

CHAPTER 8

PERMANENT INGROUND RESIDENTIAL SWIMMING POOLS

User note:

About this chapter: Permanent inground residential swimming pools are regulated by Chapter 8. Where diving boards are present, this chapter provides information regarding the minimum diving water dimensions. Requirements for means of entry and exit, decks and circulation systems are provided. Special features of these pools such as beach entries, swimouts, diving rocks and architectural features are also regulated by this chapter.

SECTION 801 GENERAL

801.1 Scope. The provisions of this chapter shall govern permanent inground *residential* swimming pools. Permanent inground *residential* swimming pools shall include pools that are partially or entirely above grade. This chapter does not cover pools that are specifically manufactured for above-ground use and that are capable of being disassembled and stored. This chapter covers new construction, modification and repair of inground *residential* swimming pools.

801.2 General. Permanent inground *residential* pools shall comply with the requirements of Chapter 3.

SECTION 802 DESIGN

802.1 Materials of components and accessories. The materials of components and accessories used for permanent inground *residential* swimming pools shall be suitable for the environment in which they are installed. The materials shall be capable of fulfilling the design, installation and the intended use requirements in the *International Residential Code*.

802.2 Structural design. The structural design and materials shall be in accordance with the *International Residential Code*.

SECTION 803 CONSTRUCTION TOLERANCES

803.1 Construction tolerances. The construction tolerance for dimensions for the overall length, width and depth of the pool shall be ± 3 inches (76 mm). The construction tolerance for all other dimensions shall be ± 2 inches (51 mm), unless otherwise specified by the design engineer.

SECTION 804 DIVING WATER ENVELOPES

804.1 General. The minimum diving water envelopes shall be in accordance with Table 804.1 and Figure 804.1. Negative construction tolerances shall not be applied to the dimensions of the minimum diving water envelopes given in Table 804.1.

SECTION 805 WALLS

805.1 General. Walls in the shallow area and deep area of the pool shall have a wall-to-floor transition point that is not less than 33 inches (838 mm) below the *design waterline*. Above the transition point, the walls shall be within 11 degrees (0.19 rad) of vertical.

TABLE 804.1
MINIMUM DIVING WATER ENVELOPE FOR SWIMMING POOLS DESIGNATED TYPES I-V^b

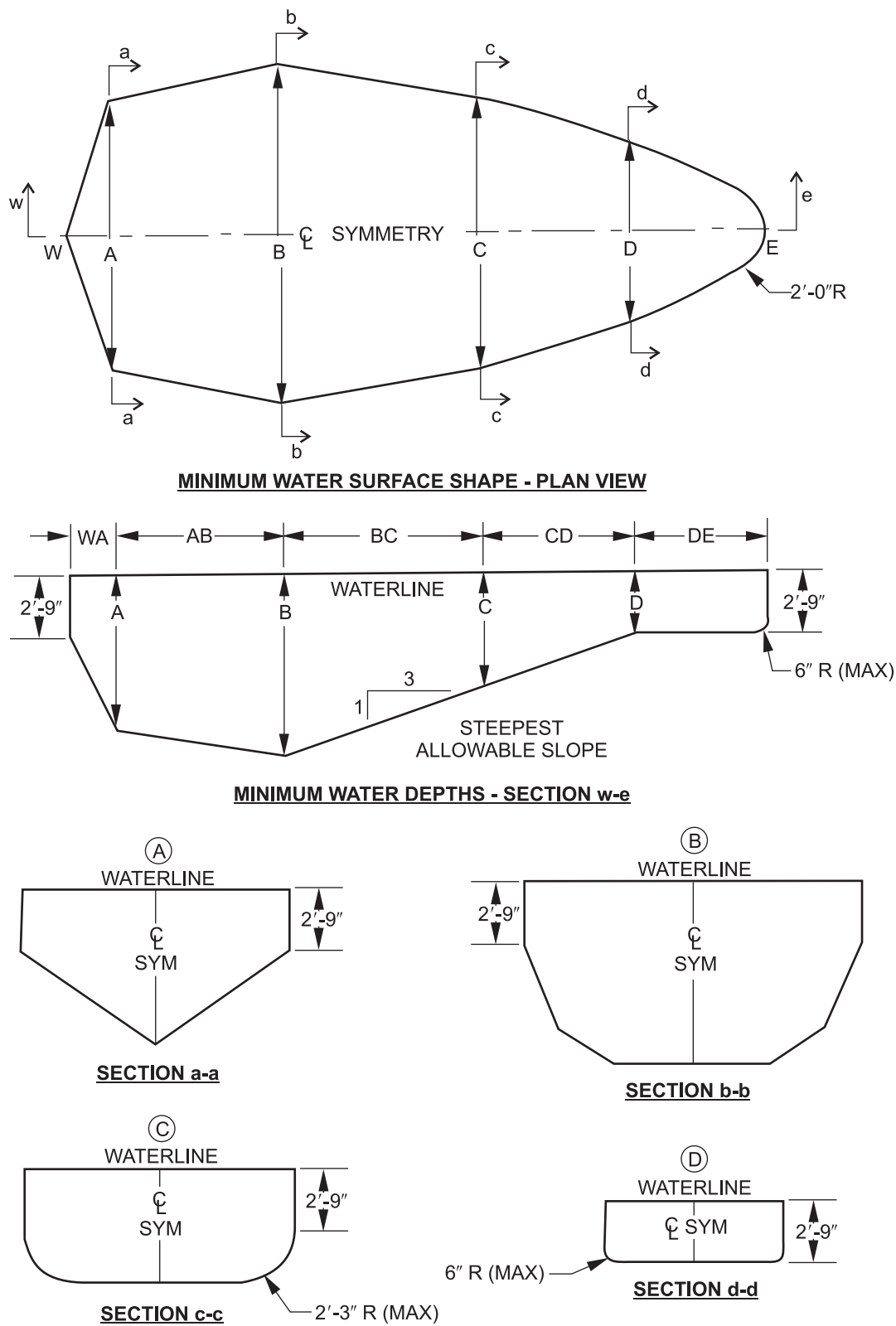
POOL TYPE	MINIMUM DEPTHS AT POINT FEET-INCHES				MINIMUM WIDTHS AT POINT FEET-INCHES				MINIMUM LENGTHS BETWEEN POINTS FEET-INCHES					
	A	B	C	D	A	B	C	D	WA	AB	BC	CD	DE	WE
I	6-0	7-6	5-0	2-9	10-0	12-0	10-0	8-0	1-6	7-0	7-6	Note a	6-0	28-9
II	6-0	7-6	5-0	2-9	12-0	15-0	12-0	8-0	1-6	7-0	7-6	Note a	6-0	28-9
III	6-10	8-0	5-0	2-9	12-0	15-0	12-0	8-0	2-0	7-6	9-0	Note a	6-0	31-3
IV	7-8	8-0	5-0	2-9	15-0	18-0	15-0	9-0	2-6	8-0	10-6	Note a	6-0	31-3
V	8-6	9-0	5-0	2-9	15-0	18-0	15-0	9-0	3-0	9-0	12-0	Note a	6-0	36-9

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

a. The minimum length between points C and D varies based on water depth at point D and the floor slope between points C and D.

b. See Figure 804.1 for location of points.

PERMANENT INGROUND RESIDENTIAL SWIMMING POOLS



For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

FIGURE 804.1
MINIMUM DIVING WATER ENVELOPE

SECTION 806 OFFSET LEDGES

806.1 Maximum width. Offset ledges shall be not greater than 8 inches (203 mm) in width.

806.2 Reduced width required. Where an offset ledge is located less than 42 inches (1067 mm) below the *design waterline*, the width of such ledge shall be proportionately less than 8 inches (203 mm) in width so as to fall within 11 degrees of vertical as measured from the top of the *design waterline*.

SECTION 807 POOL FLOORS

807.1 Floor slopes. Floor slopes shall be in accordance with Sections 807.1.1 through 807.1.3.

807.1.1 Shallow end. The slope of the floor from the beginning of the shallow end to the deep area floor slope transition point, indicated in Figure 804.1 as Point E to Point D, shall not exceed 1 unit vertical in 7 units horizontal.

807.1.2 Shallow to deep transition. The shallow to deep area floor slope transition point, indicated in Figure 804.1 as Point D, shall occur at a depth not less than 33 inches (838 mm) below the *design waterline* and at a point not less than 6 feet (1829 mm) from the beginning of the shallow end, indicated in Figure 804.1 as Point E, except as specified in Section 809.7.

807.1.3 Deep end. The slope of the floor in the deep end, indicated in Figure 804.1 as Point B to Point D, shall not exceed a slope of 1 unit vertical in 3 units horizontal (33-percent slope).

807.2 Shallow end water depths. The design water depth as measured at the shallowest point in the shallow area shall be not less than 33 inches (838 mm) and not greater than 4 feet (1219 mm). Shallow areas designed in accordance with Sections 809.6, 809.7 and 809.8 shall be exempt from the minimum depth requirement.

SECTION 808 DIVING EQUIPMENT

808.1 Manufactured and fabricated diving equipment. Manufactured and fabricated diving equipment shall be in accordance with this section. Manufactured and fabricated diving equipment and appurtenances shall not be installed on a Type O pool.

808.2 Manufactured diving equipment. Manufactured diving equipment shall be designed for swimming pool use.

808.3 Installation. Where manufactured diving equipment is installed, the installation shall be located in the deep area of the pool so as to provide the minimum dimensions as shown in Table 804.1 and shall be installed in accordance with the manufacturer's instructions.

808.4 Labeling. Manufactured diving equipment shall have a permanently affixed label indicating the manufacturer's

name and address, the date of manufacture, the minimum diving envelope and the maximum weight limitation.

808.5 Slip resistant. Diving equipment shall have slip-resistant walking surfaces.

808.6 Point A. For the application of Table 804.1, Point A shall be the point from which all dimensions of width, length and depth are established for the minimum diving water envelope. If the tip of the diving board or diving platform is located at a distance of WA or greater from the deep end wall and the water depth at that location is equal to or greater than the water depth requirement at Point A, then the point on the water surface directly below the center of the tip of the diving board or diving platform shall be identified as Point A.

808.7 Location of pool features in a diving pool. Where a pool is designed for use with diving equipment, the location of steps, pool stairs, ladders, underwater benches, special features and other accessory items shall be outside of the minimum diving water envelope as indicated in Figure 322.2.

808.8 Stationary diving platforms and diving rocks. Stationary diving platforms and diving rocks built on-site shall be permitted to be flush with the wall and shall be located in the diving area of the pool. Point A shall be in front of the wall at the platform or diving rock centerline.

808.9 Location. The forward tip of manufactured or fabricated diving equipment shall be located directly above Point A as defined by Section 808.6.

808.10 Elevation. The maximum elevation of a diving board above the *design waterline* shall be in accordance with the manufacturer's instructions.

808.11 Minimum water envelope. Manufactured diving equipment installation and use instructions shall be provided by the diving equipment manufacturer and shall specify the minimum water dimensions required for each diving board and diving stand combination. The board manufacturer shall indicate the water envelope type by dimensionally relating their products to Point A on the water envelopes as shown in Figure 804.1 and Table 804.1. The board manufacturer shall specify which boards fit on the design pool geometry types as indicated in Table 804.1.

808.12 Platform height above waterline. The height of a stationary diving platform or a diving rock above the *design waterline* shall not exceed the dimensions in Table 808.12.

TABLE 808.12
DIVING PLATFORM OR
APPURTENANCE HEIGHT ABOVE DESIGN WATERLINE

POOL TYPE	HEIGHT INCHES
I	42
II	42
III	50
IV	60
V	69

For SI: 1 inch = 25.4 mm.

PERMANENT INGROUND RESIDENTIAL SWIMMING POOLS

808.13 Headroom above the board. The diving equipment manufacturer shall specify the minimum headroom required above the board tip.

SECTION 809 SPECIAL FEATURES

809.1 Slides. Slides shall be installed in accordance with the manufacturer's instructions.

809.2 Entry and exit. Pools shall have a means of entry and exit in all shallow areas where the design water depth of the shallow area at the shallowest point exceeds 24 inches (610 mm). Entries and exits shall consist of one or a combination of the following: steps, stairs, ladders, treads, ramps, beach entries, underwater seats, benches, swimouts and other *approved* designs. The means of entry and exit shall be located on the shallow side of the first slope change.

809.3 Secondary entries and exits. Where water depth in the deep area of a pool exceeds 5 feet (1524 mm), a means of entry and exit as indicated in Section 809.2 shall be provided in the deep area of the pool.

Exception: Where the required placement of a means of exit from the deep end of a pool would present a potential hazard, handholds shall be provided as an alternative for the means of exit.

809.4 Over 30 feet in width. Pools over 30 feet (9144 mm) in width at the deep area shall have an entry and exit on both sides of the deep area of the pool.

809.5 Pool stairs. The design and construction of stairs into the shallow end and recessed pool stairs shall conform to Sections 809.5.1 through 809.5.3.

809.5.1 Tread dimension and area. Treads shall have a minimum unobstructed horizontal depth of 10 inches (254 mm) and a minimum unobstructed walking surface area of 240 square inches (0.15 m²).

809.5.2 Riser heights. Risers, other than the top and bottom riser, shall have a uniform height of not greater than 12 inches (305 mm). The top riser height shall be any dimension not exceeding 12 inches (305 mm) for the width of the walking surface. The bottom riser height shall be any dimension not exceeding 12 inches (305 mm). The top and bottom riser heights shall not be required to be equal to each other or equal to the uniform riser height. Riser heights shall be measured at the horizontal centerline of the walking surface area.

809.5.3 Additional steps. In design water depths exceeding 48 inches (1219 mm), additional steps shall not be required.

809.6 Beach and sloping entries. The slope of beach and sloping entries used as a pool entrance shall not exceed 1 unit vertical in 7 units horizontal (14-percent slope).

809.7 Steps and sloping entries. Where steps and benches are used in conjunction with sloping entries, the vertical riser distance shall not exceed 12 inches (305 mm). For steps used in conjunction with sloping entries, the requirements of Section 809.6 shall apply.

809.8 Architectural features. Surfaces of architectural features shall not be required to comply with the 1 unit vertical in 7 units horizontal (14-percent slope) slope limitation.

809.9 Maximum depth. The horizontal surface of underwater seats, benches and swimouts shall be not greater than 20 inches (508 mm) below the *design waterline*.

SECTION 810 CIRCULATION SYSTEMS

810.1 Turnover rate. The circulation system equipment shall be sized to provide a turnover of the pool water not less than once every 12 hours. The system shall be designed to provide the required turnover rate based on the manufacturer's specified maximum flow rate of the filter, with a clean media condition of the filter.

810.2 Strainer required. Pressure filter systems shall be provided with a strainer located between the pool and the circulation pump.

SECTION 811 SAFETY FEATURES

811.1 Rope and float. In pools where the point of first slope break occurs, a rope and float assembly shall be installed across the width of the pool. The rope assembly shall be located not less than 1 foot (305 mm) and not greater than 2 feet (610 mm) towards the shallow side of the slope break. Rope anchoring devices shall be permanently attached to the pool wall, coping or deck. Rope ends shall attach to the rope anchor devices so that the rope ends can be disconnected from the rope anchor device.

CHAPTER 9

PERMANENT RESIDENTIAL SPAS AND PERMANENT RESIDENTIAL EXERCISE SPAS

User note:

About this chapter: Chapter 9 regulates permanent residential spas and exercise spas by reference to Chapter 5 and exempting certain sections of that chapter as those regulations are not needed for a residential setting.

SECTION 901 GENERAL

901.1 Scope. This chapter shall govern the design, installation, construction and repair of permanently installed residential spas and exercise spas intended for *residential* use.

901.2 General. Permanent *residential* spas and permanent *residential* exercise spas shall comply with Chapter 5 except that Sections 504.1, 504.1.1, 508.1 and 509 shall not apply. Such spas shall comply with the requirements of Chapter 3.

SECTION 902 SAFETY FEATURES

902.1 Instructions and safety signage. Instructions and safety signage shall comply with the manufacturer's recommendations and the requirements of the local jurisdiction.

CHAPTER 10

PORTABLE RESIDENTIAL SPAS AND PORTABLE RESIDENTIAL EXERCISE SPAS

User note:

About this chapter: Chapter 10 regulates portable residential spas and exercise spas by requiring compliance with product standards.

SECTION 1001 GENERAL

1001.1 Scope. This chapter shall govern the installation, alteration and repair of portable *residential* spas and portable exercise spas intended for *residential* use.

1001.2 General. In addition to the requirements of this chapter, portable *residential* spas and portable *residential* exercise spas shall comply with the requirements of Chapter 3.

1001.3 Listing. Equipment and appliances shall be *listed* and *labeled*, and installed as required by the terms of their approval, in accordance with the conditions of the listing, the manufacturer's instructions and this code. Manufacturer's instructions shall be available on the job site at the time of inspection.

1001.4 Certification. Factory-built portable spas and portable exercise spas installed in *residential* applications shall be *listed* and *labeled* in compliance with UL 1563 or CSA C22.2 No. 218.1.

1001.5 Installation. Spa equipment shall be supported to prevent damage from misalignment and settling in accordance with the manufacturer's instructions.

1001.6 Access. Electrical components that require placement or servicing shall be accessible.

1001.7 Instructions and safety signage. Instructions and safety signage shall comply with UL 1563 or CSA C22.2 No. 218.1, the manufacturer's recommendations, and the requirements of the local jurisdiction.

CHAPTER 11

REFERENCED STANDARDS

User note:

About this chapter: This code contains numerous references to standards promulgated by other organizations that are used to provide requirements for materials and methods of construction. Chapter 11 contains a comprehensive list of all standards that are referenced in this code. These standards, in essence, are part of this code to the extent of the reference to the standard.

This chapter lists the standards that are referenced in various sections of this document. The standards are listed herein by the promulgating agency of the standard, the standard identification, the effective date and title, and the section or sections of this document that reference the standard. The application of the referenced standards shall be as specified in Section 102.7.

AHRI

Air Conditioning, Heating & Refrigeration Institute
2311 Wilson Boulevard, Suite 400
Arlington, VA 22201

400 (I-P)—2015: Performance Rating of Liquid to Liquid Heat Exchangers

Table 316.2(1)

1160 (I-P)—2014: Performance Rating of Heat Pump Pool Heaters—(with Addendum 1)

Table 316.2(1)

ANSI

American National Standards Institute
25 West 43rd Street, 4th Floor
New York, NY 10036

A108/A118/A136.1—2019: Specifications for Installation of Ceramic Tile

Table 307.2.2

Z21.56a/CSA 4.7—2017: Gas Fired Pool Heaters

Table 316.2(1)

APSP

Pool & Hot Tub Alliance (formerly The Association of Pool & Spa Professionals)
2111 Eisenhower Avenue, Suite 500
Alexandria, VA 22314

ANSI/APSP/ICC 4—2012: American National Standard for Aboveground/Onground Residential Swimming Pools—Includes Addenda A Approved April 4, 2013

702.2.1

ANSI/PHTA/ICC 7—2020: American National Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins

310.1

ANSI/APSP/ICC 14—2019: American National Standard for Portable Electric Spa Energy Efficiency

303.2

ANSI/APSP/ICC 15—2011: American National Standard for Residential Swimming Pool and Spa Energy Efficiency Includes Addenda A Approved January 9, 2013

303.3

ANSI/APSP/ICC 16—2017: American National Standard for Suction Outlet Fitting (SOFA) for Use in Pools, Spas, and Hot Tubs

202, 311.4.1, 311.4.4, 505.2.1, 612.4.2

ANSI/APSP/ICC/NPC 12—2016: American National Standard for the Plastering of Swimming Pools and Spas

307.2.5

REFERENCED STANDARDS

ASCE/SEI

American Society of Civil Engineers
Structural Engineering Institute
1801 Alexander Bell Drive
Reston, VA 20191-4400

ASCE 24—14: Flood Resistant Design & Construction
304.3

ASHRAE

ASHRAE
1791 Tullie Circle NE
Atlanta, GA 30329

62.1—2019: Ventilation for Acceptable Air Quality
325.1

ASME

American Society of Mechanical Engineers
Two Park Avenue
New York, NY 10016-5990

A112.1.2—2012(R2022): Air Gaps in Plumbing Systems (For Plumbing Fixtures and Water-connected Receptors)
318.2

B16.15—2013: Cast Alloy Threaded Fittings: Classes 125 and 250
Table 311.4.1

ASTM

ASTM International
100 Barr Harbor, P.O. Box C700
West Conshohocken, PA 19428-2959

A182/A182M—2018A: Standard Specification for Forged or Rolled Alloy and Stainless Steel Pipe Flanges, Forged Fittings, and Valves and Parts for High-temperature Service
Table 311.4.1

A240/A240M—17: Standard Specification for Chromium and Chromium-nickel Stainless Steel Plate, Sheet and Strip for Pressure Vessels and for General Applications
Table 307.2.2

A312/A312M—2018: Standard Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes
Table 311.4

A403/A403M—2018A: Standard Specification for Wrought Austenitic Stainless Steel Piping Fittings
Table 311.4.1

B88—2016: Standard Specification for Seamless Copper Water Tube
Table 311.4

B447—12a: Specification for Welded Copper Tube
Table 311.4

D1527—99(2005): Specifications for Acrylonitrile Butadiene Styrene (ABS) Plastic Pipe, Schedules 40 and 80
Table 311.4, Table 311.4.1

D1593—13: Standard Specification for Nonrigid Vinyl Chloride Plastic Film and Sheet
Table 307.2.2

D1785—15E1: Specification for Poly Vinyl Chloride (PVC) Plastic Pipe, Schedules 40, 80 and 120
Table 311.4

D2241—15: Standard Specification for Poly (Vinyl Chloride) (PVC) Pressure-rated Pipe (SDR Series)
Table 311.4

D2464—15: Standard Specification for Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
Table 311.4.1

D2466—2017: Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40
Table 311.4.1

D2467—15: Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
Table 311.4.1

REFERENCED STANDARDS

ASTM—continued

D2672—14: Standard Specification for Joints for IPS PVC Pipe Using Solvent Cement

Table 311.4

D2846/D2846M—2017BE1: Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot- and Cold-Water Distribution Systems

Table 311.4, Table 311.4.1

F437—15: Standard Specification for Threaded Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80

Table 311.4.1

F438—2017: Standard Specification for Socket-type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40

Table 311.4.1

F439—13: Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80

Table 311.4.1

F1346—1991(2018): Standard Performance Specification for Safety Covers and Labeling Requirements for All Covers for Swimming Pools, Spas and Hot Tubs

305.1, 305.4

CPSC

Consumer Product Safety Commission
4330 East-West Highway
Bethesda, MD 20814

16 CFR Part 1207—04: Safety Standard for Swimming Pool Slides

406.10

CSA

CSA Group
8501 East Pleasant Valley Road
Cleveland, OH 44131-5516

B137.2—17: Polyvinylchloride (PVC) Injection-moulded Gasketed Fittings for Pressure Application

Table 311.4, Table 311.4.1

B137.3—17: Rigid Polyvinylchloride (PVC) Pipe and Fitting and Pressure Applications

Table 311.4, Table 311.4.1

B137.6—17: Chlorinated Polyvinylchloride (CPVC) Pipe, Tubing, and Fitting for Hot- and Cold-water Distribution Systems

Table 311.4, Table 311.4.1

C22.2 No. 108—14: Liquid Pumps

313.8

C22.2 No. 218.1—13 (2017): Spas, Hot Tubs and Associated Equipment

302.3, 309.1, 310.1, 313.8, Table 316.2(1), 317.2, 509.1, 1001.4, 1001.7

C22.2 No. 236—15: Heating and Cooling Equipment

Table 316.2(1)

Z21.56a/CSA 4.7—2017: Gas Fired Pool Heaters

Table 316.2(1)

IAPMO

IAPMO
4755 E. Philadelphia Street
Ontario, CA 91761-USA

IAPMO Z124.7—2013: Prefabricated Plastic Spa Shells

TABLE 307.2.2

ICC

International Code Council, Inc.
500 New Jersey Avenue, NW 6th Floor
Washington, DC 20001

IBC—21: International Building Code®

201.3, 304.2, 306.1, 307.2, 410.1

REFERENCED STANDARDS

ICC—continued

ICC 901/SRCC 100—2020: Solar Thermal Collector Standard

316.6.2

ICC 902/APSP/SRCC 400—2020: Solar Pool and Spa Heating System Standard

Table 316.2(2)

ICC A117.1—2017: Accessible and Usable Buildings and Facilities

307.1.4

IECC—21: International Energy Conservation Code®

201.3, 316.4

IFC—21: International Fire Code®

201.3

IFGC—21: International Fuel Gas Code®

201.3, 316.4

IMC—21: International Mechanical Code®

201.3, 316.4

IPC—21: International Plumbing Code®

201.3, 302.2, 302.5, 302.6, 306.8, 318.2, 410.1

IRC—21: International Residential Code®

102.7.1, 201.3, 302.1, 302.5, 302.6, 304.2, 306.1, 306.3, 306.8, 307.2, 316.4, 318.2, 321.2.1, 321.4, 703.1, 802.1, 802.2

NEMA

National Electrical Manufacturers Association
1300 North 17th Street Suite 900
Rosslyn, VA 22209

NEMA Z535—2017: ANSI/NEMA Color Chart

409.3

NFPA

National Fire Protection Association
1 Batterymarch Park
Quincy, MA 02169-7471

NFPA 70—2020: National Electrical Code

302.1, 316.4, 321.2.1, 321.4

NSF

NSF International
789 N. Dixboro Road P.O. Box 130140
Ann Arbor, MI 48105

NSF 14—2017: Plastics Pumping Systems Components and Related Materials

302.3, 311.4

NSF 50—2017: Equipment for Swimming Pools, Spas, Hot Tubs, and Other Recreational Water Facilities

302.3, 309.2, Table 316.2(1), 508.1, 612.5.4

UL

UL LLC
333 Pfingsten Road
Northbrook, IL 60062

372—2007: Automatic Electrical Controls for Household and Similar Use—Part 2: Particular Requirements for Burner Ignition Systems and Components—with revisions through July 2012

506.2.1, 506.2.2

873—2007: Temperature-indicating and Regulating Equipment—with revisions through February 2015

506.2.1, 506.2.2

1004-1—12: Rotating Electrical Machines General Requirements—with August 2018

313.8

UL—continued

1081—2016: Swimming Pool Pumps, Filters and Chlorinators—with revisions through October 2017

313.8

1261—2016: Standard for Electric Water Heaters for Pools and Tubs—with revisions through September 2017

Table 316.2(1)

1563—2009: Electric Spas Equipment Assemblies and Associated Equipment—with revisions through October 2017

302.3, 309.1, 310.1, 313.8, Table 316.2(1), 317.2, 509.1, 1001.4, 1001.7

1995—2015: Heating and Cooling Equipment—with revisions through August 2018

Table 316.2(1)

2017—2008: General-purpose Signaling Devices and Systems—with revisions through January 2018

305.4

60335-2-100: Standard for Household and Similar Electrical Appliances: Particular Requirements for Electrically Powered Pool Lifts, with revisions through September 29, 2017

307.1.4

UL/CSA 60335-2-40-17: Standard for Safety for Household and Similar Electrical Appliances – Safety – Part 2-40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers

Table 316.2(1)

APPENDIX A

BOARD OF APPEALS

SECTION A101 GENERAL

[A] A101.1 Scope. A board of appeals shall be established within the jurisdiction for the purpose of hearing applications for modification of the requirements of this code pursuant to the provisions of Section 111. The board shall be established and operated in accordance with this section and shall be authorized to hear evidence from appellants and the *code official* pertaining to the application and intent of this code for the purpose of issuing orders pursuant to these provisions.

[A] A101.2 Application for appeal. Any person shall have the right to appeal a decision of the *code official* to the board. An application for appeal shall be based on a claim that the intent of this code or the rules legally adopted hereunder have been incorrectly interpreted, the provisions of this code do not fully apply or an equally good or better form of construction is proposed. The application shall be filed on a form obtained from the *code official* within 20 days after the notice was served.

[A] A101.2.1 Limitation of authority. The board shall not have authority to waive requirements of this code or interpret the administration of this code.

[A] A101.2.2 Stays of enforcement. Appeals of notice and orders, other than Imminent Danger notices, shall stay the enforcement of the notice and order until the appeal is heard by the board.

[A] A101.3 Membership of board. The board shall consist of five voting members appointed by the chief appointing authority of the jurisdiction. Each new member shall serve for [NUMBER OF YEARS] years or until a successor has been appointed. The board member's terms shall be staggered at intervals, so as to provide continuity. The *code official* shall be an ex officio member of said board but shall not vote on any matter before the board.

[A] A101.3.1 Qualifications. The board shall consist of five individuals, who are qualified by experience and training to pass on matters pertaining to building construction and are not employees of the jurisdiction.

[A] A101.3.2 Alternate members. The chief appointing authority is authorized to appoint two alternate members who shall be called by the board chairperson to hear appeals during the absence or disqualification of a member. Alternate members shall possess the qualifications required for board membership, and shall be appointed for the same term or until a successor has been appointed.

[A] A101.3.3 Vacancies. Vacancies shall be filled for an unexpired term in the same manner in which original appointments are required to be made.

[A] A101.3.4 Chairperson. The board shall annually select one of its members to serve as chairperson.

[A] A101.3.5 Secretary. The chief appointing authority shall designate a qualified clerk to serve as secretary to the board. The secretary shall file a detailed record of all proceedings that shall set forth the reasons for the board's decision, the vote of each member, the absence of a member and any failure of a member to vote.

[A] A101.3.6 Conflict of interest. A member with any personal, professional or financial interest in a matter before the board shall declare such interest and refrain from participating in discussions, deliberations and voting on such matters.

[A] A101.3.7 Compensation of members. Compensation of members shall be determined by law.

[A] A101.3.8 Removal from the board. A member shall be removed from the board prior to the end of their terms only for cause. Any member with continued absence from regular meeting of the board may be removed at the discretion of the chief appointing authority.

[A] A101.4 Rules and procedures. The board shall establish policies and procedures necessary to carry out its duties consistent with the provisions of this code and applicable state law. The procedures shall not require compliance with strict rules of evidence, but shall mandate that only relevant information be presented.

[A] A101.5 Notice of meeting. The board shall meet, upon notice from the chairperson, within 10 days of the filing of an appeal or at stated periodic intervals.

[A] A101.5.1 Open hearing. All hearings before the board shall be open to the public. The appellant, the appellant's representative, the *code official* and any person whose interests are affected shall be given an opportunity to be heard.

[A] A101.5.2 Quorum. Three members of the board shall constitute a quorum.

[A] A101.5.3 Postponed hearing. When five members are not present to hear an appeal, either the appellant or the appellant's representative shall have the right to request a postponement of the hearing.

[A] A101.6 Legal counsel. The jurisdiction shall furnish legal counsel to the board to provide members with general legal advice concerning matters before them for consideration. Members shall be represented by legal counsel at the jurisdiction's expense in all matters arising from service within the scope of their duties.

[A] A101.7 Board decision. The board shall only modify or reverse the decision of the *code official* by a concurring vote of three or more members.

APPENDIX A—BOARD OF APPEALS

[A] A101.7.1 Resolution. The decision of the board shall be by resolution. Every decision shall be promptly filed in writing in the office of the *code official* within 3 days and shall be open to the public for inspection. A certified copy shall be furnished to the appellant or the appellant's representative and to the *code official*.

[A] A101.7.2 Administration. The *code official* shall take immediate action in accordance with the decision of the board.

[A] A101.8 Court review. Any person, whether or not a previous party of the appeal, shall have the right to apply to the appropriate court for a writ of certiorari to correct errors of law. Application for review shall be made in the manner and time required by law following the filing of the decision in the office of the chief administrative officer.

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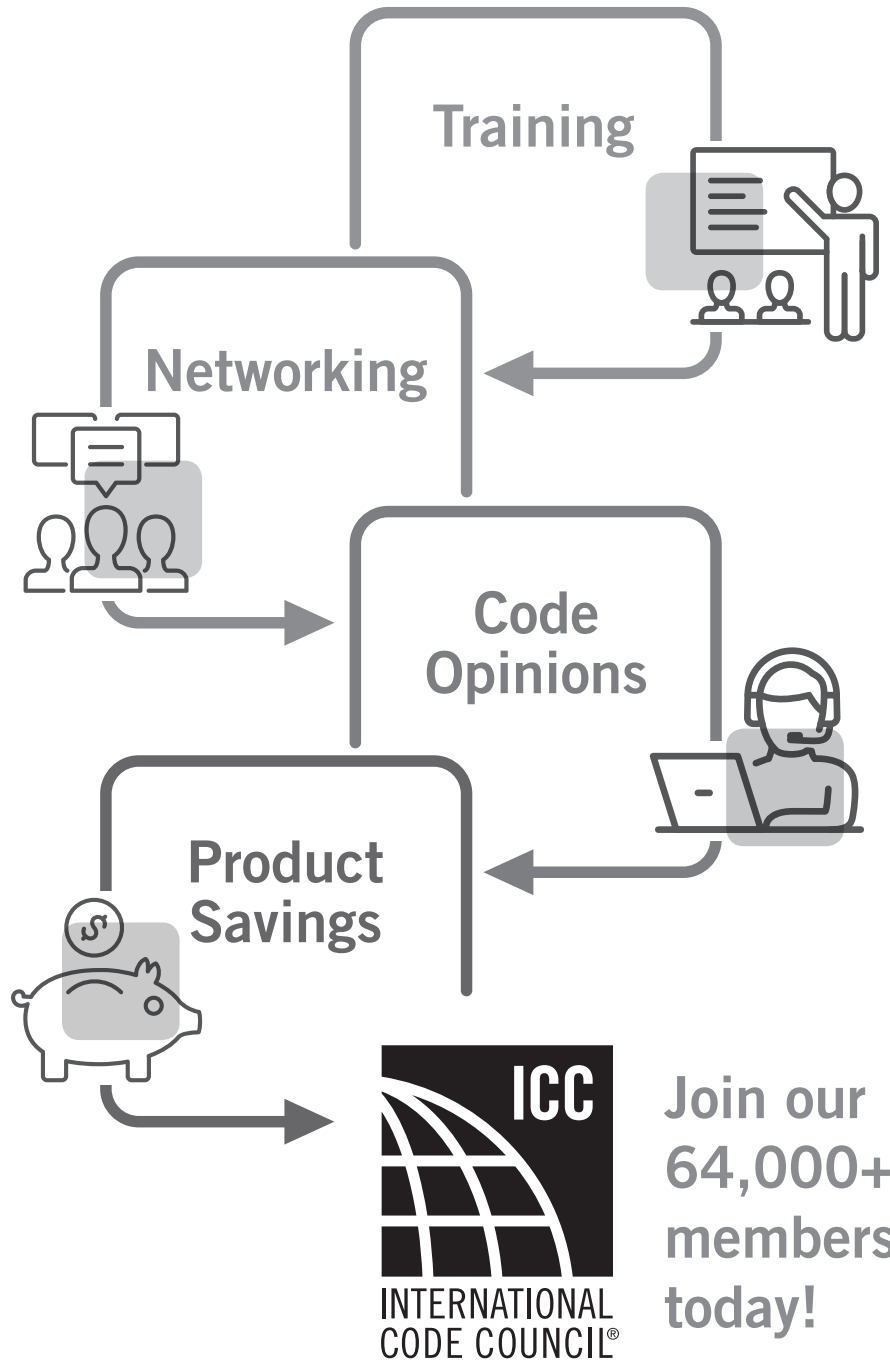
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GARLAND
CITY COUNCIL STAFF REPORT

City Council Work Session

3.

Meeting Date: 03/04/2024

Fire Staffing Realignment

Submitted By: Kristen Smith, Managing Director

Strategic Focus Area: Safe Community

Issue/Summary

To better align the current staffing needs of the department, City Council is asked to consider the reduction of one (1) budgeted Firefighter vacancy, which will be utilized to create a leadership role focused on fire prevention. The newly created position, classified as a Battalion Chief, will also serve as the city's Fire Marshal.

Similar to other sworn positions, the Battalion Chief role will be filled through competitive examination per Civil Service guidelines.

Background

Each year, sworn Firefighter and Police Officer positions are adopted via ordinance during the annual budget process. For FY 23-24, City Council authorized 285 Fire service positions, comprised of existing employees and projected hires.

Classification	Number of Positions Effective 10-01-2023
Firefighter	149
Driver	72
Lieutenant	14
Captain	37
Battalion Chief	9
Assistant Chief	3
Fire Chief	1
Total	285

Staffing

The requested realignment will not impact projected staffing or service levels.

Cost

The following represents annualized funding based on the 2024 starting rate for a Firefighter and Battalion Chief. Although the annualized amounts show a deficit, vacancies and attrition are expected to offset a portion of the implementation cost.

	Annualized Cost
Fire Recruit	\$72,650
Fire Battalion Chief	\$136,120
	(\$63,470)

Consideration / Recommendation

At this time, City Council is asked to consider and approve the revised 23-24 Civil Service Classifications & Compensation Ordinance, reflecting this change.

An item for formal consideration will be included on the March 5, 2024 Regular Session agenda.

Attachments

FY 23-24 Civil Service Ordinance_Mar 2024 Revision

ORDINANCE NO. _____

AN ORDINANCE OF THE CITY OF GARLAND, TEXAS, ESTABLISHING CIVIL SERVICE CLASSIFICATIONS WITHIN THE POLICE AND FIRE DEPARTMENTS; PRESCRIBING THE NUMBER OF POSITIONS IN EACH CLASSIFICATION; PRESCRIBING THE BASE SALARY AND TYPES OF PAY FOR THOSE CLASSIFICATIONS; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, pursuant to Chapter 143 of the Texas Local Government Code, the City Council shall establish certain classifications and shall prescribe the number of positions in each of these classifications by ordinance;

WHEREAS, the City Council has reviewed and approved a budget for the City for the fiscal year beginning October 1, 2023, and ending September 30, 2024; and

WHEREAS, the budget contains a program of planned expenditures for the police and fire departments, including changes to the operations and human resources of those departments.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF GARLAND, TEXAS:

Section 1

That the City Council of the City of Garland, Texas, hereby establishes the classifications and number of authorized positions within each classification and the base salary and types of pay for those classifications as specified on "Exhibits A-1 through A-4" attached hereto and made a part hereof as if fully set forth herein.

Section 2

That this Ordinance shall take effect on March 5, 2024.

PASSED AND APPROVED this the ____ day of _____, 2024.

THE CITY OF GARLAND, TEXAS

By: _____
Mayor

ATTEST:

City Secretary

EXHIBIT "A-1"

CIVIL SERVICE
Budgeted Positions

POLICE

Total: 357

Classification	Number of Positions Effective 10-01-2023
Police Officer	303
Police Supervisor	40
Police Captain	9
Assistant Chief	4
Police Chief	1
Total	357

FIRE

Total: *285

Classification	Number of Positions Effective 10-01-2023
Firefighter*	148
Driver	72
Lieutenant	14
Captain	37
Battalion Chief	10
Assistant Chief	3
Fire Chief	1
Total	285

*Includes nine newly requested Firefighter positions.

EXHIBIT "A-2"

**Civil Service
Salary Schedules**

Effective 1/1/2024

Police

Years	Step	Classification	Hourly	Annual
Hire	1	Recruit	\$38.4999	\$80,080
Year 1	2	Officer 2	\$40.8480	\$84,964
Year 2	3	Officer 3	\$42.7766	\$88,975
Year 3	4	Officer 4	\$44.8040	\$93,192
Year 4	5	Officer 5	\$46.4039	\$96,520
Year 5	6	Officer 6	\$48.0224	\$99,887
Year 6	7	Officer 7	\$49.2189	\$102,375
Year 7	8	Officer 8	\$50.5317	\$105,106
Year 8	9	Officer 9	\$51.6865	\$107,508
Year 1	1	Supervisor 1	\$58.7093	\$122,115
Year 2	2	Supervisor 2	\$63.2646	\$131,590
Year 1	1	Captain 1	\$68.8857	\$143,282
Year 2	2	Captain 2	\$74.2132	\$154,364
Year 1	1	Assistant Chief 1	\$82.1615	\$170,896
Year 2	2	Assistant Chief 2	\$85.3602	\$177,549

Fire

Years	Step	Classification	Staff*	Shift**	Annual
Hire	1	Recruit 1	\$34.9279	\$24.9485	\$72,650
6 Months	2	Recruit 2	\$35.4087	\$25.2919	\$73,650
Year 1	3	Firefighter 3	\$36.9084	\$26.3632	\$76,770
Year 2	4	Firefighter 4	\$38.8185	\$27.7275	\$80,743
Year 3	5	Firefighter 5	\$40.7845	\$29.1318	\$84,832
Year 5	6	Firefighter 6	\$42.8508	\$30.6077	\$89,130
Year 7	7	Firefighter 7	\$43.8643	\$31.3316	\$91,238
Year 8.5	8	Firefighter 8	\$45.0144	\$32.1532	\$93,630
Year 1	1	Fire Driver 1	\$47.2651	\$33.7608	\$98,312
Year 2	2	Fire Driver 2	\$49.3461	\$35.2472	\$102,640
Year 1	1	Lieutenant 1	\$52.0867	\$37.2048	\$108,340
Year 2	2	Lieutenant 2	\$54.4234	\$38.8739	\$113,201
Year 1	1	Captain 1	\$57.6841	\$41.2029	\$119,983
Year 2	2	Captain 2	\$61.1260	\$43.6614	\$127,142
Year 1	1	Battalion Chief 1	\$65.4423	\$46.7445	\$136,120
Year 2	2	Battalion Chief 2	\$69.7119	\$49.7942	\$145,001
Year 1	1	Assistant Chief 1	\$79.9155	\$57.0825	\$166,224
Year 2	2	Assistant Chief 2	\$84.5946	\$60.4247	\$175,957

* Staff - hourly rate calculated from 2080 hours per year

** Shift - hourly rate calculated from 2912 hours per year

EXHIBIT "A-3"

**POLICE DEPARTMENT
INCENTIVE PAY PLANS**

Effective 1/1/2024

ELIGIBILITY:

Must be a full-time, paid and duly sworn peace officer within the Garland Police Department.

CERTIFICATION AND EDUCATION INCENTIVE PAY:

1. CERTIFICATION INCENTIVE

- a) Per TCOLE Rules
- b) Available to all ranks
- c) Pay is not cumulative within Police Certification Incentives; eligible for the highest level achieved only

Description	Amount Per Month
1) Advanced Certification	\$75 per month
2) Master Certification	\$95 per month

2. EDUCATION INCENTIVE

- a) Per TCOLE Rules
- b) Available to all ranks
- c) Pay is not cumulative within Police Education Incentives; eligible for the highest level achieved only

Description	Amount Per Month
1) Bachelor's Degree	\$125 per month
2) Master's or Doctoral Degree	\$150 per month

EXHIBIT "A-3" (Continued)

ASSIGNMENT PAY:

1. FIELD TRAINING OFFICER (FTO) ASSIGNMENT PAY

- a) Per TCOLE Rules
- b) Available to Police Officers assigned as a Field Training Officer
- c) Must be a graduate of the Police Academy for the Garland Police Department

Description	Amount Per Month
1) Officers designated by the Chief of Police as Field Training Officers (FTO) shall receive FTO Pay in compensation for this job assignment. This job assignment is of a temporary nature and can be removed at the discretion of the Chief of Police	\$250 per month

2. PATROL ASSIGNMENT PAY

- a) Per TCOLE Rules
- b) Available to Police Officers and Lieutenants assigned to the Patrol Division for the majority of calendar year
- c) Must be a graduate of the Police Academy for the Garland Police Department

Description	Annual Amount
1) Patrol Officers and Patrol Lieutenants who spend the majority of the calendar year in that assignment	\$1,000 per year

EXHIBIT "A-3" (Continued)

SPECIAL PAY:

1. BILINGUAL PAY

- a) Available to all ranks
- b) Pay is not cumulative within the Bilingual Pay; eligible for the highest level achieved only

Description	Amount Per Month
1) Certification by the State of Texas indicating proficiency in verbal bilingual skills.	\$100 per month
2) Certification by the State of Texas indicating proficiency in verbal and written bilingual skills.	\$150 per month

2. LATERAL ACADEMY PAY

- a) Must be assigned to the Lateral Academy of the Garland Police Department as a student
- b) Must be licensed as a Texas Peace Officer or meet the eligibility requirements for TCOLE Reciprocity for Out-of-State Peace Officers, Federal Criminal Investigators and Military Police

Description	Amount Per Month
1) Be enrolled in and attending the first day of Garland Police Academy Lateral Academy	one-time remuneration of \$5000
2) Be enrolled in and attending the last day of the Garland Police Academy Lateral Academy.	one-time remuneration of \$5000

EXHIBIT "A-4"

**FIRE DEPARTMENT
INCENTIVE PAY PLANS**

Effective 1/1/2024 unless otherwise noted

ELIGIBILITY:

Must be a Certified Texas Commission on Fire Protection (TCFP) Firefighter.

CERTIFICATION AND EDUCATIONAL INCENTIVE PAY:

1. CERTIFICATION INCENTIVE

- a) Per TCFP Rules
- b) Available to all ranks
- c) Must be in a non-probationary status
- d) Pay is not cumulative within TCFP Fire Certification Incentives; eligible for the highest level achieved only

Description	Amount Per Month
1) Intermediate	\$45 per month
2) Advanced	\$85 per month
3) Master	\$125 per month

2. PARAMEDIC CERTIFICATION INCENTIVE

- a) Per TCFP Rules
- b) Available to Operations and Staff Firefighter, Fire Driver, Fire Lieutenant and Fire Captain ranks only; Personnel assigned to the Fire Marshal's Office in the Inspector or Fire/Arson Investigator Sections are not eligible
- c) Must be in a non-probationary status

Description	Amount Per Month
1) Paramedic Must be certified by the State and be accepted by the City Medical Control Director and assigned to the position.	\$100 per month

2) Paramedics who staff an ambulance or work in the capacity of EMS SDO receive.	*\$40 per shift
*Effective 10/1/2023	

3. EDUCATION INCENTIVE

- a) Per TCFP Rules
- b) Available to all ranks
- c) Must be in a non-probationary status
- d) Pay is not cumulative within TCFP Fire Education Incentives; eligible for the highest level achieved only

Description	Amount Per Month
1. Bachelor's or Master's Degree + Intermediate Certification	\$50 per month
2. Bachelor's or Master's Degree + Advanced Certification	\$100 per month
3. Bachelor's Degree + Master Certification	\$150 per month
4. Master's Degree + Master Certification	\$200 per month

ASSIGNMENT PAY:

1. TRAINING DIVISION ASSIGNMENT PAYS

- a) Per TCFP Rules
- b) Available to Training Division Staff Firefighter, Fire Driver, Fire Lieutenant and Fire Captain ranks only
- c) Must be in a non-probationary status
- d) Pay is not cumulative within the Fire Instructor Assignment Pay; eligible for the highest level achieved only

Description	Amount Per Month
1) Instructor II Requires an annual minimum of twenty (20) hours of documented instruction for the GFD, in approved Fire or EMS subjects. Hours of instruction will be totaled from October 1st to September 30th of each fiscal year to qualify for the next fiscal year.	\$25 per month

2) Instructor III Must be assigned full time to Training Division	\$100 per month
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2. FIRE MARSHAL'S OFFICE ASSIGNMENT PAYS

- a) Per TCFP Rules
- b) Available to Fire Marshal's Office Staff Firefighter, Fire Driver, Fire Lieutenant and Fire Captain ranks only
- c) Must be in a non-probationary status
- d) Assigned personnel may receive both Inspector and Investigator Pay, if assigned to regular duties as an Investigator and Inspector

Description	Amount Per Month
1) Instructor II Assigned to the Public Education Section of the Fire Marshal's Office	\$25 per month
2) Fire Inspector Must be certified and assigned to Inspection and Prevention Section of Fire Marshal's Office	\$100 per month
3) Fire/Arson Investigator Must be certified and assigned to the Arson and Investigation Section of Fire Marshal's Office.	\$100 per month

3. STAFF ASSIGNMENT PAY

- a) Per TCFP Rules
- b) Available to all ranks assigned to Staff positions
- c) Must be in a non-probationary status

Description	% Pay
1) Staff Assignment Pay shall be for all non-exempt, sworn personnel assigned to a Staff position performing duties in the Support Services or Life and Safety Divisions of the Fire Department	2.7815% of Staff hourly rate

EXHIBIT "A-4" (Continued)

SPECIAL PAY:

1. BILINGUAL PAY

- a) Available to all ranks
- b) Must be in a non-probationary status
- c) Pay is not cumulative within the Bilingual Pay; eligible for the highest level achieved only

Description	Amount Per Month
1) Certification by the State of Texas indicating proficiency in verbal bilingual skills	\$100 per month
2) Certification by the State of Texas indicating proficiency in verbal and written bilingual skills	\$150 per month



GARLAND
CITY COUNCIL STAFF REPORT

City Council Work Session

4.

Meeting Date: 03/04/2024
Notice of Intent to Issue Certificates of Obligation
Submitted By: Matt Watson, Chief Financial Officer
Strategic Focus Area: Sound Governance and Finances
Future-Focused City Organization

Issue/Summary

On February 6, 2024 Council adopted the 2024 Capital Improvement Program (CIP), which contemplates a Certificate of Obligation (CO) bond sale in the amount of approximately \$37.8 million to fund a portion of the CIP. Council is asked to consider approving a notice of intent resolution at the March 4, 2024 Regular Meeting to provide legal authorization for the certificates. Approval of the notice of intent resolution will not obligate the City to issue debt and the total amount of issuance in the notice will match the CO funding requirements of the Council Adopted 2024 CIP.

Background

The City Manager formally submitted the proposed CIP to Council on January 8, 2024 and staff made copies of the proposed CIP available for public inspection and review the next day in libraries and the City Secretary's Office. The City Council held a Special Budget Work Session on January 20, 2024, to review the proposed program. In addition, a Public Hearing on the Proposed CIP was held on January 23, 2024. The 2024 Capital Improvement Program was adopted by Council on February 6, 2024 and requires the issuance of Certificates of Obligation. The CO's will fund approximately \$37.8 million in projects.

In compliance with City Council's Financial Policy, Certificates of Obligation debt is issued so the debt maturities are aligned with the useful lives of the capital improvements being funded. CO principal maturities range from 5 years to 20 years. CO's require approval by Council and publication of a notice of intention for issuance.

Consideration / Recommendation

Since neither cash nor voter authorized bonds are available to fund a portion of the 2024 CIP, staff requests the issuance of Certificates of Obligation.

Attachments

Notice of Intent

THE STATE OF TEXAS
COUNTIES OF DALLAS, COLLIN AND ROCKWALL
CITY OF GARLAND

1. The City Council of the City (the "City Council") convened in REGULAR MEETING ON THE 5TH DAY OF MARCH, 2024, at the designated meeting place, and the roll was called of the duly constituted officers and members of the City Council, to wit:

City Secretary

RESOLUTION DIRECTING THE PUBLICATION OF NOTICE OF INTENTION TO
ISSUE CERTIFICATES OF OBLIGATION OF THE CITY OF GARLAND; AND
PROVIDING FOR AN EFFECTIVE DATE

AYES: All members of the City Council shown present above voted "Aye," except as shown below:

ABSTAIN: _____

2. That a true, full and correct copy of the aforesaid Resolution adopted at the Meeting described in the above and foregoing paragraph is attached to and follows this Certificate; that the Resolution has been duly recorded in the City Council's minutes of the Meeting; that the above and foregoing paragraph is a true, full and correct excerpt from the City Council's minutes of the Meeting pertaining to the adoption of the Resolution; that the persons named in the above and foregoing paragraph are the duly chosen, qualified and acting officers and members of the City Council as indicated therein; that each of the officers and members of the City Council was duly and sufficiently notified officially and personally, in advance, of the time, place and purpose of the aforesaid Meeting, and that the Resolution would be introduced and considered for adoption at the Meeting, and each of the officers and members consented, in advance, to the holding of the Meeting for such purpose, and that the Meeting was open to the public and public notice of the time, place and purpose of the meeting was given, all as required by Chapter 551, Texas Government Code.

3. That the Mayor of the City (or the Mayor Pro-tem in the absence of the Mayor) has approved and hereby approves the aforesaid Resolution; and that the Mayor (or the Mayor Pro-tem in the absence of the Mayor) and the City Secretary of the City hereby declare that their signing of this Certificate shall constitute the signing of the attached and following copy of the Resolution for all purposes.

SIGNED AND SEALED the 5th day of March, 2024.

City Secretary

Mayor

(SEAL)

RESOLUTION NO. _____

A RESOLUTION
DIRECTING THE PUBLICATION OF NOTICE OF INTENTION TO ISSUE
CERTIFICATES OF OBLIGATION
OF THE CITY OF GARLAND;
AND PROVIDING FOR AN EFFECTIVE DATE

THE STATE OF TEXAS
COUNTIES OF DALLAS, COLLIN AND ROCKWALL
CITY OF GARLAND

WHEREAS, it is deemed necessary and advisable that the Notice of Intention to Issue Certificates of Obligation be given as hereinafter provided; NOW, THEREFORE,

BE IS RESOLVED BY THE CITY COUNCIL OF THE CITY OF GARLAND, TEXAS THAT:

SECTION 1. Attached hereto is a form of "NOTICE OF INTENTION TO ISSUE CERTIFICATES OF OBLIGATION OF THE CITY OF GARLAND", the form and substance of which are hereby adopted and approved and made a part of this Resolution for all purposes.

SECTION 2. The City Secretary shall cause said NOTICE, in substantially the form attached hereto, to be published once a week for two consecutive weeks in a newspaper of general circulation in the City, with the date of the first publication to be at least forty-six (46) days before the date tentatively set for the passage of the Resolution authorizing the issuance of such Certificates of Obligation. And further that the City Secretary shall cause said NOTICE, in substantially the form attached hereto, to be posted continuously on the City's Internet website for at least 45 days before the date tentatively set for the passage of the Resolution authorizing the issuance of the Certificates of Obligation.

SECTION 3. This Resolution shall become effective immediately upon its passage and approval.

THE STATE OF TEXAS
COUNTIES OF DALLAS, COLLIN AND ROCKWALL
CITY OF GARLAND

NOTICE OF INTENTION
TO ISSUE CERTIFICATES OF OBLIGATION
OF THE CITY OF GARLAND

THE CITY OF GARLAND, in the Counties of Dallas, Collin and Rockwall, Texas, hereby gives notice of its intention to issue CITY OF GARLAND CERTIFICATES OF OBLIGATION, in accordance with the Certificate of Obligation Act of 1971, as amended and codified, and other applicable laws, in the maximum principal amount of \$45,000,000 for the purpose of paying all or a portion of the City's contractual obligations incurred pursuant to contracts for the purchase, construction, renovation and acquisition of certain real and personal property, to wit: (a) acquiring, constructing, renovating, improving, installing and equipping park and recreational improvements and the acquisition of land and interests in land related thereto; (b) constructing, renovating and equipping municipal drainage improvements; (c) constructing and improving streets, including related sidewalks, cycle paths, signage and signalization, landscaping, streetscaping, drainage, utility line relocations and the acquisition of land and rights-of-way therefor; (d) acquisition of vehicles and equipment for the fire, police, and stormwater management departments and programs; (e) constructing, renovating, installing and equipping of buildings, streets and traffic control facilities, and public safety facilities for the police and fire departments, stormwater management department, parks and recreation department, and street department; (f) acquisition of vehicles and equipment for, and acquiring, constructing, installing and equipping additions, extensions, renovations and improvements for the City's sanitation department, including the landfill and transfer station; (g) constructing, equipping and improving information management services systems; (h) acquiring, constructing, renovating, improving and equipping existing municipal buildings, including HVAC replacement/upgrades, roof replacement, parking lot upgrades, and safety upgrades; and (i) for the purpose of paying all or a portion of the City's contractual obligations for professional services, including engineers, architects, attorneys, map makers, auditors, and financial advisors, in connection with said projects and said Certificates of Obligation. The City proposes to provide for the payment of such Certificates of Obligation from the levy and collection of ad valorem taxes in the City as provided by law, and a limited pledge of the net revenues derived by the City from the ownership and operation of the City's Water and Sewer System. The City Council of the City tentatively proposes to authorize the issuance of such Certificates of Obligation, in one or more series, at a meeting commencing at 7:00 p.m. on May 7, 2024, in the City Council room at the Garland City Hall, 200 N. Fifth Street, Garland, Texas. In the event that the City Council will be unable to meet at the Garland City Hall on May 7, 2024, the City will post on its website, www.garlandtx.gov, information for persons to attend the meeting by telephone, teleconference or other electronic means.

The maximum interest rate for such Certificates of Obligation will not exceed the maximum legal interest rate, the maximum maturity date for such Certificates of Obligation is February 15, 2044, and the estimated combined principal and interest required to pay such Certificates of Obligation to be authorized on time and in full is \$56,893,976.

The City currently has outstanding debt obligations secured by and payable from ad valorem taxes equal to \$351,600,000 in principal amount and \$462,426,684 in combined principal and interest required to pay such outstanding debt obligations on time and in full.

CITY OF GARLAND, TEXAS

By:



GARLAND
CITY COUNCIL STAFF REPORT

City Council Work Session

5.

Meeting Date: 03/04/2024
Pavement Condition Index Survey for the Garland Street Network
Submitted By: Tony Irvin, Streets Director
Strategic Focus Area: Well-Maintained City Infrastructure
Vibrant Neighborhoods and
Commercial Centers

Issue/Summary

The city's street and alley network is comprised of over 1,000 centerline miles, corresponding to nearly 2,700 lane miles. The Street Department is responsible for maintaining these critically important assets. Reliable and relevant pavement condition data is a crucially important input staff uses for making decisions on how to prioritize resources to sustain and improve the city's street and alley assets. Condition data is typically collected using the Pavement Condition Index (PCI) method -- a nationally recognized approach to assessing, inventorying, and scoring pavement condition. Generally, PCI is considered a measure to quantify the health (or condition) of the city's streets.

Background

Historically, Street Department staff has performed visual surveys of city streets and alleys and assigned condition scores. Though the visual survey method is a method used by some public works agencies to provide a data baseline for pavement management planning, staff is proposing to contract with a vendor to expand the condition assessment approach, while conforming to recognized industry standards for performing such assessments. Staff recommends awarding a contract to Roadway Asset Services, LLC. This vendor has performed PCI services for municipalities in the Dallas/Fort Worth region, across Texas, and the United States.

The vendor's condition assessment methodology will follow the American Society for Testing and Materials (ASTM) standard for assessing asphalt and concrete pavement conditions. This method is based on a physical survey of each street and alley using specialized equipment, with a special emphasis on surveying pavement distresses. The type, severity and quantity of these distresses is noted and a PCI score is then assigned on a scale of 0 - 100 (100 being the best possible score). This scoring data is important because it is used to determine the most effective rehabilitation and maintenance strategy for a specific street and will also assist staff with developing a multi-year plan for pavement management that maximizes financial resources. PCI is considered a planning tool, not a design tool.

Consideration / Recommendation

Staff recommends City Council consider approving the award of a contract to Roadway Asset Services, LLC in the amount of \$288,280 to provide Pavement Condition Index services for the city's street and alley network. Unless otherwise directed by Council, this item will be placed on the March 5, 2024 regular meeting for Council consideration.



GARLAND
CITY COUNCIL STAFF REPORT

City Council Work Session

6.

Meeting Date: 03/04/2024

USDA Forest Service Urban & Community Forestry Inflation Reduction Act Grant Report

Submitted By: Matthew Grubisich, Parks Director

Strategic Focus Area: Growing Economic Base
Well-Maintained City Infrastructure
Vibrant Neighborhoods and
Commercial Centers
Reliable, Cost Efficient Utility
Services
Sound Governance and Finances
Future-Focused City Organization

Issue/Summary

Council is requested to consider accepting a sub-grant from the National Arbor Day Foundation, through the USDA Forest Service Urban & Community Forestry Inflation Reduction Act Grant, to implement a community-centric initiative designed to significantly expand tree planting efforts aimed at planting 10,000 trees over the next five years, focusing primarily on neighborhoods, parks, and medians with low tree canopy cover.

Background

Last Spring, the U.S. Department of Agriculture's Forest Service announced a Notice of Funding Opportunity for the Urban and Community Forestry Program. Under the Inflation Reduction Act, the Urban and Community Forestry Program received \$1.5 billion to support urban tree planting, urban forest planning and management, and related activities, particularly in disadvantaged communities. The Forest Service selected 385 grant proposals from entities working to increase equitable access to trees and nature, and the benefits they provide for cooling city streets, improving air quality, and promoting food security, public health, and safety. The City of Garland was one of those selected. Staff will be presenting additional information about the grant, and the project.

Consideration / Recommendation

Staff recommends the City Council adopt a resolution authorizing the City Manager or designee to execute the agreement between the National Arbor Day Foundation and the City of Garland, which defines the terms and conditions for the National Arbor Day Foundation and the City of Garland, and to transfer local contributions to perform the scope of work defined in the agreement.



GARLAND
CITY COUNCIL STAFF REPORT

City Council Work Session

7.

Meeting Date: 03/04/2024

Captioning, Translations and Related Services for Council Meetings

Submitted By: Tiffany Veno, Managing Director

Strategic Focus Area: Customer-Focused City Services
Future-Focused City Organization

Issue/Summary

Staff will discuss potential options for providing captioning, translations and other related services at City Council meetings.

Background

At the Jan. 22 Work Session, Council asked Staff to examine possible meeting accommodations for community members who speak Spanish or Vietnamese or are hard of hearing. This briefing includes options for Council consideration.

Consideration / Recommendation

Council is asked to give direction regarding options presented.
