

**CALIFORNIA
ADOPTED THE FOLLOWING:**

FINAL EXPRESS TERMS
FOR STATE AGENCY APPROVED CHANGES
TO
THE 2021 UNIFORM PLUMBING CODES (UPC)
FOR
THE 2022 CALIFORNIA PLUMBING CODES (CPC)
CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 24, PARTS 5

- THE CALIFORNIA BUILDING STANDARDS COMMISSION (BSC)
- CALIFORNIA ENERGY COMMISSION (CEC)
- THE DIVISION OF THE STATE ARCHITECT – STRUCTURAL SAFETY (DSA-SS)
- DEPARTMENT OF WATER RESOURCES (DWR)
- THE DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPEMENT (HCD)
- THE OFFICE OF STATE WIDE HEALTH PLANNING AND DEVELOPMENT (OSHDP)
- THE OFFICE OF THE STATE FIRE MARSHAL (SFM)

Disclaimer: All Final Express Terms for the above mentioned agencies are available and were obtained from the Building Standards Commission at the following link:

<https://www.dgs.ca.gov/BSC/Rulemaking/2021-Triennial-Code-Adoption-Cycle/Dec-2021-Commission-Mtg>

<https://www.dgs.ca.gov/BSC/Rulemaking/2021-Triennial-Code-Adoption-Cycle/Jan-2022-Commission-Mtg>

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APPROVED BY THE CALIFORNIA BUILDING STANDARDS COMMISSION

DECEMBER 14, 2021

**FINAL EXPRESS TERMS
FOR PROPOSED BUILDING STANDARDS
OF THE CALIFORNIA BUILDING STANDARDS COMMISSION
REGARDING THE 2022 CALIFORNIA PLUMBING CODE,
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 5
(BSC 02/21)**

The State agency shall draft the regulations in plain, straightforward language, avoiding technical terms as much as possible and using a coherent and easily readable style. The agency shall draft the regulation in plain English. A notation shall follow the express terms of each regulation listing the specific statutes authorizing the adoption and listing specific statutes being implemented, interpreted, or made specific (Government Code Section 11346.2(a)(1)).

If using assistive technology, please adjust your settings to recognize underline, strikeout, italic and ellipsis.

LEGEND for EXPRESS TERMS (Based on model codes - Parts 2, 2.5, 3, 4, 5, 9, 10)

- Model Code language appears upright
- Existing California amendments appear in *italic*
- Amended model code or new California amendments appear *underlined & italic*
- Repealed model code language appears ~~upright and in strikeout~~
- Repealed California amendments appear in ~~*italic and strikeout*~~
- Ellipsis (...) indicate existing text remains unchanged

FINAL EXPRESS TERMS

ITEM 1

**Chapter 1, ADMINISTRATION DIVISION I, CALIFORNIA ADMINISTRATION
Sections 1.1.0 through 1.2.3.2**

BSC proposes to bring forward existing California amendments in *Chapter 1, Division I* from the 2019 California Plumbing Code for adoption into the 2022 edition of the California Plumbing Code (CPC) with the following amendment:

**CHAPTER 1
ADMINISTRATION
DIVISION 1
CALIFORNIA ADMINISTRATION**

1.1.1 Title. *These regulations shall be known as the California Plumbing Code, may be cited as such and will be referred to herein as “this code.” The California Plumbing Code is Part 5 of thirteen parts of the official compilation and publication of the adoption,*

amendment, and repeal of plumbing regulations to the California Code of Regulations, Title 24, also referred to as the California Building Standards Code. This part incorporates by adoption the 2018 2021 Uniform Plumbing Code of the International Association of Plumbing and Mechanical Officials with necessary California amendments.

1.1.3.2 State-Regulated Buildings, Structures, and Applications. *The model code, state amendments to the model code, and/or state amendments where there are no relevant model code provisions shall apply to the following buildings, structures, and applications regulated by state agencies as specified in Sections 1.2.0 through 1.14.0, except where modified by local ordinance pursuant to Section 1.1.8. When adopted by a state agency, the provisions of this code shall be enforced by the appropriate enforcing agency, but only to the extent of authority granted to such agency by the state Legislature.*

Note: *See ~~Preface to distinguish the model code provisions from the California provisions~~ “How to Distinguish Between Model Code Language and California Amendments” in the front of the code.*

1.2.0 Building Standards Commission.

1.2.1 BSC. *Specific scope of application ... [No change to existing California amendment]*

...

1.2.3.2 Tests. ... [No change to existing California amendment]

Notation:

Authority: Health and Safety Code Sections 18928, 18928.1, 18934.5, 18949.6

Reference(s): Health and Safety Code Sections 18928, 18928.1, 18934.5, 18949.6

ITEM 2

Chapter 1, DIVISION II ADMINISTRATION

Chapter 1 Administration of the 2021 UPC is renamed Chapter 1, *Division II*, by BSC, and contains administrative provisions used by local jurisdictions. BSC proposes to only adopt Section *104.4.3.1* and continues to not adopt the balance of Chapter 1, *Division II*, which is printed for use by local jurisdictions only.

DIVISION II ADMINISTRATION

...

104.4.3.1 Expiration. *[BSC] On or after January 1, 2019, every permit issued shall become invalid unless the work on the site authorized by such permit is commenced within 12 months after its issuance or if the work authorized on the*

site by such permit is suspended or abandoned for a period of 12 months after the time the work is commenced. The building official is authorized to grant, in writing, one or more extensions of time, for periods not more than 180 days each. The extension shall be requested in writing and justifiable cause demonstrated. (See Health and Safety Code Section 18938.5 and 18938.6).

...

Notation:

Authority: Health and Safety Code Sections 18931, 18934.5, 18949.6

Reference(s): Health and Safety Code Sections 18934.5, 18938.5, 18938.6, 18949.6

ITEM 3

Chapter 2 DEFINITIONS

BSC proposes to adopt the entire Chapter 2 of the 2021 UPC and to carry forward existing amendments that includes the deletion of some model code definitions, for use in the 2022 CPC. BSC has included specified state definitions in its express terms for context. This will ensure accuracy and consistency with existing definitions that have been co-adopted by other state agencies (e.g. HCD, DWR, etc.).

**CHAPTER 2
DEFINITIONS**

203.0

-A-

...

Alternate Water Source. Nonpotable source of water that includes but not limited to gray water, on-site treated nonpotable water, on-site treated nonpotable gray water, rainwater, and reclaimed (recycled) water.

~~**Alternate Water Source.** Nonpotable source of water that includes but not limited to gray water, on-site treated nonpotable gray water, rainwater, and reclaimed (recycled) water.~~

...

205.0

-C-

...

Complex System [BSC-CG]. Gray water systems that ... [No change to existing California amendment]

...

206.0

-D-

...

Disposal Field [BSC-CG]. An intended destination for ... [No change to existing California amendment]

...

207.0

-E-

...

Enforcing Agency [BSC, BSC-CG]. "Enforcing Agency" is ... [No change to existing California amendment]

...

209.0

-G-

...

Graywater [BSC-CG]. Pursuant to Health and Safety ... [No change to existing California amendment]

~~**Gray Water Diverter Valve.** A valve that directs gray water to the sanitary drainage system or a subsurface irrigation system.~~

Gray Water System [BSC-CG]. A system designed to ... [No change to existing California amendment]

...

211.0

-I-

...

Irrigation Field [BSC-CG]. An intended destination ... [No change to existing California amendment]

215.0

-M-

...

Mulch Basin [BSC-CG]. A subsurface type of irrigation ... [No change to existing California amendment]

216.0

-N-

Nonwater Urinal with Drain Cleansing Action. A nonwater urinal that conveys ... [No change to model code definition]

...

217.0

-O-

...

On-Site Treated Nonpotable Water [BSC-CG]. *Nonpotable water ... [No change to existing California amendment]*

...

220.0

-R-

Rainwater [BSC-CG]. *Precipitation on any public or ... [No change to existing California amendment]*

Rainwater Catchment System [BSC-CG]. *A facility designed to ... [No change to existing California amendment]*

Receiving Landscape [BSC-CG]. *Includes features ... [No change to existing California amendment]*

Reclaimed (Recycled) Water [BSC-CG]. *Nonpotable water ... [No change to existing California amendment]*

...

221.0

-S-

...

Simple System [BSC-CG]. *A gray water system ... [No change to existing California amendment]*

...

222.0

-T-

...

Treated Gray Water [BSC-CG]. *Non-potable water ... [No change to existing California amendment]*

Notation:

Authority: Health and Safety Code Sections 18928, 18930.5, 18941.8

Reference(s): Health and Safety Code Section 18941.8, Water Code Section 14877.1

ITEM 4

Chapter 3 General Regulations

BSC proposes to adopt the entire Chapter 3 of the 2021 UPC without amendment into the 2022 CPC.

CHAPTER 3 GENERAL REGULATIONS

...

Notation:

Authority: Health & Safety Code Sections 18928 and 18934.5

Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

ITEM 5

Chapter 4 Plumbing Fixtures and Fixture Fittings

BSC proposes to adopt the entire Chapter 4 of the 2021 UPC (for BSC and BSC-CG, as applicable), and to carry forward existing amendments as shown in the Express Terms; renumber sections as model code changed their numbering sequence to 412.1.3, 412.1.4 and 412.1.4.1; and add new editorial changes to Section 412.1.4.1, Table 422.1 into the 2022 CPC.

CHAPTER 4 PLUMBING FIXTURES AND FIXTURE FITTINGS

...

401.3 Water-Conserving Fixtures and Fittings.

Note 1 and Note 2: *[BSC] ... [No change to existing California amendment]*

...

407.0 Lavatories

...

407.2 Water Consumption. The maximum water ... *[No change to existing California amendment]*

...

407.2.4.1 Metering Faucet [BSC-CG]. *Metering faucets shall ... [No change to existing California amendment]*

...

408.0 Showers

...

408.2.1 Single Showerhead [BSC-CG]. Showerheads shall have a ... [No change to existing California amendment]

408.2.2 Multiple Showerheads Serving One Shower [BSC-CG]. When a shower is served by more than ... [No change to existing California amendment]

...

411.0 Water Closets.

...

411.2.2 Flushometer Valve Activated Water Closets.

411.2.2.1 Flushometer Valve Activated Water Closets [BSC-CG]. Flushometer valve activated water closets ... [No change to existing California amendment]

...

411.2.4 Water Closets [BSC-CG]. The effective flush volume ... [No change to existing California amendment]

...

412.0 Urinals.

...

412.1.1 Wall Mounted Urinals. [BSC-CG]. The effective flush ... [No change to existing California amendment]

412.1.2 Floor Mounted Urinals [BSC-CG]. The effective flush ... [No change to existing California amendment]

412.1.3 412.1.1 Nonwater Urinals. Nonwater urinals shall have ... [No change to existing California amendment]

412.1.4 412.1.2 Nonwater Urinals with Drain Cleansing Action. Nonwater urinals with drain cleansing ... [No change to model code language]

412.1.4.1 (formerly 412.1.3.1) Urinals, Hybrid [BSC-CG]. Where approved, ~~hybrid urinals~~ nonwater urinals with drain cleansing action shall be considered nonwater urinals in compliance with Chapter 5, Division A5.3 of the California Green Building Standards Code (CALGreen).

417.0 Faucets and Fixture Fittings

417.1.1 Wash Fountains [BSC-CG]. Wash fountains shall have [No change to existing California amendment]

417.1.2 Metering Faucets for Wash Fountains [BSC-CG]. Metering faucets for wash fountains ... [No change to existing California amendment]

420.0 Sinks

...

420.2.1 Kitchen Faucets [BSC-CG]. Kitchen faucets shall have ... [No change to existing California amendment]

...

420.3.1 Pre-rinse spray valve. [BSC-CG]. When installed, shall ... [No change to existing California amendment]

...

422.1 Fixture Count. ...

[BSC] Using occupancy classification ... [No change to existing California amendment]

TABLE 422.1 MINIMUM PLUMBING FACILITIES¹

Each building shall be provided with sanitary facilities, ... [No change to model code language]

The total occupant load shall be determined in accordance with the [BSC, DSA-SS & DSA-SS/CC] California Building Code or Table 4-1 Occupant Load Factor Table A

[No changes to Table]

Notes:

1.

...

³ The total number of required water closets for females shall be not less than the total number of required water closets and urinals for males. **[BSC]** This requirement shall not apply when single occupancy toilet ... [No change to existing California amendment]

a. and b. [No change to existing California amendment]

4.

...

⁷ **[BSC]** In accordance . . . [No change to existing California amendment]

TABLE 4-1 OCCUPANT LOAD FACTOR: [BSC]

[No changes to table]

** And ** [No change to existing California amendments]*

...

Notation:

Authority: Health & Safety Code Sections 18928 and 18934.5

Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

ITEM 6

Chapter 5 Water Heaters

BSC proposes to adopt the entire Chapter 5 of the 2021 UPC without amendment into the 2022 CPC. This action provides general construction provisions for plumbing systems used throughout the state and ensures consistency for the code user.

**CHAPTER 5
WATER HEATERS**

...

Notation:

Authority: Health & Safety Code Sections 18928 and 18934.5

Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

ITEM 7

Chapter 6 Water Supply and Distribution

BSC proposes to adopt Chapter 6 of the 2021 UPC, carry forward existing amendments (for BSC and BSC-CG, as applicable) into the 2022 CPC. BSC is also renumbering Section 601.2 Exception (4) to Exception (5) due to an additional exception added in the 2021 UPC. This action provides general construction provisions for plumbing systems used throughout the state and ensures consistency for the code user.

**CHAPTER 6
WATER SUPPLY AND DISTRIBUTION**

601.2 Water Supply and Flushing. Each plumbing fixture ...

Exceptions:

...

~~(5)~~ ~~(4)~~ [BSC-CG] For non-residential ... [No change to existing California amendment]

601.3.3 Alternate Water Sources

...

(2) Reclaimed (recycled) water systems *for outdoor applications ... [No change to existing California amendment]*

...

TABLE 604.1 MATERIALS FOR BUILDING SUPPLY AND WATER DISTRIBUTION PIPING AND FITTINGS *[No changes to table]*

Notes:

...

3. – 5 *[No change to existing California amendment]*

...

604.13 Water Heater Connections. Flexible metallic (copper and stainless ... *[BSC] PEX-AL-PEX is not adopted for use ... [No change to existing California amendment]*

...

605.10 PEX-AL-PEX Plastic Tubing and Joints. PEX-AL-PEX plastic pipe ... *[BSC] PEX-AL-PEX is not adopted for use ... [No change to existing California amendment]*

605.10.1 Mechanical Joints. Mechanical joints between ...

[BSC] PEX-AL-PEX is not adopted for use in ... [No change to existing California amendment]

605.10.1.1 Compression Joints. Compression joints include ...

[BSC] PEX-AL-PEX is not adopted for ... [No change to existing California amendment]

...

607.1 General. Potable water supply tanks ... *[No change to existing California amendment]*

...

Notation:

Authority: Health & Safety Code Sections 18928, 18928.1, 18930.5, 18934.5, and 18940.5

Reference(s): Health & Safety Code Sections 18928.1, and 18940.5

ITEM 8

Chapter 7 Sanitary Drainage, Chapter 8 Indirect Wastes, Chapter 9 Vents, Chapter 10 Traps and Interceptors

BSC proposes to adopt the entire Chapter 7 - SANITARY DRAINAGE, Chapter 8 - INDIRECT WASTES, Chapter 9 - VENTS, and Chapter 10 - TRAPS AND INTERCEPTORS of the 2021 UPC without amendments for use in California for all occupancies, as required by statute. This action provides general construction provisions for plumbing systems used throughout the state and ensures consistency for the code user.

CHAPTER 7 SANITARY DRAINAGE CHAPTER 8 INDIRECT WASTES CHAPTER 9 VENTS CHAPTER 10 TRAPS AND INTERCEPTORS

Notation:

Authority: Health & Safety Code Sections 18928 and 18934.5

Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

ITEM 9

Chapter 11 Storm Drainage

BSC proposes to adopt Chapter 11 of the 2021 UPC, and carry forward existing amendment for the 2022 CPC. This action provides general construction provisions for plumbing systems used throughout the state and ensures consistency for the code user.

CHAPTER 11 STORM DRAINAGE

1101.4 Material Uses. Pipe, tube, and fittings ... *[No change to existing California amendment]*

Notation:

Authority: Health & Safety Code Sections 18928 and 18934.5

Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

ITEM 10

Chapter 12 Fuel Gas Piping

BSC proposes to adopt Chapter 12 of the 2021 UPC without amendment for use in California, as required by statute into the 2022 CPC. This action provides general construction provisions for plumbing systems used throughout the state and ensures consistency for the code user.

CHAPTER 12 FUEL GAS PIPING

...

Notation:

Authority: Health & Safety Code Sections 18928 and 18934.5

Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

ITEM 11

Chapter 13 Health Care Facilities and Medical Gas and Medical Vacuum Systems, Chapter 14 Firestop Protection

BSC proposes to not adopt Chapter 13 and Chapter 14 of the 2021 UPC into the 2022 CPC.

CHAPTER 13 HEALTH CARE FACILITIES AND MEDICAL GAS AND MEDICAL VACUUM SYSTEMS

CHAPTER 14 FIRESTOP PROTECTION

...

Notation:

Authority: Health & Safety Code Sections 18928 and 18934.5

Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

ITEM 12

Chapter 15 Alternate Water Sources for Nonpotable Applications

BSC proposes to adopt the entire Chapter 15 of the 2021 UPC with new amendments and carry forward existing amendments (for BSC and BSC-CG, as specified) into the 2022 CPC.

CHAPTER 15 ALTERNATE WATER SOURCES FOR NONPOTABLE APPLICATIONS

1501.1 Applicability [BSC-CG]. The provisions of this chapter ...

1501.2 System Design. Alternate water source systems shall be designed in accordance with this chapter by a ~~licensed plumbing contractor or a registered design professional~~ or licensed person who demonstrates competency to design the alternate water source system as required by the Authority Having Jurisdiction. Components, piping, and fittings used in an alternate water source system shall be listed.

[BSC-CG] *Irrigation design plans shall meet the requirements of the ...*

...

1501.3 Permit [BSC-CG]. It shall be unlawful for a person ... *[No change to existing California amendment]*

Exception: [BSC-CG] *A construction permit shall not be ... [No change to existing California amendment]*

TABLE 1501.5 [BSC-CG] RECOMMENDED MINIMUM ALTERNATE WATER SOURCE TESTING, INSPECTION, AND MAINTENANCE FREQUENCY *[No changes to table]*

1501.5 Maintenance and Inspection [BSC-CG]. Alternate water source ... *[No change to existing California amendment]*

1501.5.1 ~~1501.5.3~~ Maintenance Responsibility. The required maintenance ... *[No change to model code language]*

1501.6 Operation and Maintenance Manual [BSC-CG]. An operation and maintenance manual ... *[No change to existing California amendment]*

1501.7 Minimum Water Quality Requirements [BSC-CG]. The minimum water quality for alternate water source systems shall meet the applicable water quality requirements for the intended application as determined by the Authority Having Jurisdiction. In the absence of water quality requirements, for on-site treated nonpotable systems, the water quality requirements of NSF 350 shall apply. ~~The EPA/625/R-04/108 contains recommended water reuse guidelines to assist regulatory agencies to develop, revise, or expand alternate water source water quality standards~~ *Water quality requirements for on-site treated nonpotable graywater shall comply with this section and Section 1506.9.2.*

Exceptions:

(1) Water treatment is not ... *(No change to existing California amendment)*

(2) *[DWR] . . .*

...

1501.9 Signage [BSC-CG]. Signage for on-site treated ... *[No change to existing California amendment]*

1501.9.1 Commercial, Industrial, Institutional, and Residential Restroom Signs. A sign shall be installed ... *[No change to existing California amendment]*

1501.9.2 Equipment Room Signs. Each room containing ... *[No change to existing California amendment]*

...

1502.1 General. Alternate water source ... *[No change to existing California amendment]*

...

1502.3 Annual Cross-Connection Inspection and Testing. An initial ... *[No change to existing California amendment]*

...

1502.3.2 Cross-Connection Test. A cross-connection test ... *[No change to existing California amendment]*

1502.3.3 Discovery of Cross-Connection. If a cross-connection is ... (1) , (2), (3) and (5) *[No change to existing California amendment]*

...

1503.0 Gray Water Systems [BSC-CG]. Gray water systems shall be ... *[No change to existing California amendment]*

1503.1 General. The provisions of this section ... *[No change to existing California amendment]*

(A) through (F) *[No change to existing California amendment]*

...

(2) **[BSC-CG]** Photo labs or similar activities.

(G) through (I) *[No change to existing California amendment]*

...

1503.1.2 Simple System. Simple systems exceed a ... *[No change to existing California amendment]*

1503.1.3 Complex System. Any gray water system ... *[No change to existing California amendment]*

1503.2 System Requirements. Gray water shall be permitted ... *[No change to existing California amendment]*

1503.2.1 Surge Capacity. Gray water systems shall ... *[No change to existing California amendment]*

Exception: *It is not the intent of this ... [No change to existing California amendment]*

1503.2.2 Diversion. The gray water systems shall connect to the sanitary drainage system downstream of fixture traps and vent connections through a an

approved gray water diverter valve. The ~~gray water~~ diverter valve shall comply with ~~IAPMO PS 59~~ and be installed in an *readily* accessible location and clearly indicate the direction of flow.

1503.2.3 Backwater Valves. Gray water drains subject ... *[No change to existing California amendment]*

1503.2.4 . . . *[amendment withdrawn]*

1503.3 Connection to Potable and Reclaimed (Recycled) Water Systems.

Gray water systems shall have no direct connection to a potable water supply, on-site treated nonpotable gray water supply, or reclaimed (recycled) water *supply* systems.

Exceptions:

- (1) Potable *water*, on-site treated nonpotable gray water, reclaimed (recycled) water, or rainwater is permitted to be used as makeup water for a non-pressurized storage tank provided the connection is protected by an air gap in accordance with this code.
- (2) *A potable water supply may be connected temporarily for initial testing of the untreated graywater system as required for Section 1502.3.2.*

1503.4 Location. No gray water system ...

Exception: *When there exists a lawfully recorded ... [No change to existing California amendment]*

TABLE 1503.4 Location of Gray Water Systems *[No change to existing Table]*

...

1503.7 Drawings and Specifications. The Authority Having ...

- (1) – (3) No change to model code language
- (4) A log of soil ... *[No change to existing California amendment]*

Exceptions:

- (1) No change to model code language
- (2) *and (3) [No change to existing California amendment]*

1503.8 Procedure for Estimating Gray Water Discharge. Gray water systems shall be designed to ...

Exception: *It is not the intent of this section to require that ... [No change to existing California amendment]*

...

1503.8.2 Commercial, Industrial, and Institutional Occupancies. The Authority Having Jurisdiction may ... [No change to existing California amendment]

1503.8.2.1 Lavatories. Daily discharge from lavatories may be determined by the following equation:

(Equation 15.1)

$Occupants \times Lavatory \text{ flow rate} \times 3$

Where:

The number of occupants = square footage of the building divided by the occupant load factor from the California Plumbing Code Chapter 4, Table A 4-1.

Lavatory fixture flow rate, new construction = That from the California Green Building Standards (CALGreen) Code Section ~~5.303.2.3~~ 5.303.3.4

...

1503.8.2.2 Showers. Daily gray water discharge ... [No change to existing California amendment]

1503.8.2.3 Commercial Clothes Washers. Daily gray water ... [No change to existing California amendment]

1503.9 Gray Water System Components. Gray water systems ... [No change to existing California amendment]

...

1503.9.3 Animals and Insects. Gray water tank ... [No change to existing California amendment]

1503.9.4 Freeze Protection. Tanks and piping installed ... [No change to existing California amendment]

...

TABLE 1504.2 Design of Six Typical Soils [no change to table]

1504.3 Determination of Maximum Absorption Capacity. Irrigation field ...

Exceptions:

(1) and (2) [No change to existing California amendment]

...

TABLE 1504.5.5 SUBSURFACE IRRIGATION DESIGN CRITERIA FOR SIX TYPICAL SOILS. [no change to Table]

1504.5 Irrigation, Disposal Field and Mulch Basin Construction.

Irrigation fields, disposal fields and mulch basins ... [No change to existing California amendment]

1504.5.1 Mulch Basin. *A mulch basin may be used as ... [No change to existing California amendment]*

1504.5.2 Irrigation Field. *The provisions of this section ... [No change to existing California amendment]*

(1) ...

(2) *Emitters shall be designed to resist root intrusion and shall be of a design recommended by the manufacturer for the intended gray water flow and use. ~~For emitter ratings, refer to Irrigation Equipment Performance Report, Drip Emitters and Micro-Sprinklers, Center for Irrigation Technology, California State University, 5730 N. Chestnut Avenue, Fresno, California 93740-0018.~~*

(3) *Each irrigation zone shall be designed to include no less than the number of emitters specified in Table 1504.5.5, or through a procedure designated by the Enforcing Agency. Minimum spacing between emitters in any direction shall be sufficient to prevent surfacing or runoff.*

(4) through (7) *[No change to existing California amendment]*

1504.5.3 Disposal Field. *The provisions of this section ... [No change to existing California amendment]*

...

TABLE 1504.7.3 1504.5.3 Subsoil Irrigation Field Construction. *[No change to Table]*

¹*Manufactured leaching [No change to existing California amendment].*

...

1504.8 Gray Water System Color and Marking Information. *Pressurized gray water distribution systems shall be identified ... [No change to existing California amendment]*

...

1504.9.1 Future Connections. *Gray water ... [No change to existing California amendment]*

1505.0 Reclaimed (Recycled) Water Systems. (Not adopted by BSC)

1506.0 On-Site Treated Nonpotable Gray Water Systems.

1506.1 General. *The provisions of this section shall ... [No change to existing California amendment]*

1506.2 Plumbing Plan Submission. *No permit for an on-site ... [No change to existing California amendment]*

1506.3 System Changes. *No changes or connections ... [No change to existing California amendment]*

1506.4 Connections to Potable or Reclaimed (Recycled) Water Systems.

On-Site treated nonpotable *gray* water systems ... *[No change to existing California amendment]*

...

1506.6 On-Site Treated Nonpotable Gray Water System Materials.

On-site treated nonpotable *gray* ... *[No change to existing California amendment]*

1506.7 On-Site Treated Nonpotable Gray Water Devices and Systems.

Devices or equipment used to treat on-site treated nonpotable *gray* water ...

1506.8 On-Site Treated Nonportable Gray Water System Color and Marking Information. On-site treated *nonportable gray* ... *[No change to existing California amendment]*

1506.9 Design and Installation. The design and installation ... *[No change to existing California amendment]*

1506.9.1 Listing Terms and Installation Instructions. On-site ... *[No change to existing California amendment]*

1506.9.2 Minimum Water Quality [BSC-CG]. On-site treated ... *[No change to existing California amendment]*

1506.9.3 Deactivation and Drainage. This on-site treated ... *[No change to existing California amendment]*

1506.9.4 Near Underground Potable Water Pipe. On-site treated ... *[No change to existing California amendment]*

1506.9.5 Required Filters. A filter permitting the passage of particulates no larger than 100 microns (100 μm) shall be provided for on-site treated nonpotable water supplied to water closets, urinals, trap primers, and drip irrigation systems.

1506.9.6 Disinfection. Where the intended ... *[No change to existing California amendment]*

...

1506.11 Signs. Signs in building usings on ... *[No change to existing California amendment]*

1506.12 Inspection and Testing. On-site treated ... *[No change to existing California amendment]*

Notation:

Authority: Health and Safety Code Sections 18928, 18930.5, 18941.8

Reference(s): Health and Safety Code Section 18941.8, Water Code Section 14877.1

ITEM 13

Chapter 16 Nonpotable Rainwater Catchment Systems

BSC proposes to adopt the entire Chapter 16 of the 2021 UPC to carry forward existing amendments and propose new amendments (for BSC only) into the 2022 CPC.

CHAPTER 16 NONPOTABLE RAINWATER CATCHMENT SYSTEMS

...

1601.2 System Design. Rainwater catchment systems shall be designed in accordance with this chapter by a ~~licensed plumbing contractor or~~ person registered or licensed to perform plumbing design work or who demonstrates competency to design the rainwater catchment system as required by the Authority Having Jurisdiction design professional. Components, piping, and fittings used in a rainwater catchment system shall be listed.

Exceptions:

- (1) A person registered or licensed to perform plumbing design work is not required to design rainwater catchment systems used for irrigation with a maximum storage capacity of 360 gallons (1363 L).
- (2) A person registered or licensed to perform plumbing design work is not required to design rainwater catchment systems for single family dwellings where outlets, piping, and system components are located on the exterior of the building.

1601.3 Permit. It shall be unlawful for a person to construct ...

Exceptions:

- (1) *A permit is not required for ... [No change to existing California amendment]*

...

~~**1601.5.1**~~ **1601.5.3 Maintenance Responsibility.** The required maintenance ...
[No change to model code language]

1601.6 Operation and Maintenance Manual. An operation and ... *[No change to existing California amendment]*

1601.7 Minimum Water Quality Requirements. The minimum water quality for rainwater catchment systems ...
In the absence of water quality requirements for harvested rainwater, Table ~~1602.9.6~~ 1603.5 shall apply.

Exceptions: *[No change to existing California amendment]*

1601.8 Material Compatibility. Rainwater catchment system ... *[No change to model*

code language]

1601.9 System Controls. Controls for pumps, valves, and ... [No change to model code language]

1601.10 Separation Requirements. Underground rainwater catchment ... [No change to model code language]

1601.11 Abandonment. Rainwater catchment systems that are no longer ... [No change to model code language]

1601.11.1 General. An abandoned system or part thereof ... [No change to model code language]

1601.11.2 Underground Tank. An underground water storage tank ... [No change to model code language]

1601.12 Sizing. Unless otherwise provided for ... [No change to model code language]

1602.0 Nonpotable Rainwater Catchment Systems.

...

1602.4 Connections to Potable or Reclaimed (Recycled) Water Systems. Rainwater catchment systems shall have no direct connection to a potable water supply, or alternate water source system.

Exceptions:

(1) Potable *water, on-site treated nonpotable gray water,* or reclaimed (recycled) water is permitted to be used as makeup water for rainwater catchment system provided the ~~potable or reclaimed (recycled) water supply~~ connection is protected by an air gap or ~~reduced-pressure principle backflow preventer~~ in accordance with this code.

(2) *A potable water supply may be connected temporarily for initial cross-connection test of the rainwater catchment system as required in Section 1605.3.2.*

1602.7 Rainwater Catchment System Materials. Rainwater catchment ... [No change to existing California amendment]

...

~~**1602.9.3 Rainwater Catchment System Surfaces.** Rainwater shall be collected from roof surfaces or other impervious manmade, above-ground collection surfaces. Rainwater collected from surface water runoff, vehicular parking surfaces or manmade surfaces at or below grade shall comply with the water quality requirements for on-site treated nonpotable gray water in Section 1504.0. **Exception:** Collected rainwater or storm water used exclusively for subsurface landscape irrigation.~~

...

1603.4 (1602.9.3) Rainwater Catchment Collection Surfaces. Rainwater shall be collected from roof surfaces or other impervious manmade, aboveground collection surfaces.

1603.4.1 (formerly 1602.9.3 & 1602.9.4) Other Surfaces. Natural precipitation collected from surface water runoff, vehicular parking surfaces, or manmade surfaces at or below grade shall be in accordance with the stormwater water quality requirements for on-site treated nonpotable gray water systems in Section 1506.0.

Exception: *Collected rainwater or storm water used exclusively for subsurface landscape irrigation.*

1603.5 (formerly 1602.9.6) Minimum Water Quality. The minimum water quality for ... (No change to model code language)

Exception: ~~*[BSC] No treatment is required for rainwater used for non-spray irrigation where the maximum storage volume is less than*~~ No treatment is required for rainwater used for subsurface or nonsprinklered surface irrigation where the maximum storage volume is less than ~~360 gallons (1363 L)~~ 5000 gallons (18 927 L) where the tank is supported directly upon grade and the ratio of height to diameter or width does not exceed 2 to 1.

TABLE 1603.5 (formerly Table 1602.9.6) MINIMUM WATER QUALITY [no change to table]

1603.5.1 Treatment. If the quality of the tested water cannot consistently be maintained at the minimum levels specified in Table 1603.5, then the system shall be equipped with an appropriate treatment device meeting the applicable NSF standards referenced in Chapter 17.

~~**1602.9.6.1**~~ **1603.5.2 Disinfection.** *Where the initial quality of the collected rainwater requires disinfection or other treatment or both, the collected rainwater shall be treated as necessary to ensure the required water quality is delivered at the point of use. Where chlorine is used for disinfection or treatment, water shall be tested for residual chlorine in accordance with ASTM D1253. The levels of residual chlorine shall not exceed the levels allowed for the intended use in accordance with the requirements of the local Enforcing Agency.*

...

1603.8 (formerly 1603.4) Above Grade. Above grade, storage tanks ...

Exception: *Tanks may be installed directly on grade in accordance with Section 1601.3.*

1603.9 (formerly 1603.5) Below Grade. Rainwater storage tanks installed ... [No change to existing California amendment]

1603.10 (formerly 1603.6) Drainage and Overflow. Rainwater storage ... *[No change to existing California amendment]*

1603.11 (formerly 1603.7) Opening and Access Protection. Rainwater ... *[No change to existing California amendment]*

(A) Animals and Insects. Screens installed on vent pipe, inlets, and ... *[No change to existing California amendment]*

(B) Human Access. A minimum of one access opening shall ... *[No change to existing California amendment]*

...

1603.13 (formerly 1603.9) Storage Tank Venting. Where venting using drainage or overflow piping is not provided or is considered insufficient, a vent shall be installed on each tank. The vent shall extend from the top of the tank and terminate not less than 6 inches (152 mm) above grade and shall be ~~not less than 1½ inches (40 mm) in diameter~~ *provided with a vent sized in accordance with this code, and based on the size of the influent pipe.* The vent terminal shall be directed downward and covered with a 1/16 of an inch ~~(2.4 mm)~~ *(1.6 mm)* mesh screen to prevent the entry of vermin and insects. *Tank vent pipes shall not be connected to the sanitary drainage system vent.*

1604.0 Signs

1604.1 General. Signs in buildings using rainwater ... *[No change to existing California amendment]*

1604.2 Commercial, Industrial, Institutional and Residential Restroom Signs. A sign shall be installed in restrooms in commercial, ... *[No change to existing California amendment]*

1604.3 Equipment Room Signs. Each equipment room ... *[No change to existing California amendment]*

1605.0 Inspection and Testing.

1605.3 Annual Cross-Connection Inspection and Testing. An initial ... *[No change to existing California amendment]*

1605.3.2 Cross-Connection Test. A cross-connection test ... *[No change to existing California amendment]*

...

(6) The rainwater catchment water systems shall then be activated and ... *[No change to existing California amendment]*

1605.3.3 Discovery of Cross-Connection. In the event that ... *[No change to existing California amendment]*

Notation:

Authority: Health and Safety Code Sections 18928, 18928(b), 18928.1, 18930.5, 18934.5, 18940.5, 18941.8, and Water Code Section 14877.1.

Reference(s): Health and Safety Code Sections 18928, 18928(b), 18928.1, 18930.5, 18934.5, 18940.5, 18941.8, and Water Code Section 14877.1.

ITEM 14

Chapter 17, Referenced Standards TABLE 1701.1 and 1701.2

BSC proposes to adopt Chapter 17 of the 2021 UPC with with new and existing amendments for use in California for all occupancies, as required by statute. This action provides general construction provisions for plumbing systems used throughout the state and ensures consistency for the code user.

**CHAPTER 17
REFERENCE STANDARDS, TABLE 1701.1 & 1701.2 REFERENCED STANDARDS**

**TABLE 1701.1
REFERENCED STANDARDS**

| Standard Number | Standard Title | Application | Referenced Section |
|--|---|----------------------|---|
| <i>ASTM D1235-2014</i> | <i>Standard Test Method for Residual Chlorine in Water</i> | <i>Miscellaneous</i> | <i>1506.9.6, 1602.9.6.1, <u>1603.5.2</u></i> |
| IAPMO PS 59-2016a ^{e1} | Wastewater Diverter Valves and Diversion Systems | Fittings | 1503.2.2 |
| IAPMO IGC 352-2018 | Diverter Valves for Diversion of Rainwater or Storm Water for Use in Alternate Nonpotable Water Source System | Valves | 1503.2.4 |

**TABLE 1701.2
REFERENCED STANDARDS**

| Standard Number | Standard Title | Application | Referenced Sections |
|-------------------------|---|--------------------|----------------------------|
| <u>IAPMO PS 59-2016</u> | <u>Wastewater Diverter Valves and Diversion Systems</u> | <u>Fittings</u> | |

Notation:

Authority: Health and Safety Code Sections 18928, 18930.5, 18941.8

Reference(s): Health and Safety Code Section 18941.8, Water Code Section 14877.1

ITEM 15

APPENDIX A, B, D, H, and J

BSC proposes to continue adoption of Appendix A, B, D, H, and J of the 2021 UPC without amendments into the 2022 CPC. This action is carried forward from prior cycles and there is no intended change in regulatory effect.

Notation:

Authority: Health & Safety Code Sections 18928 and 18934.5

Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

ITEM 16

APPENDIX I, IAPMO IS 31-2014

BSC proposes to continue adoption of Appendix Chapter I, IAPMO IS 31-2014 only of the 2021 UPC without amendments into the 2022 CPC, and not adopting new 2021 UPC Appendix sections IAPMO IS 26-2019e2, IAPMO IS 33-2019e1 and TCNA Handbook-2018.

IAPMO IS 31-2014

Notation:

Authority: Health & Safety Code Sections 18928 and 18934.5

Reference(s): Health & Safety Code Sections 18928, 18928.1 and 18934.5

Part 5 – California Plumbing Code

Chapters 4, 5, and 6

Chapter 1, Section 1.1.8

1.1.8 City, County, or City and County Amendments, Additions or Deletions.

[...]

1.1.8.2 Locally Adopted Energy Standards – California Energy Code, Part 6. California Energy Code Requirements for Locally Adopted Energy Standards. In addition to the provisions of Section 1.1.8.1 of this part, ~~the provisions of this section apply to cities, counties, and cities and counties amending adopted energy standards affecting buildings and structures subject to the California Energy Code, Part 6.~~ local jurisdictions that adopt changes to energy conservation or insulation standards (including energy efficiency measures) may not enforce such changes until the California Energy Commission has made the findings required by Public Resources Code Section 25402.1(h)(2), following the process specified in Section 10-106 of the California Administrative Code. ~~Applicable provisions of Public Resources Code Section 25402.1 and applicable provisions of Chapter 10 of the California Administrative Code, Part 1 apply to local amendment of energy standards adopted by the California Energy Commission.~~

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code

Chapter 4, Section 401

401.3 Water-conserving fixtures and fittings.

[...]

Note 4: Appliance Efficiency Regulations – Water Efficiency. Where California law in Title 20 Sections 1601 et seq. applying to water-using appliances sold or offered for sale within the state specifies a lower maximum flow rate than specified in Section 407.2, 408.2, or 411.2, the lower maximum flow rate shall be required.

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code

Chapter 5, Section 501

501.0 General.

[...]

501.2. California Energy Code Water Heating System Requirements. See California Energy Code Section 110.3 for additional mandatory requirements for all service water heating systems, and 150.0(n) for additional mandatory requirements for residential service water heating systems.

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code

Chapter 6, Section 609.12

609.12 Pipe Insulation.

[...]

609.12.3 California Energy Code Pipe Insulation Requirements. See California Energy Code Sections 150.0(j)2 and 120.3(c) for pipe insulation requirements based on fluid temperature and pipe diameter – for domestic hot water piping. The California Energy Code requires that piping that penetrates metal framing shall use grommets, plugs, wrapping or other insulating material to assure that no contact is made with the metal framing. The California Energy Code also requires that insulation shall abut securely against all framing members, and places conditions on when installed wall or attic insulation that surrounds installed piping can be considered to provide pipe insulation meeting requirements.

Notation:

Authority: Sections 25213, 25218, 25218.5, 25402 and 25402.1, Public Resources Code

Reference(s): Sections 25007, 25008, 25218.5, 25310, 25402, 25402.1, 25402.4, 25402.8, and 25943, Public Resources Code

APPROVED BY THE CALIFORNIA BUILDING STANDARDS COMMISSION

DECEMBER 14, 2021

**FINAL EXPRESS TERMS
FOR PROPOSED BUILDING STANDARDS
OF THE DIVISION OF THE STATE ARCHITECT-STRUCTURAL SAFETY**

**(DSA-SS AND DSA-SS/CC)
REGARDING THE 2022 CALIFORNIA PLUMBING CODE,
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 5**

(DSA-SS/CC 02/21)

The State agency shall draft the regulations in plain, straightforward language, avoiding technical terms as much as possible and using a coherent and easily readable style. The agency shall draft the regulation in plain English. A notation shall follow the express terms of each regulation listing the specific statutes authorizing the adoption and listing specific statutes being implemented, interpreted, or made specific (Government Code Section 11346.2(a)(1)).

If using assistive technology, please adjust your settings to recognize underline, strikeout, italics and ellipsis.

LEGEND for EXPRESS TERMS (Based on model codes - Parts 2, 2.5, 3, 4, 5, 9, 10)

- Model Code language appears upright
- Existing California amendments appear in *italic*
- Amended model code or new California amendments appear *underlined & italic*
- Repealed model code language appears ~~upright and in strikeout~~
- Repealed California amendments appear in ~~*italic and strikeout*~~
- Ellipsis (...) indicate existing text remains unchanged

FINAL EXPRESS TERMS

Item 1

**Chapter 1, ADMINISTRATION,
DIVISION I, CALIFORNIA ADMINISTRATION**

1.1.1 Title. *These regulations shall be known as the California Plumbing Code, may be cited as such and will be referred to herein as “this code.” The California Plumbing Code is Part 5 of thirteen parts of the official compilation and publication of the adoption, amendment, and repeal of plumbing regulations to the California Code of Regulations, Title 24, also referred to as the California Building Standards Code. This part incorporates by adoption the ~~2018~~ 2021 Uniform Plumbing Code of the International Association of Plumbing and Mechanical Officials with necessary California amendments.*

Notation: DSA-SS

Authority: Education Code Sections 17310 and 81142, and Health and Safety Code Section 16022.

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147, and Health and Safety Code Sections 16000 through 16023.

Notation: DSA-SS/CC

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

Item 2

Chapter 2, DEFINITIONS

DSA proposes to adopt Chapter 2 of the 2021 UPC with existing California amendments carried forward into the 2022 edition of the CPC.

Notation: DSA-SS

Authority: Education Code Sections 17310 and 81142, and Health and Safety Code Section 16022.

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147, and Health and Safety Code Sections 16000 through 16023.

Notation: DSA-SS/CC

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

Item 3

Chapter 3, General Regulations

DSA proposes to adopt Chapter 3 of the 2021 UPC with existing California amendments carried forward into the 2022 edition of the CPC.

Notation: DSA-SS

Authority: Education Code Sections 17310 and 81142, and Health and Safety Code Section 16022.

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147, and Health and Safety Code Sections 16000 through 16023.

Notation: DSA-SS/CC

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

Item 4

Chapter 4, Plumbing fixtures and fixture fittings

DSA proposes to adopt Chapter 4 of the 2021 UPC into the 2022 edition of the CPC with existing California amendments carried forward and additional changes.

...

422.1 Fixture Count. Plumbing fixtures shall be provided for the type of building occupancy and in the minimum number shown in Table 422.1 ~~[OSHPD 1,1R,2,3,4 & 5] and Tables 4-2 and Table 4-3.~~ The total occupant load and occupancy classification shall be determined in accordance with the *California Building Code* ~~[DSA-SS & DSA-SS/CC] or Occupant Load Factor Table A.~~ Occupancy classification not shown in Table 422.1 shall be considered separately by the Authority Having Jurisdiction.

Exception: [BSC, DSA-SS & DSA-SS/CC] Using occupancy classification, described as function of space, determine occupant load factor from Table 4-1 Occupant Load Factor, of this chapter.

...

Table 422.1 MINIMUM PLUMBING FACILITIES¹

Each building shall be provided with sanitary facilities, ... [No change to model code language]

The total occupant load shall be determined in accordance with the [BSC, DSA-SS & DSA-SS/CC] California Building Code or Table 4-1 Occupant Load Factor Table A

Chapter 4, Table 4-1

**TABLE A4-1
OCCUPANT LOAD FACTOR:
[BSC, DSA-SS and DSA-SS/CC]**

| <u>OCCUPANCY FUNCTION OF SPACE</u>^{* **} | OCCUPANT LOAD FACTOR (square feet) |
|---|---|
| <p>Group A Assembly - without fixed seats <i>Auditoriums, convention halls, dance floors, lodge rooms, stadiums, and casinos (where no fixed seating is provided)</i> <i>(Where fixed seating is provided use one-half the number of fixed seating.)</i> <u><i>Auditorium, convention and dance hall, lodge, stage, indoor sport/spectator event, worship, arcade, gaming (standing space)</i></u></p> | <p>15 <u>11</u></p> |

| <u>OCCUPANCY FUNCTION OF SPACE</u> * ** | OCCUPANT LOAD FACTOR (square feet) |
|---|--|
| 2. Conference rooms, dining rooms, drinking establishments, exhibit rooms, gymnasiums, lounges, stages, and similar uses, including restaurants classified as Group B occupancies. Waiting, terminal (portable seating space) | 30 <u>15</u> |
| 3. Worship places; principal assembly area, educational and activity unit (where no fixed seating is provided) (Where no fixed seating is provided use one-half the number of fixed seating.) Conference, dining/drinking, lounge (portable seating/table space) | 30 |
| <u>Gallery, museum, exhibit (standing space)</u> | <u>30</u> |
| <u>Assembly – with fixed seats</u> | <u>See CBC 1004.6</u> <u>Use 50% of the fixed seating value</u> |
| <u>Group B</u> <i>Office or public buildings (area accessible to the public)</i> | <u>200</u> |
| <u>Business</u> (office, sales/soliciting, administration, food processing, courtroom, ambulatory clinic) | <u>150</u> <u>See CBC 1004.8</u> |
| <u>Dormitory</u> | <u>50</u> |
| <u>Group E</u> <i>Schools for day care, elementary, secondary</i> | <u>50</u> |
| <u>Day care</u> | <u>35</u> |
| <u>Educational Facilities Other than Group E</u> <i>Colleges, universities, adult centers, etc.</i> | <u>50</u> |
| <u>Education (classroom)</u> <i>Through 12th grade</i> | <u>30</u> |
| <u>Education (classroom)</u> <i>Beyond 12th grade</i> | <u>50</u> |
| <u>Exercise (fitness)</u> | <u>50</u> |
| <u>Group F</u> <i>Workshops, foundries and similar establishments</i> | <u>2,000</u> |
| <u>Industrial</u> (fabrication, foundry, workshop, component assembly, repair) | <u>500</u> |
| <u>Group H</u> <i>Hazardous materials fabrication and storage</i> | <u>2,000</u> |
| <u>Kitchen/food prep (commercial)</u> | <u>50</u> |

| <u>OCCUPANCY FUNCTION OF SPACE</u> * ** | OCCUPANT LOAD FACTOR (square feet) |
|---|---|
| <u>Group I</u> <i>Hospital general use area, health care facilities</i> | <u>200</u> |
| <u>Laboratory</u> <i>Educational</i> | <u>50</u> |
| <u>Laboratory</u> <i>Non-educational</i> | <u>100</u> |
| <u>Library</u> | <u>50</u> |
| <u>Group M</u> <i>Retail or wholesale stores</i> | <u>200</u> |
| <u>Mercantile</u> (wholesale, retail) | <u>100</u> |
| <u>Mall building</u> (covered/open) | <u>See CBC 402.8.2</u> |
| <u>Group R</u> <i>Congregate residence, Group R-1</i> | <u>200</u> |
| <u>Residential</u> (long term: central toilet facilities) | <u>200</u> |
| <u>Group S</u> <i>Warehouse</i> | <u>5,000</u> |
| <u>Warehouse</u> <i>Storage portions</i> | <u>4000</u> |
| <u>Warehouse</u> <i>Distribution portions (selecting, processing, packing, receiving, shipping)</i> | <u>500</u> |

* Any uses not specifically listed shall be based on similar uses listed in this table.

** For a building or space with mixed occupancies, use appropriate occupancy group for each area (for example, a school may have an "A" occupancy for the gymnasium, a "B" occupancy for the office, an "E" occupancy for the classrooms, etc.). Accessory areas (for example: hallway, restroom, stair enclosure) such as, but not limited to, hallways/corridors, stairways, ramps, toilet rooms, mechanical rooms, closets and fixed equipment, may be excluded.

Notation: DSA-SS

Authority: Education Code Sections 17310 and 81142, and Health and Safety Code Section 16022.

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147, and Health and Safety Code Sections 16000 through 16023.

Notation: DSA-SS/CC

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

Item 5

Chapter 5, Water Heaters

DSA proposes to adopt Chapter 5 of the 2021 UPC with existing California amendments carried forward into the 2022 edition of the CPC.

Notation: DSA-SS

Authority: Education Code Sections 17310 and 81142, and Health and Safety Code Section 16022.

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147, and Health and Safety Code Sections 16000 through 16023.

Notation: DSA-SS/CC

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

Item 6

Chapter 6, Water Supply and Distribution

DSA proposes to adopt Chapter 6 of the 2021 UPC with existing California amendments carried forward into the 2022 edition of the CPC.

Notation: DSA-SS

Authority: Education Code Sections 17310 and 81142, and Health and Safety Code Section 16022.

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147, and Health and Safety Code Sections 16000 through 16023.

Notation: DSA-SS/CC

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

Item 7

Chapter 7, Sanitary Drainage

DSA proposes to adopt Chapter 7 of the 2021 UPC with existing California amendments carried forward into the 2022 edition of the CPC.

Notation: DSA-SS

Authority: Education Code Sections 17310 and 81142, and Health and Safety Code Section 16022.

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147, and Health and Safety Code Sections 16000 through 16023.

Notation: DSA-SS/CC

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

Item 8

Chapter 8, Indirect Waste

DSA proposes to adopt Chapter 8 of the 2021 UPC into the 2022 edition of the CPC without amendment.

Notation: DSA-SS

Authority: Education Code Sections 17310 and 81142, and Health and Safety Code Section 16022.

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147, and Health and Safety Code Sections 16000 through 16023.

Notation: DSA-SS/CC

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

Item 9

Chapter 9, Vents

DSA proposes to adopt Chapter 9 of the 2021 UPC into the 2022 edition of the CPC without amendment.

Notation: DSA-SS

Authority: Education Code Sections 17310 and 81142, and Health and Safety Code Section 16022.

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147, and Health and Safety Code Sections 16000 through 16023.

Notation: DSA-SS/CC

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

Item 10

Chapter 10, Traps and Interceptors

DSA proposes to adopt Chapter 10 of the 2021 UPC with existing California amendments carried forward into the 2022 edition of the CPC.

Notation: DSA-SS

Authority: Education Code Sections 17310 and 81142, and Health and Safety Code Section 16022.

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147, and Health and Safety Code Sections 16000 through 16023.

Notation: DSA-SS/CC

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

Item 11

Chapter 11, Storm Drainage

DSA proposes to adopt Chapter 11 of the 2021 UPC with existing California amendments carried forward into the 2022 edition of the CPC.

Notation: DSA-SS

Authority: Education Code Sections 17310 and 81142, and Health and Safety Code Section 16022

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147, and Health and Safety Code Sections 16000 through 16023.

Notation: DSA-SS/CC

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

Item 12

Chapter 12, Fuel Gas Piping

DSA proposes to adopt Chapter 12 of the 2021 UPC with existing California amendments carried forward into the 2022 edition of the CPC.

Notation: DSA-SS

Authority: Education Code Sections 17310 and 81142, and Health and Safety Code Section 16022.

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147, and Health and Safety Code Sections 16000 through 16023.

Notation: DSA-SS/CC

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

Item 13

Chapter 13 Health Care Facilities and Medical Gas and Medical Vacuum Systems, Chapter 14 Firestop Protection, Chapter 15 Alternate Water Sources for

Nonpotable Applications, and Chapter 16 Nonpotable Rainwater Catchment Systems

DSA proposes to not adopt Chapter 13 of the 2021 UPC into the 2022 CPC. This chapter is adopted by the Office of the State Fire Marshal (for fire and panic safety) and amended by the Office of Statewide Health Planning and Development.

DSA proposes to not adopt Chapter 14 of the 2021 UPC into the 2022 CPC. This is under the authority of the State Fire Marshal.

DSA proposes to not adopt Chapters 15 and 16 of the 2021 UPC. DSA did not adopt Chapters 15 and 16 in the 2018 edition of the UPC.

Notation: DSA-SS

Authority: Education Code Sections 17310 and 81142, and Health and Safety Code Section 16022.

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147, and Health and Safety Code Sections 16000 through 16023.

Notation: DSA-SS/CC

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

Item 14

Chapter 17, Referenced Standards

DSA proposes to adopt Chapter 17 of the 2021 UPC with existing California amendments carried forward into the 2022 edition of the CPC.

Notation: DSA-SS

Authority: Education Code Sections 17310 and 81142, and Health and Safety Code Section 16022.

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147, and Health and Safety Code Sections 16000 through 16023.

Notation: DSA-SS/CC

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

Item 15

Appendix A, Recommended Rules for Sizing the Water Supply System

DSA proposes to adopt Appendix A of the 2021 UPC into the 2022 edition of the CPC without amendment.

Notation: DSA-SS

Authority: Education Code Sections 17310 and 81142, and Health and Safety

Code Section 16022.

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147, and Health and Safety Code Sections 16000 through 16023.

Notation: DSA-SS/CC

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

Item 16

Appendix B, Explanatory Notes on Combination Waste and Vent Systems

DSA proposes to adopt Appendix B of the 2021 UPC into the 2022 edition of the CPC without amendment.

Notation: DSA-SS

Authority: Education Code Sections 17310 and 81142, and Health and Safety Code Section 16022.

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147, and Health and Safety Code Sections 16000 through 16023.

Notation: DSA-SS/CC

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

Item 17

Appendix C, Alternate Plumbing Systems

DSA proposes to not adopt Appendix C of the 2021 UPC into the 2022 edition of the CPC. DSA did not adopt Appendix C in the 2018 UPC.

Notation: DSA-SS

Authority: Education Code Sections 17310 and 81142, and Health and Safety Code Section 16022.

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147, Health and Safety Code Sections 16000 through 16023.

Notation: DSA-SS/CC

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

Item 18

Appendix D, Sizing Storm Water Drainage Systems

DSA proposes to adopt Appendix D of the 2021 UPC into the 2022 edition of the CPC

Notation: DSA-SS

Authority: Education Code Sections 17310 and 81142, and Health and Safety Code Section 16022.

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147, and Health and Safety Code Sections 16000 through 16023.

Notation: DSA-SS/CC

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

Item 19

Appendix E, Manufactured/Mobile Home Parks and Recreational Vehicle Parks, Appendix F, Firefighter Breathing Air Replenishment Systems, and Appendix G, Sizing of Venting Systems

DSA proposes to not adopt Appendices E, F and G of the 2021 UPC into the 2022 edition of the CPC. DSA did not adopt Appendices E, F and G in the 2018 UPC.

Notation: DSA-SS

Authority: Education Code Sections 17310 and 81142, and Health and Safety Code Section 16022.

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147, and Health and Safety Code Sections 16000 through 16023.

Notation: DSA-SS/CC

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

Item 20

Appendix H, Private Sewage Disposal Systems

DSA proposes to adopt Appendix H of the 2021 UPC into the 2022 edition of the CPC without amendment.

Notation: DSA-SS

Authority: Education Code Sections 17310 and 81142, and Health and Safety Code Section 16022.

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147, and Health and Safety Code Sections 16000 through 16023.

Notation: DSA-SS/CC

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

Item 21

Appendix I, Installation Standard for PEX Tubing Systems for Hot and Cold Water Distribution

DSA proposes to continue adoption of Appendix Chapter I, IAPMO IS 31-2014 only of the 2021 UPC without amendments into the 2022 CPC, and not adopt new 2021 UPC Appendix sections IAPMO IS 26-2019e2, IAPMO IS 33-2019e1 and TCNA Handbook-2018.

Notation: DSA-SS

Authority: Education Code Sections 17310 and 81142, and Health and Safety Code Section 16022.

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147, and Health and Safety Code Sections 16000 through 16023.

Notation: DSA-SS/CC

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

Item 22

Appendix J, Combination of Indoor and Outdoor Combustion and Ventilation Opening Design, Appendix K, Potable Rainwater Catchment Systems, Appendix L, Sustainable Practices, and Appendix M, Peak Water Demand Calculator

DSA proposes to not adopt Appendices J, K, L, and M of the 2021 UPC into the 2022 edition of the CPC. DSA did not adopt Appendices J, K, L and M in the 2018 UPC.

Notation: DSA-SS

Authority: Education Code Sections 17310 and 81142, and Health and Safety Code Section 16022.

Reference(s): Education Code Sections 17280 through 17317, and 81130 through 81147, and Health and Safety Code Sections 16000 through 16023.

Notation: DSA-SS/CC

Authority: Education Code Section 81053.

Reference(s): Education Code Sections 81052, 81053, and 81130 through 81147.

APPROVED BY THE CALIFORNIA BUILDING STANDARDS COMMISSION
DECEMBER 14, 2021

**FINAL EXPRESS TERMS
FOR PROPOSED BUILDING STANDARDS
OF THE CALIFORNIA DEPARTMENT OF WATER RESOURCES
REGARDING THE 2022 CALIFORNIA PLUMBING CODE,
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 5
(DWR 01/21)**

The State agency shall draft the regulations in plain, straightforward language, avoiding technical terms as much as possible and using a coherent and easily readable style. The agency shall draft the regulation in plain English. A notation shall follow the express terms of each regulation listing the specific statutes authorizing the adoption and listing specific statutes being implemented, interpreted, or made specific (Government Code Section 11346.2(a)(1)).

If using assistive technology, please adjust your settings to recognize underline, strikeout, italics, and ellipsis.

LEGEND for EXPRESS TERMS (Based on model codes - Parts 2, 2.5, 3, 4, 5, 9, 10)

- Model Code language appears upright
- Existing California amendments appear in *italic*
- Amended model code or new California amendments appear *underlined & italic*
- Repealed model code language appears ~~upright and in strikeout~~
- Repealed California amendments appear in ~~*italic and strikeout*~~
- Ellipsis (...) indicate existing text remains unchanged

FINAL EXPRESS TERMS

ITEM 1

**Chapter 1 – ADMINISTRATION DIVISION 1, CALIFORNIA ADMINISTRATION,
Sections 1.13.0 through 1.13.2**

DWR proposes to carry forward existing California amendments in Chapter 1, Division I from the 2019 California Plumbing Code for adoption into the 2022 edition of the California Plumbing Code (CPC):

**CHAPTER 1
ADMINISTRATION
DIVISION 1
CALIFORNIA ADMINISTRATION**

Section 1.13.0 Department of Resources (DWR).

Section 1.13.1 Application – Design standards to safely plumb buildings with both

potable and recycled water systems.

Enforcing Agency – State or local agency specified by the applicable provisions of law.

Authority Cited – Water Code Section 13557.

References – Water Code Section 13553.

Section 1.13.2 Adopting Agency Identification. *The provisions of this code applicable to buildings identified in this section will be identified in the Matrix Adoption Tables under the acronym DWR.*

[No change to existing California amendment]

Notation:

Authority: Water Code Section: 13557.

Reference: Water Code Sections: 13553.

ITEM 2

Chapter 2 DEFINITIONS

DWR proposes to carry forward existing amendments in Section 206.0 and Section 220.0 in Chapter 2 from the 2019 California Plumbing Code for adoption into the 2022 edition of the CPC.

**CHAPTER 2
DEFINITIONS**

206.0 -D-

Disinfected Tertiary Recycled Water. *[DWR] Filtered and subsequently disinfected wastewater that meets the approved method of treatment and minimum level of water quality specified in California Code of Regulations, Title 22, Division 4, Chapter 3 for the purpose of direct beneficial use. [No change to existing California amendment]*

220.0 -R-

Reclaimed (Recycled) Water. *[DWR] Nonpotable water that meets California State Water Resources Control Board statewide uniform criteria for disinfected tertiary recycled water. Reclaimed (recycled) water is also known as “recycled water” or “reclaimed water”. [No change to existing California amendment]*

Recycled Water Supply System. *[DWR] The building supply pipe, the water distribution pipes, and the necessary connecting pipes, fittings, control valves, backflow prevention devices, and all appurtenances carrying or supplying reclaimed (recycled) water in or adjacent to the building or within the premises. [No change to existing California amendment]*

Notation:

Authority: Water Code Section: 13557.

Reference(s): Water Code Sections: 13557.

ITEM 3

Chapter 6 - WATER SUPPLY AND DISTRIBUTION

DWR proposes to carry forward existing amendments in Section 601.2 and Section 601.3.3 in Chapter 6 from the 2019 California Plumbing Code for adoption into the 2022 edition of the CPC.

**CHAPTER 6
WATER SUPPLY AND DISTRIBUTION**

Section 601.2 Water Supply and Flushing. Except where not deemed necessary for safety or sanitation by the Authority Having Jurisdiction, each plumbing fixture shall be provided with an adequate supply of potable running water piped thereto in an approved manner, so arranged as to flush and keep it in a clean and sanitary condition without danger of backflow or cross-connection. Water closets and urinals shall be flushed using an approved flush tank or flushometer valve.

[No change to UPC]

Exceptions:

- (1) Listed fixtures that do not require water for their operation and are not connected to the water supply.
- (2) **[HCD 1 & HCD 2]**
- (3) **[DWR]** *For all residential occupancies, alternate water sources may be allowed as specified in Chapter 15 of this code in addition to potable water. [No change to existing California amendment]*
- (4) **[DWR]** *For non-residential occupancies, alternate water sources may be allowed as specified in Chapter 15 of this code. [No change to existing California amendment]*
- (5) **[DWR]** *Where a public agency requires a building to use recycled water to flush water closets and urinals in accordance with California Water Code 13554. [No change to existing California amendment]*

In occupancies where plumbing fixtures are installed for private use, hot water shall be required for bathing, washing, laundry, cooking purposes, dishwashing or maintenance. In occupancies where plumbing fixtures are installed for public use, hot water shall be required for bathing and washing purposes. This requirement shall not supersede the requirements for individual temperature control limitations for public lavatories and public and private bidets, bathtubs, whirlpool bathtubs, and shower control valves.

[No change to UPC]

Section 601.3.3 Alternate Water Sources

...

Exception: *[DWR] For recycled water supply systems that are within or a part of a building, the provisions of Section 1505.7 shall apply. [No change to existing California amendment]*

Notation:

Authority: Water Code Section: 13557.

Reference(s): Water Code Sections: 13554.

ITEM 4

Chapter 15 - ALTERNATE WATER SOURCES FOR NONPOTABLE APPLICATIONS, Sections 1501 through 1504

DWR proposes to adopt parts of Chapter 15 of the 2021 UPC with new amendments and carry forward existing amendments as specified into the 2022 CPC.

CHAPTER 15

ALTERNATE WATER SOURCES FOR NONPOTABLE APPLICATIONS

Section 1501.0 General.

Section 1501.1 Applicability. *[DWR] The provisions of this chapter shall apply to the construction, alteration, discharge, use and repair of alternate water source systems for nonpotable applications. [No change to existing California amendment]*

Section 1501.1.1 Allowable Use of Alternate Water. Where approved or required by the Authority Having Jurisdiction, alternate water sources [reclaimed (recycled) water, gray water, and on-site treated nonpotable gray water] shall be permitted to be used instead of potable water for the applications identified in this chapter. *[No change to existing California amendment]*

Section 1501.2 System Design. Alternate water source systems shall be designed in accordance with this chapter by a ~~licensed plumbing contractor or registered design professional~~ or licensed person who demonstrates competency to design the alternate water source system as required by the Authority Having Jurisdiction. Components, piping, and fittings used in an alternate water source system shall be listed.

Section 1501.3 Permit. *[DWR] It shall be unlawful for a person to construct, install, alter, or cause to be constructed, installed, or altered an alternate water source system in a building or on a its premises without first obtaining a permit to do such work from the Authority Having Jurisdiction. No changes or connections shall be made to either the alternate water source system or the potable water system within a site containing an alternate water source system without approval by the Authority Having Jurisdiction. [No change to existing California amendment]*

Section 1501.4 Component Identification. System components shall be properly identified as to the manufacturer. *[No change to UPC]*

Section 1501.5 Maintenance and Inspection. *[DWR] Alternate water source systems*

and components shall be inspected and maintained in accordance with *the manufacturer's recommendations and/or as required by the Authority Having Jurisdiction. [No change to existing California amendment]*

Exception: [DWR] *Recycled water supply systems that are within or a part of a building shall comply with Section 1505.15. [No change to existing California amendment]*

Section 1501.5.1 Maintenance Responsibility. The required maintenance and inspection of alternate water source systems shall be the responsibility of the property owner unless otherwise required by the Authority Having Jurisdiction. *[No change to existing California amendment]*

Section 1501.6 Operation and Maintenance Manual. [BSC-CG, HCD 1, DWR] An operation and maintenance manual for gray water, and on-site treated nonpotable water, and recycled water supply systems required to have a permit in accordance with Section 1501.3, Section 1505.2 and Section 1506.2 shall be supplied to the building owner by the system designer or installer. The operation and maintenance manual shall include the following:

- (1) Diagram(s) of the entire system and the location of system components.
- (2) Instructions on operating and maintaining the system.
- (3) Instructions on maintaining the required water quality for on-site treated nonpotable water systems.
- (4) Details on startup, shutdown, and deactivating the system for maintenance, repair, or other purposes.
- (5) Applicable testing, inspection, and maintenance frequencies in accordance with Section 1501.5 [DWR] or Section 1505.15 as applicable.
- (6) A method of contacting the installer and/or manufacturer(s).
- (7) Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure.

~~**[DWR]** An operation and maintenance manual for recycled water supply systems required to have a permit in accordance with Section 1501.3 and Section 1505.2 shall be supplied to the building owner by the system designer or installer. The operating and maintenance manual shall include the following:~~

- ~~(1) Diagram(s) of the entire system and the location of system components.~~
- ~~(2) Instructions on operating and maintaining the system.~~
- ~~(3) Details on startup, shutdown, and deactivating the system for maintenance, repair, or other purposes.~~
- ~~(4) Applicable testing, inspection, and maintenance frequencies in accordance with Section 1501.5 or Section 1503.15 as applicable.~~
- ~~(5) A method of contacting the installer and/or manufacturer(s).~~
- ~~(6) Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure.~~

Section 1501.7 Minimum Water Quality Requirements. [DWR] The minimum water quality for alternate water source systems shall meet the applicable water quality requirements for the intended application as determined by the Authority Having Jurisdiction. In the absence of water quality requirements, for on-site treated nonpotable systems, the water quality requirements of NSF 350 shall apply. ~~The EPA/625/R-04/108 contains recommended water reuse guidelines to assist regulatory agencies to develop, revise, or expand alternate water source water quality standards.~~

[No change to existing California amendment]

Exceptions:

- (1) [BSC-CG & HCD 1] Water treatment is not required for gray water used in disposal field or ...*
- (2) [DWR] Recycled water shall comply with the water quality requirements of Section 1505.14. [No change to existing California amendment]*

Section 1501.8 Material Compatibility. Alternate water source systems shall be constructed of materials that are compatible with the type of pipe and fitting materials, water treatment, and water conditions in the system. *[No change to UPC]*

Section 1501.9 Signage. *Signage for on-site treated ... [No change to existing California amendment]*

Section 1501.10 System Controls. Controls for pumps, valves, and other devices that contain mercury that come in contact with alternate water source water supply shall not be permitted. *[No change to UPC]*

Section 1502.0 Inspection and Testing.

Section 1502.1 General. Alternate water source systems shall be inspected and tested in accordance with Section 1502.2 through Section 1502.3.3, *and/or as required by the Authority Having Jurisdiction. [No change to existing California amendment]*

Exception: *[DWR] Recycled water supply systems that are within or a part of a building shall comply with Section 1505.13. [No change to existing California amendment]*

Section 1502.4 Separation Requirements.

Exception: *[DWR] Recycled water supply systems that are within or a part of a building shall comply with Section 1505.11. [No change to existing California amendment]*

Section 1502.5 Abandonment. Alternate water source systems that are no longer in use or fail to be maintained in accordance with Section 1501.5 shall be abandoned. Abandonment shall comply with Section 1502.5.1 and Section 1502.5.2. *[No change to UPC]*

Section 1502.5.1 General. An abandoned system or part thereof covered under the scope of this chapter shall be disconnected from remaining systems, drained, plugged, and capped in an approved manner. *[No change to UPC]*

Section 1502.5.2 Underground Tank. An underground water storage tank that has been abandoned or otherwise discontinued from use in a system covered under the scope of this chapter shall be completely drained and filled with earth, sand, gravel, concrete, or other approved material or removed in a manner satisfactory to the Authority Having Jurisdiction. *[No change to UPC]*

Section 1502.6 Sizing. Unless otherwise provided for in this chapter, alternate water source piping shall be sized in accordance with Chapter 6 for sizing potable water piping. *[No change to UPC]*

Section 1503.3 Connections to Potable and Reclaimed (Recycled) Water Systems. Gray water systems shall have no direct connection to a potable water supply, on-site treated nonpotable gray water supply, or reclaimed (recycled) water supply systems. *[No change to existing California amendment]*

Exceptions:

- (1) Potable *water*, on-site treated nonpotable *gray water*, or reclaimed (recycled) water, or *rainwater* is permitted to be used as makeup water for a non-pressurized storage tank provided the connection is protected by an air gap in accordance with this code. *[No change to existing California amendment]*
- (2) A *potable water supply* may be connected temporarily for the initial cross-connection test of the untreated graywater system as required in Section 1502.3.2. *[No change to existing California amendment]*

Notation:

Authority: Water Code Section: 13557.

Reference(s): Water Code Sections: 13557.

ITEM 5

Chapter 15 - ALTERNATE WATER SOURCES FOR NONPOTABLE APPLICATIONS, Section 1505.0 Reclaimed (Recycled) Water Systems.

Section 1505.1 General. The provisions of Section 1505.0 through Section 1505.15 shall apply to *safely plumb buildings with both potable and recycled water supply systems. Unless otherwise specified in this code, the general provisions applying to alternate water systems pursuant to Section 1501.0 through Section 1501.14 shall apply to recycled water supply systems. The provisions in this section encompass the installation, construction, alteration, and repair of recycled water supply systems that are within or a part of a building, including a landscape irrigation system that connects to plumbing that is within or a part of a building, and receive reclaimed (recycled) water provided by a water/wastewater utility. When dealing with recycled water supply systems, the Authority Having Jurisdiction and Enforcing Agency may include the recycled water purveyor or potable water purveyor in accordance with their respective statutory authority and responsibility as provided on their respective permits for supplying water. Plumbing systems using reclaimed (recycled) water that do not enter the interior of a building plumbed with potable water are not encompassed by this section. All reclaimed (recycled) water use, covered and not covered by this code, is subject to applicable provisions of the California Code of Regulations, Title 17, Title 22, and Title 23.*

Section 1505.1.1 Allowed Uses. *Allowed uses shall include water closets, urinals, trap primers for floor drains and floor sinks, aboveground and subsurface irrigation, industrial or commercial cooling or air conditioning and other uses as generally allowed in the California Code of Regulations, Title 22, Division 4, Chapter 3 and specifically allowed in the permit for the facility producing or supplying the reclaimed (recycled) water issued by the State Water Resources Control Board or Regional Water Quality Control Board.*

Section 1505.1.2 Structures Allowed for Toilet and Urinal Flushing. *In accordance with Water Code Section 13553, reclaimed (recycled) water shall be allowed for toilet and urinal flushing in certain structures. These structures include commercial, retail and office buildings, theaters, auditoriums, condominium projects, schools, hotels, apartments, barracks, dormitories, jails, prisons, reformatories, and other structures as determined by the State Water Resources Control Board. [No change to existing*

California amendment]

Section 1505.2 Permit. It shall be unlawful for a person to construct, install, alter, or cause to be constructed, installed, or altered a recycled water *supply* system within a building or on *its* premises without first obtaining a permit to do such work from the Authority Having Jurisdiction.

Prior to commencing the issuance of permits for recycled water supply systems pursuant to state requirements relating to recycled water, a city, county, city and county or other local agency shall seek consultation with the State Water Resources Control Board, local public health department and local recycled water purveyor to ensure that state and local public health concerns are addressed in local standards or ordinances, or in issuing permits. [No change to existing California amendment]

Section 1505.2.1 Plumbing Plan Submission. No permit for a recycled water *supply* system shall be issued until complete plumbing plans, with data satisfactory to the Authority Having Jurisdiction, have been submitted and approved. *[No change to existing California amendment]*

Section 1505.3 System Changes. No changes or connections shall be made to either the recycled water *supply* system or the potable water system within a site containing a recycled water *supply* system without approval by the Authority Having Jurisdiction. *[No change to existing California amendment]*

Section 1505.4 Connections to Potable or Recycled Water Supply Systems. Recycled water *supply* systems shall have no *direct* connection to a potable water supply or alternate water source system. *[No change to existing California amendment]*

Exceptions:

- (1) Potable water is permitted to be used as makeup water for a reclaimed (recycled) water storage tank provided the *potable* water supply inlet is protected by an air gap in accordance with this code. *[No change to existing California amendment]*
- (2) *A potable water supply may be connected temporarily for initial testing of the recycled water supply system as provided in Section 1505.13.2.2. Prior to temporarily connecting the potable line to the recycled water supply system for the initial cross-connection test purposes, the potable line must have a reduced-pressure principle backflow preventer installed. [No change to existing California amendment]*
- (3) *Reclaimed (recycled) water is permitted to be used as makeup water for an alternate water source system provided the recycled water supply system is protected by an air gap in accordance with this code. [No change to existing California amendment]*
- (4) *Upon State Water Resources Control Board's approval of a water user's changeover device, swivel ell, or other assembly that complies with the design, construction, legal and other requirements, as well as with the water user's ongoing compliance with operating, monitoring, reporting, and other periodic requirements, potable water is permitted to be used as an auxiliary water supply when there is an interruption to the reclaimed (recycled) water supply by using the changeover device, swivel ell, or other assembly.*

Section 1505.5 Initial Cross-Connection Test. A cross-connection test is required in accordance with Section 1505.13.2.2. Before the building is occupied or the system is activated, the installer shall perform *an* initial cross-connection test in the presence of

the Authority Having Jurisdiction or other authorities having jurisdiction. The test shall be ruled successful by the Authority Having Jurisdiction before final approval is granted. *[No change to existing California amendment]*

Section 1505.6 Recycled Water Supply System Materials. Recycled water supply system materials shall comply with the requirements of this code for potable water supply and distribution systems, unless otherwise provided for in this section. *[No change to existing California amendment]*

Section 1505.7 Recycled Water Supply System Color and Marking Information. *All mechanical equipment, including control valves, appurtenant to recycled water supply systems shall be painted purple or composed of purple material matching Pantone color No. 512, 522C or equivalent. Recycled water supply systems shall be identified and permanently marked with clearly visible black uppercase lettering on purple background. The identification may be accomplished by labeling metallic and non-metallic piping using purple-colored (Pantone color No. 512) adhesive Mylar PVC tape affixed along the entire length of the pipe, or using non-metallic pipe manufactured with purple (Pantone color No. 512, 522C, or equivalent) integral to the material. For either material, the tape or pipe shall be installed so the wording is clearly visible and shall be field or factory marked as follows:*

"CAUTION: NONPOTABLE RECYCLED WATER, DO NOT DRINK". [No change to existing California amendment]

Section 1505.8 Valves. Valves, except fixture supply control valves, shall be equipped with a locking feature. *[No change to UPC]*

Section 1505.8.1 Valve Seals. *The master reclaimed (recycled) water shut-off valve and/or the reclaimed (recycled) water meter curb cock and each valve within a wall shall be sealed after the recycled water supply system has been approved and placed into operation. These seals shall be either crimped lead wire seal or plastic break away seal which, if broken after system approval, shall be deemed conclusive evidence that the recycled water supply system has been accessed. The seals shall be purple, numbered, and contain the words "RECYCLED WATER", and shall be supplied by the recycled water purveyor, or by other arrangements acceptable to the Authority Having Jurisdiction. [No change to existing California amendment]*

Section 1505.8.2 Valve and Appurtenance Access Door Signs. *Each reclaimed (recycled) water valve within a wall shall have its access door into the wall equipped with a warning sign approximately 6 inches by 6 inches (152 mm x 152 mm) with wording in approximately 3/8 inch (9.5 mm) letters on a purple background. The wording text and format of the sign shall be substantially the same as that specified in Section 1505.12.3. The signs shall be attached inside the access door frame and shall hang in the center of the access door frame. This sign requirement shall be applicable to any and all access doors, hatches, etc., leading to reclaimed (recycled) water piping and appurtenances. [No change to existing California amendment]*

Section 1505.9 Hose Bibbs. Hose bibbs shall not be allowed on reclaimed (recycled) water piping systems. *Only quick couplers that differs from those installed on the potable water system shall be used on the recycled water piping system in areas subject to public access. Quick couplers supplying reclaimed (recycled) water shall be marked with the words: "CAUTION: NONPOTABLE RECYCLED WATER, DO NOT DRINK," and one of the symbols in Figure 1505.9. [No change to existing California*

amendment]

Exception: *In accordance with Health and Safety Code Section 8117 and Section 8118, hose bibbs are approved for use in cemeteries supplied with reclaimed (recycled) water. A hose bibb in an area subject to access by the general public shall be equipped with a sign marked “CAUTION: NONPOTABLE RECYCLED WATER, DO NOT DRINK,” and one of the symbols in Figure 1505.9. [No change to existing California amendment]*



FIGURE 1505.9

Section 1505.10 Required Appurtenances. The recycled water *supply* system and the potable water system within the building *and the premises* shall be provided with the required appurtenances (e.g., valves, air/vacuum relief valves, etc.) to allow for *testing* as required for a cross-connection test in accordance with Section 1505.13.2. *[No change to existing California amendment]*

Section 1505.11 Pipe Separation in Trenches. Reclaimed (recycled) water pipes shall be permitted to be run or laid in the same trench as potable water pipes with 12 inches (305 mm) minimum vertical and horizontal separation where both pipe materials are approved for use within a building. Where piping materials do not meet this requirement the minimum horizontal separation shall be increased to 48 inches (1220 mm). The potable water piping shall be installed at an elevation above the reclaimed (recycled) water piping. Reclaimed (recycled) water pipes laid in the same trench or crossing building sewer or drainage piping shall be installed in accordance with Section 609.0 and Section 720.0 of this code for water pipes. *[No change to existing California amendment]*

Section 1505.12 Signage. Signs in rooms and water closet tanks in buildings using reclaimed (recycled) water shall be in accordance with Section 1505.12.1, Section 1505.12.2, and Section 1505.12.3. *Signs on access doors to valves and appurtenances shall be in accordance with Section 1505.8.2. [No change to existing California amendment]*

Section 1505.12.1 Commercial, Industrial, Institutional, and Residential Restroom Signs. *A sign shall be installed in each restroom of commercial, industrial, and institutional occupancies, and in residential common use areas using reclaimed (recycled) water for water closets, urinals, or both. Each sign shall contain letters of a*

highly visible color on a contrasting background with a character height as specified in the California Building Code (California Code of Regulations, Title 24, Part 2), Section 1143A.5 and Section 11B-703.5. The location of the sign(s) shall be such that the sign(s) are visible to users and shall be approved by the Authority Having Jurisdiction. The sign(s) shall contain the following text:

TO CONSERVE WATER, THIS BUILDING USES RECYCLED WATER TO FLUSH TOILETS AND URINALS. [No change to existing California amendment]

Section 1505.12.2 Tank-Type Toilet Signs. *Where tank-type toilets (water closets) are flushed with recycled water, a permanent sign (such as plastic or stainless steel) shall be installed inside the tank to warn that the water within the tank is not a suitable emergency drinking water supply. The sign shall be labeled: "CAUTION: NONPOTABLE RECYCLED WATER – DO NOT DRINK. [No change to existing California amendment]*

Section 1505.12.3 Equipment Room Signs. *Each room containing reclaimed (recycled) water equipment shall have a sign posted in a location that is visible to anyone working on or near reclaimed (recycled) water equipment with the following wording in 1 inch (25.4 mm) letters on a purple background:*

CAUTION: NONPOTABLE RECYCLED WATER, DO NOT DRINK. DO NOT CONNECT TO DRINKING WATER SYSTEM. NOTICE: CONTACT BUILDING MANAGEMENT BEFORE PERFORMING ANY WORK ON THIS WATER SYSTEM. [No change to existing California amendment]

Section 1505.13 Inspection and Testing. *Recycled water supply systems shall be inspected and tested in accordance with Section 1505.13.1 and Section 1505.13.2. The reclaimed (recycled) water purveyor or other designated appointee may substitute for the Authority Having Jurisdiction for the purpose of inspections and tests pursuant to this section. [No change to existing California amendment]*

Section 1505.13.1 Supply System Inspection and Test. *Recycled water supply systems shall be inspected and tested in accordance with this code for testing of potable water piping. [No change to existing California amendment]*

Section 1505.13.2 Cross-Connection Inspection and Testing. *An initial visual inspection and an initial cross-connection test shall be performed on both the potable and recycled water supply systems before the initial operation of the recycled water supply system. During an initial or subsequent cross-connection test, the potable water system and recycled water supply system shall be isolated from each other and independently inspected and tested to ensure there is no cross-connection in accordance with Section 1505.13.2.2. Initial or subsequent inspections or tests shall be performed in accordance with Section 1505.13.2.1 through Section 1505.13.2.4. The inspection and testing shall be performed by a cross-connection control specialist who has valid certification from a certifying organization recognized by the State Water Resources Control Board.*

- (1) Written reports of cross-connection inspections and testing shall be performed as provided in California Code of Regulations, Title 22, Section 60316.*
- (2) A cross-connection test pursuant to Section 1505.13.2.2 shall be performed on the premises of a recycled water supply system when there is material reason to believe that the potable water system or recycled water supply system separation*

from another water supply has been compromised. A material reason to believe that the system has been compromised may be based on, but is not limited to, evidence gathered (a) during a visual inspection performed pursuant to Section 1505.13.2.1, (b) as a result of an inspection performed following complaints of water quality or flow conditions consistent with a compromised system, or (c) during a visual inspection that indicates that the recycled water supply system has been modified.

Section 1505.13.2.1 Visual System Inspection. *A visual dual system inspection shall be conducted by the Authority Having Jurisdiction and other authorities having jurisdiction to verify that no modifications were made, and that no cross-connections are visible as follows:*

- (1) Meter locations of the reclaimed (recycled) water source and potable water lines shall be checked.*
- (2) All pumps and equipment, equipment room signs, and exposed piping in equipment room shall be checked.*
- (3) All valves shall be checked to ensure that the value lock seals are still in place and intact. Value control door signs shall be checked to verify that no signs have been removed.*

[No change to existing California amendment]

Section 1505.13.2.2 Cross-Connection Test. *A cross-connection test shall be performed pursuant to Section 1505.13.2. The test shall be conducted in the presence of the Authority Having Jurisdiction or other authorities having jurisdiction to determine whether a cross connection has occurred as follows:*

- (1) The potable water system shall be activated and pressurized. The recycled water supply system shall be shut down, depressurized, and drained.*
- (2) The potable water system shall remain pressurized for a minimum period of time specified by the Authority Having Jurisdiction while the recycled water supply system is empty. The minimum period the recycled water supply system is to remain depressurized shall be determined on a case-by-case basis, taking into account the size and complexity of the potable and the recycled water supply systems, but in no case shall that period be less than 1 hour.*
- (3) All fixtures, potable and reclaimed (recycled) water source, shall be tested and inspected for flow. Flow from a recycled water supply system outlet indicates a cross-connection. No flow from a potable water outlet shall indicate that it is connected to the recycled water supply system.*
- (4) The drain on the recycled water supply system shall be checked for flow during the test and at the end of the test.*
- (5) The potable water system shall then be depressurized and drained.*
- (6) The recycled water supply system shall then be activated and pressurized. For the initial cross-connection test, a temporary connection to a potable water supply shall be required to test the recycled water supply system plumbing. At the conclusion of the initial cross-connection test, the temporary connection to the potable water supply shall be disconnected.*
- (7) The recycled water supply system shall remain pressurized for a minimum period of time specified by the Authority Having Jurisdiction while the potable water system is empty. The minimum period the potable water system is to remain depressurized shall be determined on a case-by-case basis, but in no case shall*

that period be less than 1 hour.

- (8) All fixtures, potable and reclaimed (recycled) water, shall be tested and inspected for flow. Flow from a potable water system outlet indicates a cross-connection. No flow from a recycled water supply system outlet will indicate that it is connected to the potable water system.*
- (9) The drain on the potable water system shall be checked for flow during the test and at the end of the test.*
- (10) Where there is no flow detected in the fixtures that would indicate a cross-connection, the potable water system shall be repressurized.*

Where shutting off the water is not practical for residential, institutional, or industrial buildings, the Authority Having Jurisdiction may authorize testing procedures other than those described above.

[No change to existing California amendment]

Section 1505.13.2.3 Discovery of Cross-Connection. *In the event that a cross-connection is discovered, the following procedure shall be activated immediately:*

- (1) Notify the Authority Having Jurisdiction of the cross-connection.*
- (2) The reclaimed (recycled) water piping to the building and its premises shall be shut down at the meter, and the reclaimed (recycled) water riser shall be drained.*
- (3) Potable water piping to the building and its premises shall be shut down at the meter.*
- (4) The cross-connection shall be uncovered and disconnected.*
- (5) The building and its premises shall be retested in accordance with Section 1505.13.2.1 and Section 1505.13.2.2.*
- (6) The potable water system shall be chlorinated with 50 parts-per-million (ppm) chlorine for 24 hours.*
- (7) The potable water system shall be flushed after 24 hours, and a standard bacteriological test shall be performed. Where test results are acceptable, the potable water system shall be permitted to be recharged.*

[No change to existing California amendment]

Section 1505.13.2.4 Periodic Inspection. *Periodic visual inspections of recycled water supply systems shall be required by the recycled water supplier or designee following the procedures in Section 1505.13.2.1. Pursuant to California Code of Regulations, Title 22, Section 60316, annual visual inspections shall be required for recycled water supply systems that are within or a part of a building. [No change to existing California amendment]*

Section 1505.14 Minimum Water Quality Requirements for Reclaimed (Recycled) Water. *The minimum water quality for reclaimed (recycled) water shall meet the applicable water quality requirements of California Code of Regulations, Title 22, Division 4, Chapter 3 (commencing with Section 60301) for disinfected tertiary recycled water and the applicable reclaimed (recycled) water use. The reclaimed (recycled) water supplier shall supply water in accordance with permits issued by the State Water Resources Control Board or Regional Water Quality Control Board. [No change to existing California amendment]*

Section 1505.15 Maintenance and Inspection. *Recycled water supply systems and*

components shall be inspected and maintained in accordance with the manufacturer's recommendations and/or as required by the Authority Having Jurisdiction. The frequency of testing, inspection, and maintenance shall be in accordance with Table 1505.15. The required inspection and maintenance shall be the responsibility of the property owner, unless otherwise required by the Authority Having Jurisdiction.

[No change to existing California amendment]

TABLE 1505.15

MINIMUM RECLAIMED (RECYCLED) WATER SOURCE TESTING, INSPECTION, AND MAINTENANCE FREQUENCY

| DESCRIPTION | MINIMUM FREQUENCY* |
|--|---|
| <i>Inspect and clean filters and screens, and replace (where necessary).</i> | <i>Every 3 months.</i> |
| <i>Inspect pumps and verify operation.</i> | <i>After initial installation and every 12 months thereafter.</i> |
| <i>Inspect valves and verify operation.</i> | <i>After initial installation and every 12 months thereafter.</i> |
| <i>Inspect pressure tanks and verify operation.</i> | <i>After initial installation and every 12 months thereafter.</i> |
| <i>Clear debris from and inspect storage tanks, locking devices, and verify operation.</i> | <i>After initial installation and every 12 months thereafter.</i> |
| <i>Inspect caution labels and marking.</i> | <i>After initial installation and every 12 months thereafter.</i> |

** Note: Frequency is as described in this table, or more frequently as required by manufacturer's instructions and/or the Authority Having Jurisdiction.*

[No change to existing California amendment]

ITEM 6

Chapter 15 - ALTERNATE WATER SOURCES FOR NONPOTABLE APPLICATIONS, DWR proposes to carry forward existing amendments from the 2019 CPC as shown in the Express Terms for adoption into the 2022 edition of the CPC.

Section 1506.0 On-Site Treated Nonpotable Gray Water Systems.

Section 1506.4 Connections to Potable or Reclaimed (Recycled) Water Systems.

On-site treated nonpotable *gray* water systems shall have no *direct* connection to a potable water supply or recycled water *supply* system. *[No change to existing California amendment]*

Exceptions:

- (1) Potable or reclaimed (recycled) water is permitted to be used as makeup water

for a non-pressurized storage tank provided the makeup water supply *inlet* is protected by an air gap in accordance with this code. *[No change to existing California amendment]*

- (2) *A potable water supply may be connected temporarily for the initial cross-connection test of the on-site treated nonpotable gray water system as provided in Section 1502.3.2. [No change to existing California amendment]*

Notation:

Authority: Water Code Section: 13557.

Reference(s): Water Code Sections: 13551, 13552.2, 13552.4, 13552.6, 13552.8, 13553, 13554, 13555.3, 13557. Health and Safety Code Sections: 8117, 8118.

ITEM 7

Chapter 16 - NONPOTABLE RAINWATER CATCHMENT SYSTEMS,

DWR proposes to adopt the following section in Chapter 16 of the 2021 UPC with amendments as follows:

Section 1602.0 Nonpotable Rainwater Catchment Systems.

Section 1602.4 Connections to Potable or Reclaimed (Recycled) Water Systems.

Rainwater catchment systems shall have no direct connection to a potable water supply, or alternate water source system.

Exceptions:

- (1) Potable water, on site treated nonpotable gray water, or reclaimed (recycled) water is permitted to be used as makeup water for a rainwater catchment system provided the ~~potable or reclaimed (recycled) water supply~~ connection is protected by an air gap ~~or reduced-pressure principle backflow preventer~~ in accordance with this code.
- (2) A potable water supply may be connected temporarily for the initial cross-connection test of the rainwater catchment system as required in Section 1605.3.2.

Notation:

Authority: Water Code Section: 13557.

Reference(s): Water Code Sections: 13557.

APPROVED BY THE CALIFORNIA BUILDING STANDARDS COMMISSION

DECEMBER 14, 2021

**FINAL EXPRESS TERMS
FOR PROPOSED BUILDING STANDARDS OF THE
CALIFORNIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
REGARDING THE 2022 CALIFORNIA PLUMBING CODE,
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 5
(HCD 02/21)**

The State agency shall draft the regulations in plain, straightforward language, avoiding technical terms as much as possible and using a coherent and easily readable style. The agency shall draft the regulation in plain English. A notation shall follow the express terms of each regulation listing the specific statutes authorizing the adoption and listing specific statutes being implemented, interpreted, or made specific (Government Code Section 11346.2(a)(1)).

If using assistive technology, please adjust your settings to recognize underline, strikeout, italic and ellipsis.

LEGEND for EXPRESS TERMS

- Model Code language appears upright
 - Existing California amendments appear in *italic*
 - Amended model code or new California amendments appear *underlined & italic*
 - Repealed model code language appears ~~upright and in strikeout~~
 - Repealed California amendments appear in ~~*italic and strikeout*~~
 - Ellipsis (...) indicate existing text remains unchanged
-

SUMMARY OF REGULATORY ACTION

HCD PROPOSES TO:

- Repeal the 2018 edition of the Uniform Plumbing Code (UPC)
 - Repeal the 2019 edition of the California Plumbing Code (CPC), including existing California amendments to the model code that are no longer necessary
 - Adopt sections from the 2021 UPC into the 2022 CPC **without amendments**
 - Adopt sections from the 2021 UPC into the 2022 CPC **with existing amendments**
 - Bring forward existing California amendments from the 2019 CPC for adoption into the 2022 CPC **without modifications**
 - Bring forward existing California amendments from the 2019 CPC for adoption into the 2022 CPC **with nonsubstantive editorial modifications**
 - Adopt sections from the 2021 UPC into the 2022 CPC **with new amendments**
-

FINAL EXPRESS TERMS

Item 1: HCD proposes to bring forward existing California amendments in Chapter 1, Division 1, Sections 1.1 and 1.8, from the 2019 California Plumbing Code (CPC) for adoption into the 2022 CPC with modifications as follows:

Note: Chapter 1, Division I, is comprised entirely of California amendments. Therefore, only detailed text for changes, repeals and new amendments are shown.

CHAPTER 1 ADMINISTRATION DIVISION I CALIFORNIA ADMINISTRATION

1.1.0 General.

1.1.1 Title. *These regulations shall be known as the California Plumbing Code, may be cited as such and will be referred to herein as “this code.” The California Plumbing Code is Part 5 of thirteen parts of the official compilation and publication of the adoption, amendment, and repeal of plumbing regulations to the California Code of Regulations, Title 24, also referred to as the California Building Standards Code. This part incorporates by adoption the ~~2018~~ 2021 Uniform Plumbing Code of the International Association of Plumbing and Mechanical Officials with necessary California amendments.*

1.1.2 Purpose. *The purpose ...*

1.1.3 Scope. *The provisions ...*

1.1.3.1 Non-State-Regulated Buildings, Structures, and Applications. *Except as ...*

1.1.3.2 State-Regulated Buildings, Structures, and Applications. *The model ...*

1.1.4 Appendices. *Provisions contained ...*

1.1.5 Referenced Codes. *The codes, ...*

1.1.6 Non-Building Standards, Orders, and Regulations. *Requirements contained ...*

1.1.7 Order of Precedence and Use.

1.1.7.1 Differences. *In the event ...*

1.1.7.2 Specific Provisions. *Where a specific ...*

1.1.7.3 Conflicts. *When the requirements ...*

1.1.7.3.1 Detached One- and Two-Family Dwellings. *Detached ~~one- and one- and~~ two-family dwellings, efficiency dwelling units, lodging houses, live/work units, townhouses not more than three stories above grade plane in height with a separate*

means of egress, and their accessory structures, shall not be required to comply with the California Residential Code if constructed in accordance with the California Building Code.

1.1.8 City, County, or City and County Amendments, Additions or Deletions. *The provisions ...*

1.1.8.1 Findings and Filings. *...*

1 and 2 (No change to existing California amendment.)

3. Findings prepared by fire protection districts shall be ratified by the local city, county, or city and county and filed with the California Department of Housing and Community Development, Division of Codes and Standards, P.O. Box 278180, Sacramento, CA 95827-8180 or 9342 Tech Center Dr. Drive, Suite 500, Sacramento, CA 95826-2582.

1.1.8.2 Locally Adopted Energy Standards – California Energy Code, Part 6. *In addition ...*

1.1.9 Effective Date of this Code. *Only those ...*

Exceptions:

(1) [HCD 1 & HCD 2] Retroactive permits *...*

(2) [HCD 1 & HCD 2] Plans approved by the Department of Housing and Community Development or a Department-approved design approval agency for factory-built housing as defined by Health and Safety Code Section 19971. *Approved plans, pursuant to the California Code of Regulations, Title 25, Division 1, Chapter 3, Subchapter 1, Article 3, Section ~~3048~~ 3037 remain valid for a period of 36 months from the date of plan approval.*

1.1.10 Availability of Codes. *At least one ...*

1.1.11 Format. *This part ...*

1.1.12 Validity. *If any ...*

1.8.0 Department of Housing and Community Development. (HCD)

1.8.1 Purpose. *The purpose of ...*

1.8.2 Authority and Abbreviations.

1.8.2.1 General. *The Department of ...*

1.8.2.1.1 Housing Construction.

Application - Hotels, ...

Enforcing Agency - Local building department or the Department of Housing and Community Development.

Authority Cited: Health and Safety Code Sections 17040, ~~47050~~, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17922.15, 17926, 17927, 17928, 17958.12, ~~48300~~, ~~18552~~, ~~18554~~, ~~18620~~, ~~18630~~, ~~18640~~, ~~18670~~, ~~18690~~, ~~18691~~, ~~18865~~, ~~18871.3~~, ~~18871.4~~, ~~18873~~, ~~18873.1 through 18873.5~~, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.6, 18941, 19890, 19891, 19892 and 19960 through 19997; Civil Code Sections 832, 1101.4, 1101.5 and 1954.201, 1954.202 and 5551; and Government Code Sections 8698.4, 12955.1 and 12955.1.1. California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

1.8.2.1.2 Housing Accessibility.

Application – Covered multifamily dwellings ...

Enforcing Agency—Local building department or the Department of Housing and Community Development.

Authority Cited: Health and Safety Code Sections 17040, ~~47050~~, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 17958.12, ~~48300~~, ~~18552~~, ~~18554~~, ~~18620~~, ~~18630~~, ~~18640~~, ~~18670~~, ~~18690~~, ~~18691~~, ~~18865~~, ~~18871.3~~, ~~18871.4~~, ~~18873~~, ~~18873.1 through 18873.5~~, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.6, 18941, and 19960 through 19997; Civil Code Sections 1101.4, 1101.5 and 1954.201 and 1954.202; and Government Code Sections 12955.1 and 12955.1.1. California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

1.8.2.1.3 Permanent Buildings in Mobilehome Parks and Special Occupancy Parks.

Application - Permanent buildings, ...

Enforcing Agency – The Department of ...

Authority Cited: Health and Safety Code Sections 17040, ~~47050~~, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17922.15, 17926, 17927, 17928, 17958.12, ~~48300~~, ~~18552~~, ~~18554~~, ~~18620~~, ~~18630~~, ~~18640~~, ~~18670~~, ~~18690~~, ~~18691~~, ~~18865~~, ~~18871.3~~, ~~18871.4~~, ~~18873~~, ~~18873.1 through 18873.5~~, 18938.3, 18944.11, and 19990; and Government Code Section 12955.1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.6, 18941, 19890, 19891, 19892 and 19960 through 19997; Civil Code Sections 1101.4, 1101.5 and 1954.201; and Government Code Sections 12955.1 and 12955.1.1. California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607; and Title 25, Sections 1042 and 2042.

1.8.3 Local Enforcing Agency.

1.8.3.1 Duties and Powers. *The building department ...*

1.8.3.2 Laws, Rules, and Regulations. *Other than ...*

1.8.3.2.1 State Housing Law. *Refer to ...*

1.8.3.2.2 Mobilehome Parks Act. *Refer to ...*

Exception: *Mobilehome parks ...*

1.8.3.2.3 Special Occupancy Parks Act. *Refer to ...*

Exception: *Special occupancy parks ...*

1.8.3.2.4 Employee Housing Act. *Refer to ...*

1.8.3.2.5 Factory-Built Housing Law. *Refer to ...*

1.8.4 Permits, Fees, Applications, and Inspections.

1.8.4.1 Permits. *A written construction permit ...*

Exceptions:

1 through 3 (No change to existing California amendments.)

1.8.4.2 Fees. *Subject to ...*

1.8.4.3 Plan Review and Time Limitations. *Subject to ...*

1.8.4.3.1 Retention of Plans. *The building department ...*

Exceptions:

1 through 4 (No change to existing California amendments.)

1.8.4.4 Inspections. *Construction or work ...*

1.8.5 Right of Entry for Enforcement.

1.8.5.1 General. *Subject to ...*

1.8.6 Local Modification by Ordinance or Regulation.

1.8.6.1 General. *Subject to ...*

1.8.6.2 Findings, Filings, and Rejections of Local Modifications. *Prior to ...*

1.8.7 Alternate Materials, Designs, Tests, and Methods of Construction.

1.8.7.1 General. *The provisions ...*

1.8.7.2 Local Building Departments. *The building department ...*

1.8.7.2.1 Approval of Alternates. *The consideration ...*

1.8.7.3 Department of Housing and Community Development. *The Department ...*

1.8.8 Appeals Board.

1.8.8.1 General. *Every city, county, or city and county ...*

1.8.8.2 Definitions. *The following terms shall for the purposes of this section have the meaning shown.*

Housing Appeals Board. *The board or agency ...*

Local Appeals Board. *The board or agency ...*

1.8.8.3 Appeals. *Except as otherwise provided ...*

1.8.9 Unsafe Buildings or Structures.

1.8.9.1 Authority to Enforce. *Subject to ...*

1.8.9.2 Actions and Proceedings. *Subject to ...*

1.8.10 Other Building Regulations.

1.8.10.1 Existing Structures. *Notwithstanding other ...*

1.8.10.2 Moved Structures. *Subject to ...*

Authority cited: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.6, 17921.10, 17922, 17922.6, 17922.12, 17922.14, 17926, 17927, 17928, 17958.12, 18552, 18554, 18620, 18630, 18640, 18670, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1 through 18873.5, 18938.3, and 19990; and Government Code Sections 12955.1 and 12855.1,1.

Reference: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.6, 18941, 18941.5, 19890, 19891, 19892 and 19960 through 19997; Civil Code Sections 1101.4, 1101.5, 1954.201, 1954.202 and 5551; and Government Code Sections 8698.4, 12955.1, 12955.1.1 and 65852.2. California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 2: HCD proposes to adopt Chapter 1, Division II, Section 104.2 (Items 1 and 2), from the 2021 Uniform Plumbing Code (UPC) into the 2022 CPC without amendments:

**DIVISION II
ADMINISTRATION**

104.2 Exempt Work. (No change to model code text.)

A permit shall not be required for the following:

- (1) The stopping of leaks ...
- (2) The clearing of stoppages ...

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 3: HCD proposes to adopt Chapter 2 from the 2021 UPC into the 2022 CPC with new and existing amendments as follows:

**CHAPTER 2
DEFINITIONS.**

203.0 --A--

Accessory Dwelling Unit. [**HCD 1 & HCD 2**] *An attached or detached residential dwelling unit ...* (No change to existing California amendment.)

Alternate Water Source. Nonpotable source of water that includes but is not limited to gray water, on-site treated non-potable water, on-site treated nonpotable gray water, rainwater, and reclaimed (recycled) water.

~~**Alternate Water Source.** Nonpotable source of water that includes but is not limited to gray water, on-site treated non-potable gray water, rainwater, and reclaimed (recycled) water. (Repealing California amendment definition; adopting model code with amendments.)~~

Approved. Acceptable to the Authority Having Jurisdiction.

Exception: [**HCD 1 & HCD 2**] *“Approved” means ...* (No change to existing California amendment.)

Notes: 1 through 5 (No change to existing California amendment.)

Approved Testing Agency. An organization ... (No change to model code text.)

[HCD 1 & HCD 2] *“Approved Testing Agency” is ...* (No change to existing California amendment.)

Authority Having Jurisdiction. The organization, office, or individual ... (No change to model code text.)

[HCD 1 & HCD 2] *“Authority Having Jurisdiction” shall mean “Enforcing Agency” as defined in Section 207.0 of this code.* (No change to existing California amendment.)

204.0 -- B --

Building. A structure built, ... (No change to model code text.)

Exceptions: **[HCD 1 & HCD 2]** *“BUILDING” shall not include ...* (No change to existing California amendment.)

205.0 -- C --

Clothes Washer System [HCD 1]. *A gray water system utilizing only a single domestic clothes washing machine in a one- or two-family dwelling.*

Complex System [HCD 1]. *Gray water systems ...* (No change to existing California amendment.)

Covered Multifamily Dwellings [HCD 1-AC]. *See Section 1.8.2.1.2.* (No change to existing California amendment.)

206.0 -- D --

Department [HCD 1, HCD 2 and HCD 1-AC]. *“Department” means the Department of Housing and Community Development.* (No change to existing California amendment.)

Department Having Jurisdiction. The Authority Having Jurisdiction, ... (No change to model code text.)

[HCD 1 & HCD 2] *“Department Having Jurisdiction” shall mean ...* (No change to existing California amendment.)

Disposal Field [HCD 1]. *An intended destination ...* (No change to existing California amendment.)

207.0 -- E --

Enforcing Agency [HCD 1, HCD 2, and HCD 1-AC]. *“Enforcing Agency” is ...* (No change to existing California amendment.)

209.0 --G --

~~**Gray Water.** Untreated wastewater ...~~ (Model code text not adopted.)

Graywater [HCD 1]. Pursuant to Health and Safety Code ... (No change to existing California amendment.)

~~**Gray Water Diverter Valve.** A valve that directs gray water to the sanitary drainage system or a subsurface irrigation system. (Model code text not adopted.)~~

Gray Water System [HCD 1]. A system designed ... (No change to existing California amendment.)

211.0 – I. --

Irrigation Field [HCD 1]. An intended destination ... (No change to existing California amendment.)

214.0 -- L --

Labeled. Equipment or materials ... (No change to model code text.)

[HCD 1 & HCD 2] “Labeled” means ... (No change to existing California amendment.)

Lavatory [HCD 1 & HCD 2]. “Lavatory” shall mean ... (No change to existing California amendment.)

Limited-Density Owner-Built Rural Dwelling [HCD 1]. “Limited-density owner-built rural dwelling” shall mean ... (No change to existing California amendment.)

Listed [HCD 1 & HCD 2]. “Listed” means ... (No change to existing California amendment.)

Listing Agency. An agency ... (No change to model code text.)

[HCD 1 & HCD 2] “Listing Agency” means ... (No change to existing California amendment.)

Low VOC Cement [HCD 1 & HCD 2]. Cement with ... (No change to existing California amendment.)

Low VOC One-Step Cement [HCD 1 & HCD 2]. Listed solvent cements ... (No change to existing California amendment.)

Low VOC Primer [HCD 1 & HCD 2]. Primer with ... (No change to existing California amendment.)

215.0 – M --

Meter. An instrument ... (No change to existing California amendment.)

~~**Mulch Basin.** A subsurface catchment area ... (Model code text not adopted.)~~

Mulch Basin [HCD 1]. A subsurface type of ... (No change to existing California amendment.)

216.0 – N --

Nonwater Supplied Urinal [HCD 1]. A plumbing fixture ... (No change to existing California amendment.)

Nuisance. Includes, but is not limited to: (No change to model code text.)

[HCD 1 & HCD 2] “Nuisance” shall mean ... (No change to existing California amendment.)

217.0 -- O --

~~**On-Site Treated Nonpotable Water.**~~ Nonpotable water, ... (Model code text not adopted.)

On-Site Treated Nonpotable Water [HCD 1]. Nonpotable water ... (No change to existing California amendment.)

220.0 – R --

~~**Rainwater.**~~ Natural precipitation ... (Model code text not adopted.)

Rainwater [HCD 1]. Precipitation on ... (No change to existing California amendment.)

~~**Rainwater Catchment System.**~~ A system ... (Model code text not adopted.)

Rainwater Catchment System [HCD 1]. A facility designed ... (No change to existing California amendment.)

Receiving Landscape [HCD 1]. Includes features ... (No change to existing California amendment.)

~~**Reclaimed Water.**~~ Nonpotable water ... (Model code text not adopted.)

Reclaimed (Recycled) Water. [HCD 1] Nonpotable water ... (No change to existing California amendment.)

221.0 -- S --

Simple System [HCD 1]. A gray water system ... (No change to existing California amendment.)

~~**Single Family Dwelling.**~~ A building designed ... (Model code text not adopted.)

Submeter. [HCD 1] A secondary device beyond a meter that measures water consumption of an individual rental unit within a multiunit residential structure or mixed-use residential and commercial structure. (See Civil Code Section 1954.202(g) and Water Code Section 517 for additional details.) (No change to existing California amendment.)

222.0 -- T --

Testing Agency [HCD 1]. See “Approved Testing Agency”. (No change to existing California amendment.)

Treated Gray Water [HCD 1]. Nonpotable water ... (No change to existing California amendment.)

223.0 -- U --

UPC [HCD 1]. “UPC” is ... (No change to existing California amendment.)

225.0 -- W --

Water Closet [HCD 1]. “Water Closet” is a ... (No change to existing California amendment.)

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 4: HCD proposes to adopt Chapter 3 (except Sections 301.3.1, 301.3.1.1 and 301.3.1.2), from the 2021 UPC into the 2022 CPC, with new and existing amendments as follows:

**CHAPTER 3
GENERAL REGULATIONS**

301.0 General.

301.3 Alternate Materials and Methods of Construction Equivalency. Nothing in this code ... purpose. **[HCD 1]** (See Section 1.8.7). (No change to existing California amendment.)

However, the exercise of ...

301.3.1 Testing. (Not adopted by HCD)

301.3.1.1 Tests. (Not adopted by HCD)

301.3.1.2 Request by Authority Having Jurisdiction. (Not adopted by HCD)

301.4 Flood Hazard Areas. (No change to model code text.)

301.4.1 Coastal High Hazard Areas. Plumbing systems ... (No change to existing California amendment.)

301.6 One- and Two-Family Dwellings. [HCD 1] *The provisions contained in this code shall not apply to one- and two-family dwelling private sewage disposal systems and minimum plumbing facilities when alternate facilities or installations have been approved by the local health authority, provided that such alternative facilities or installations provide substantially equivalent or greater protection to health and safety.*

303.0 Disposal of Liquid Waste.

303.1 General. It shall be unlawful ... (No change to model code text.)

Exception: [HCD 1] *Limited-density ...* (No change to existing California amendment.)

304.0 Connections to Plumbing System Required.

304.1 General. Plumbing fixtures, ... (No change to model code text.)

Exception: [HCD 1] *Limited-density ...* (No change to existing California amendment.)

311.0 Independent Systems.

311.1 General. The drainage system ...

Exception: Where one building ... (No change to model code text.)

Note: *Accessory dwelling units ...* (No change to existing California amendment.)

312.0 Protection of Piping, Materials, and Structures.

312.2 Installation. Piping in connection ... (No change to existing California amendment.)

312.7 Fire-Resistant Construction. Piping penetrations ... (No change to existing California amendment.)

312.11 Structural Members. A structural member ... (No change to existing California amendment.)

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 5: HCD proposes to adopt Chapter 4 (except Sections 422.2, 422.4 and 422.5) from the 2021 UPC into the 2022 CPC with new and existing amendments as follows:

CHAPTER 4 PLUMBING FIXTURES AND FIXTURE FITTINGS

401.0 General.

401.3 Water-Conserving Fixtures and Fittings. [HCD 1] *All noncompliant plumbing ...* (No change to existing California amendment.)

403.0 Accessible Plumbing Facilities.

403.1 General. Where accessible facilities ... **[HCD 1-AC]** *For specific requirements regarding ...* (No change to existing California amendment.)

403.2 Fixtures and Fixture Fittings for Persons with Disabilities. Plumbing fixtures and fixture fittings ... (No change to existing California amendments.)

403.3 Exposed Pipes and Surfaces. Water supply ... **[HCD 1-AC]** *Specific requirements ...* (No change to existing California amendment.)

407.0 Lavatories.

407.2 Water Consumption. The maximum water flow ... (No change to existing California amendments.)

407.2.1 ~~Maximum Flow Rate Public Lavatory Faucets.~~ The maximum flow ... (No change to existing California amendments.)

407.2.2 Residential Lavatory Faucets. [HCD 1] *The maximum flow rate ...* (No change to existing California amendment.)

407.2.3 Lavatory Faucets in Common and Public Use Areas. [HCD 1 & HCD 2] *The maximum flow rate ...* (No change to existing California amendment.)

407.2.4 ~~407.2.2~~ Metering Faucets. Metering faucets shall ... (No change to existing California amendments.)

408.0 Showers.

408.2 Water Consumption. Showerheads shall have ... **[HCD 1]** *Residential showerheads ...* (No change to existing California amendments.)

408.5 Finished Curb or Threshold. Where a shower receptor ... (No change to existing California amendment.)

408.6 Shower Compartments. Shower compartments ... (No change to model code text.)

Exceptions:

(1) Showers that are designed ... (No change to existing California amendments.)

(2) The minimum ... (No change to model code text.)

411.0 Water Closets.

411.2 Water Consumption. *The effective flush* ... (No change to existing California amendment.)

411.2.2 Flushometer Valve Activated Water Closets. Flushometer valve ... (No change to existing California amendments.)

411.2.3 Performance [HCD 1 & HCD 2]. *Water closets installed* ... (No change to existing California amendment.)

412.0 Urinals.

412.1 Application. Urinals shall ... (No change to existing California amendment.)

~~412.1.1~~ **412.1.3 Nonwater Urinals.** Nonwater urinals ... (No change to existing California amendment.)

~~412.1.2~~ **412.1.4 Nonwater Urinals with Drain Cleansing Action.** Nonwater urinals with ...

415.0 Drinking Fountains.

415.1 Application. Drinking fountains shall ... **[HCD 1]** *Drinking fountains shall* ... (No change to existing California amendment.)

420.0 Sinks.

420.2.2 Kitchen Faucets. [HCD 1] *The maximum flow* ... (No change to existing California amendment.)

420.3 Pre-Rinse Spray Valve. Commercial food service ... (No change to model code text.)

420.3.1 Pre-Rinse Spray Valves. [HCD 1 & HCD 2] *When installed,* ... (No change to existing California amendment.)

FOR REFERENCE ONLY: *The following table ...*

Table H-2

Standards for Commercial Pre-rinse Spray Valves Manufactured On or After January 28, 2019 ... (No change to California amendment table.)

422.0 Minimum Number of Required Fixtures.

TABLE 422.1

MINIMUM PLUMBING FACILITIES¹

Each building shall ... (No change to existing California amendment.)

For requirements for persons ... (No change to existing California amendment.)

Exceptions: 1 and 2 (No change to existing California amendments.)

.... (No Changes to Table)

Notes: ...

7.[HCD 1 & HCD 2] *In accordance with ...* (No change to existing California amendment.)

422.2 Separate Facilities. Separate toilet facilities shall be provided for each sex. (**Not adopted by HCD**)

Exceptions: ...

422.2.1 Single Use Toilet Facilities. Single use ...

422.2.2 Family or Assisted-Use Toilet Facilities. Where a separate ...

422.4 Toilet Facilities Serving Employees and Customers. (**Not adopted by HCD**)
Each building ...

422.4.1 Access to Toilet Facilities. In multi-story ...

422.5 Toilet Facilities for Workers. (**Not adopted by HCD**) Toilet facilities shall ...

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 6: HCD proposes to adopt Chapter 5 from the 2021 UPC into the 2022 CPC with existing amendments as follows:

CHAPTER 5 WATER HEATERS

507.0 Appliance and Equipment Installation Requirements.

507.2 Seismic Provisions. Water heaters shall ... (No change to model code text.)

Note: [HCD 1 & HCD 2] Reference Health and Safety Code ... (No change to existing California amendment.)

Note: The applicable subsection ... (No change to existing California amendment.)

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 7: HCD proposes to adopt Chapter 6 (except Section 609.11) from the 2021 UPC into the 2022 CPC with new and existing amendments as follows:

CHAPTER 6 WATER SUPPLY AND DISTRIBUTION

601.0 General.

601.2 Water Supply and Flushing. Each plumbing fixture ... (No change to model code text.)

Exceptions:

- (1) Listed fixtures ... (No change to model code text.)
- (2) Where not deemed ... (No change to model code text.)

~~(2)~~(3) **[HCD 1 & HCD 2]** For limited-density ... (No change to existing California amendment except renumbering.)

~~(3)~~(4) **[HCD 1 & HCD 2]** For all residential occupancies... (No change to existing California amendment except renumbering.)

601.2.1 Submeters. [HCD 1] Submeters (or meters) ... (No change to existing California amendment.)

Exemptions:

1 through 5 (No change to existing California amendment.)

601.2.1.1 Approved Submeters. [HCD 1] Submeters (or meters) shall ... (No change to existing California amendment.)

~~601.2.2~~ **601.2.1.2 Submeter Testing. [HCD 1]** Submeter (or meter) testing ... (No change to existing California amendment except for renumbering.)

~~601.2.4~~ **601.2.2 Hot and Cold Water Required.** In occupancies where ... (No change to model code text except for renumbering.)

601.3 Identification of a Potable and Nonpotable Water System. (No change to text)

601.3.2 Color and Information. Each system shall be identified ...

(No change to model code text.)

[HCD 1 & HCD 2] An international symbol ... (No change to existing California amendment.)



**FIGURE 601
INTERNATIONAL SYMBOL**

The background color ... (No change to model code text.)

601.3.3 Alternate Water Sources. Alternate water source systems ...

(1) (No change to model code text)

(2) Reclaimed (recycled) water systems *for outdoor applications* shall be marked in accordance with this section with the words: "CAUTION: NONPOTABLE RECLAIMED (RECYCLED) WATER, DO NOT DRINK" in black letters. (No change to existing California amendment.)

(3) (No change to model code text)

(4) (No change to model code text)

603.0 Cross-Connection Control.

603.5. Specific Requirements.

603.5.11 Nonpotable Water Piping. In cases where ... (No change to model code text.)

[HCD 1 & HCD 2] An international symbol ... (No change to existing California amendment.)

604.0 Materials.

604.1 Pipe, Tube, and Fittings.

TABLE 604.1 MATERIALS FOR BUILDING SUPPLY AND WATER DISTRIBUTION WATER PIPING AND FITTINGS

(No changes to model code Table)

Notes:

1. For building supply ... (No change to model code text.)
2. For brazed fittings only. (No change to model code text.)
3. *When PEX tubing is placed ...* (No change to existing California amendment.)
4. *PEX tubing shall ...* (No change to existing California amendment.)
5. *[HCD 1 & HCD 2] The use of PEX-AL-PEX in potable water supply systems is not adopted.*

604.1.1 Local Authority to Approve CPVC Pipe Within Residential Buildings Under Specified Conditions. *[HCD 1 & HCD 2] The local responsible building official ...* (No change to existing California amendment.)

(a) through (h) (No change to existing California amendments.)

604.1.2 PEX. *[HCD 1 & HCD 2] All installations of PEX ...* (No change to existing California amendment.)

(1) through (4) (No change in existing California amendments.)

604.13 Water Heater Connectors. Flexible metallic ... (No change to model code text.)

[HCD 1 & HCD 2] PEX-AL-PEX is not adopted ... (No change to existing California amendment.)

605.0 Joints and Connections.

605.2 CPVC Plastic Pipe and Joints. (No change to model code text.)

605.2.2 Solvent Cement Joints. Solvent cement joints for CPVC ... (No change to model code text.)

[HCD 1 & HCD 2] Low VOC One-Step Cement ... (No change to existing California amendment.)

605.10 PEX-AL-PEX Plastic Tubing and Joints. PEX-AL-PEX plastic pipe ... (No change to model code text.)

[HCD 1 & HCD 2] PEX-AL-PEX is not adopted for ... (No change to existing California amendment.)

605.12 PVC Plastic Pipe and Joints. (No change to model code text.)

605.12.2 Solvent Cement Joints. Solvent cement joints for PVC ... (No change to model code text.)

[HCD 1 & HCD 2] Plastic pipe and fittings ... (No change to existing California amendment.)

605.15 Dielectric Unions. Dielectric unions ... **[HCD 1 & HCD 2] Dielectric unions shall be used** ... (No change to existing California amendment.)

609.0 Installation, Testing, Unions, and Location.

609.11 (Formerly 609.10) Water Hammer. (Not adopted by HCD)

610.0 Size of Potable Water Piping.

TABLE 610.3 WATER SUPPLY FIXTURE UNITS (WSFU) AND MINIMUM FIXTURE BRANCH PIPE SIZES

(No change to existing California amendments.)

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 8: HCD proposes to adopt Chapter 7 from the 2021 UPC into the 2022 CPC with new and existing amendments as follows:

CHAPTER 7 SANITARY DRAINAGE

Part I – Drainage Systems.

701.0 General.

701.2 Drainage Piping. Materials for ... (No change to model code text.)

(1), (3) through (6) (No change to model code text.)

(2) ABS and PVC DWV piping installations ... (No change to existing California amendments.)

(a) **[HCD 1 & HCD 2]** ABS and PVC ... (No change to existing California amendment.)

702.0 Fixture Unit Equivalentents.

**TABLE 702.1
DRAINAGE FIXTURE UNIT VALUES (DFU)**

| PLUMBING APPLIANCES, APPURTENANCES, OR FIXTURES | MINIMUM SIZE TRAP AND TRAP ARM ⁷ (inches) | PRIVATE | PUBLIC | ASSEMBLY ⁸ |
|---|--|---------------------|--------|-----------------------|
| --- | | | | |
| Mobile Home Mobilehome or Manufactured Home, trap ⁹¹⁰ | 3 | 12.0 6.0 | — | — |
| --- | | | | |
| Nonwater Urinal with Drain Cleansing Action | 2 | 1.0 | 1.0 | 1.0 |
| --- | | | | |

For SI units: 1 inch = 25 mm

Notes:

Notes 1-9. (No change to model code text.)

⁹¹⁰ For drainage fixture unit values ... (No change to existing California amendment except numbering.)

705.0 Joints and Connections.

705.1 ABS and ABS Co-Extruded Plastic Pipe and Joints. (No change to model code text.)

705.1.2 Solvent Cement Joints. Solvent cement joints ... (No change to model code text.) **[HCD 1 & HCD 2]** Plastic pipe and fittings ... (No change to existing California amendment.)

705.6 PVC and PVC Co-Extruded Plastic Pipe and Joining Methods. (No change to model code text.)

705.6.2 Solvent Cement Joints. Solvent cement joints ... (No change to model code text.) **[HCD 1 & HCD 2]** Plastic pipe and fittings joined ... (No change to existing California amendment.)

705.9 Special Joints. (No change to model code text.)

705.9.4 Transition Joint. A solvent cement transition joint ... (No change to model code text.) *[HCD 1 & HCD 2] Plastic pipe and fittings joined ...* (No change to existing California amendment.)

707.2 Approved. Each cleanout fitting and each cleanout plug or cap shall be of an approved type. A list of approved standards for cleanouts are referenced in Table 707.2. (No change to model code text.)

**TABLE 707.2
CLEANOUT MATERIALS FOR DRAIN, WASTE, AND VENT**

| MATERIAL | STANDARD |
|------------------|---|
| ABS ¹ | ASTM D2661, CSA B79, IAPMO IGC 78, IAPMO IGC 224 |
| ... | |
| PVC ¹ | ASTM D2665, CSA B79, IAPMO IGC 78, IAPMO IGC 224 |
| Stainless Steel | CSA B79 |

1. [HCD 1 & HCD 2] ABS and PVC installations are limited to not more than two stories of areas of residential accommodation. (New California amendment.)

710.0 Drainage of Fixtures Located Below the Next Upstream Manhole or Below the Main Sewer Level.

710.3 Sewage Ejector and Pumps. A sewage ejector or sewage pump ... (No change to model code text including items (1) through (3).)

(1) through (3) (No change to model code text.)

[HCD 1 & HCD 2] The minimum size ... (No change to existing California amendment.)

Part II – Building Sewers.

713.0 Sewer Required.

713.4 Public Sewer Availability. The public sewer ... (No change to model code text.)

[HCD 1] For residential occupancies, ... (No change to existing California amendment.)

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 9: HCD proposes to adopt Chapter 8 from the 2021 UPC into the 2022 CPC without amendment:

CHAPTER 8 INDIRECT WASTES

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 10: HCD proposes to adopt Chapter 9 from the 2021 UPC into the 2022 CPC with existing amendments as follows:

CHAPTER 9 VENTS

903.0 Materials.

903.1 Applicable Standards. Vent pipe and fittings ... (No change to existing California amendments.)

- (1) No galvanized steel ... (No change to model code text.)
- (2) ABS and PVC DWV piping installations ... (No change to existing California amendments.)

903.1.1 [HCD 1 & HCD 2] ABS or PVC installations ... (No change to existing California amendment.)

903.1.2 [HCD 1] All malleable iron vents ... (No change to existing California amendment.)

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 11: HCD proposes to adopt Chapter 10 from the 2021 UPC into the 2022 CPC with existing amendments as follows:

**CHAPTER 10
TRAPS AND INTERCEPTORS**

1003.0 Traps — Described.

1003.1 General Requirements. Each trap ... (No change to model code text.)

Exceptions:

- (1) Drawn-copper alloy tubing ... (No change to existing California amendment numbering.)
- (2) **[HCD 1 & HCD 2]** *Non-water supplied urinals* ... (No change to existing California amendment.)

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 12: HCD proposes to adopt Chapter 11 from the 2021 UPC into the 2022 CPC with existing amendments as follows:

**CHAPTER 11
STORM DRAINAGE**

1101.0 General.

1101.4 Material Uses. Pipe, tube, and fittings ... (No change to existing California amendment.)

[HCD 1 & HCD 2] ABS or PVC installations ... (No change to existing California amendment.)

1101.4.2 Conductors. Conductors installed aboveground ... (No change to model code text.)

1101.4.2.1 [HCD 1] ABS or PVC installations ... (No change to existing California amendment.)

1101.6 Subsoil Drains. Subsoil drains shall ... (No change to model code text.)

Exception: [HCD 1 & HCD 2] Subsoil drains ... (No change to existing California amendment.)

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 13: HCD proposes to adopt Chapter 12 from the 2021 UPC into the 2022 CPC without amendments.

**CHAPTER 12
FUEL GAS PIPING**

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 14: HCD proposes to NOT adopt Chapter 13 from the 2021 UPC.

**CHAPTER 13
HEALTH CARE FACILITIES AND MEDICAL GAS AND MEDICAL VACUUM
SYSTEMS**

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 15: HCD proposes to NOT adopt Chapter 14 from the 2021 UPC.

**CHAPTER 14
FIRESTOP PROTECTION**

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 16: HCD proposes to adopt Chapter 15 from the 2021 UPC into the 2022 CPC with new and existing amendments as follows. HCD proposes to not adopt Sections 1501.5.2; 1502.3.4; 1503.9.3-1503.9.7; 1505; and Table 1501.5.

**CHAPTER 15
ALTERNATE WATER SOURCES FOR NONPOTABLE APPLICATIONS**

1501.0 General.

1501.1 Applicability. The provisions of this chapter shall apply... (No change to existing California amendment.)

1501.1.1 Allowable Use of Alternate Water. Where approved or required ... (No change to existing California amendment.)

1501.2 System Design. Alternate water source systems shall be designed in accordance with this chapter by a licensed plumbing contractor or a registered design professional or licensed person who demonstrates competency to design the alternate water source system as required by the Authority Having Jurisdiction. Components, piping, and fittings used in an alternate water source system shall be listed.

[HCD 1] Irrigation design plans ... (No change to existing California amendment.)

Exceptions:

- (1) A registered design professional or a licensed person who demonstrates competency to design the alternate water source system is not required to design gray water systems having a maximum discharge capacity of 250 gallons per day (gal/d) (0.011 L/s) for single-family and multi-family dwellings.
- (2) A registered design professional or a licensed person who demonstrates competency to design the alternate water source system is not required to design an on-site treated nonpotable water system for single-family dwellings having a maximum discharge capacity of 250 gal/d (0.011 L/s).

1501.3 Permit. It shall be unlawful ... *No changes or connections ...* (No change to existing California amendment.)

Exception: [HCD 1] A construction permit ... (No change to existing California amendment.)

~~TABLE 1501.5 MINIMUM ALTERNATE WATER SOURCE TESTING, INSPECTION, AND MAINTENANCE FREQUENCY~~

(Table continues to not be adopted by HCD.)

1501.5 Maintenance and Inspection. [HCD 1] Alternate water source systems ... *the manufacturer's recommendations ...* (No change to existing California amendments.)

~~**1501.5.1 Frequency.** Alternate water source systems ... (Model code section continues to not be adopted by HCD.)~~

~~**1501.5.2 Maintenance Log.** A maintenance log ... (Model code section continues to not be adopted by HCD.)~~

~~**1501.5.1 1501.5.3 Maintenance Responsibility.** The required maintenance ... (No change to existing California amendment.)~~

1501.6 Operation and Maintenance Manual. [HCD 1] An operation and maintenance ... (No change to existing California amendments.)

- (1) *Diagram(s)* of the entire ... (No change to existing California amendments.)
- (2) Instructions for operating and maintaining the system.

- (3) *Instructions* for maintaining the required water quality for on-site *treated* nonpotable water systems. (No change to California amendment.)
- (4) Details on *startup, shutdown, and ...* (No change to existing California amendments.)
- (5) Applicable testing, ... *Section 1501.5*. (No change to existing California amendments.)
- (6) A method of contacting the *installer ...* (No change to existing California amendments.)
- (7) *Directions to ...* (No change to existing California amendment.)

1501.7 Minimum Water Quality Requirements. The minimum water quality for alternate water source systems shall meet the applicable water quality requirements for the intended application as determined by the Authority Having Jurisdiction. In the absence of water quality requirements, for on-site treated nonpotable systems, the water quality requirements of NSF 350 shall apply. ~~The EPA/625/R-04/108 contains recommended water reuse guidelines to assist regulatory agencies to develop, revise, or expand alternate water source water quality standards~~ *Water quality requirements for on-site treated nonpotable graywater shall comply with this section and Section 1506.9.2.*

Exception: Water treatment ... (No change to existing California amendment.)

1501.9 Signage. [HCD 1, HCD 2 & HCD-1AC] *Signage for ...* (No change to existing California amendment.)

1501.9.1 Commercial, Industrial, and Institutional, and Residential Restroom Signs. A sign shall be installed ... (No change to existing California amendments.)

TO CONSERVE WATER, ... (No change to existing California amendment.)

1501.9.4 2 Equipment Room Signs. Each room containing ... (No change to existing California amendments.)

CAUTION: *ON-SITE TREATED NONPOTABLE GRAYWATER ...*

1502.0. Inspection and Testing.

1502.1 General. Alternate water source systems ... (No change to existing California amendments.)

1502.3 Annual Cross-Connection Inspection and Testing. An initial *visual* inspection and ... (No change to existing California amendments.)

1502.3.2 Cross-Connection Test. *A cross-connection test ...* (No change to existing California amendments.)

(1) through (4) and (6) through (9) (No change to model code text.)

(5) The alternate water source ... *When an alternate* ... (No change to existing California amendments.)

1502.3.3 Discovery of Cross-Connection. In the event ... (No change to existing California amendments.) (No change to existing California amendments items below.)

(1) *Notify the Authority* ...

~~(1)~~ (2) The alternate water source ...

~~(2)~~ (3) Potable water piping

~~(3)~~ (4) The cross-connection ...

~~(4)~~ (5) The building *and* ...

~~(5)~~ (6) The potable water ... (No change to model code text except renumbering.)

~~(6)~~ (7) The potable water system ... (No change to model code text except renumbering.)

~~1502.3.4 Annual Inspection.~~ ~~An annual inspection ...~~ (Model code section continues to not be adopted by HCD.)

1503.0 Gray Water Systems.

1503.1 General. The provisions of this section ... *A city, county,* ... (No changes to existing California amendments.)

(A) through (I) (No change to existing California amendments.)

1503.1.1 [HCD 1] Clothes Washer System. *A clothes washer system* ... (No changes to existing California amendments.)

(1) through (13) (No change to existing California amendments.)

1503.1.2 Simple System. *Simple systems exceed ... a clothes washer system and shall comply with the following:* (No change to existing California amendment)

(1) through (3) (No change to existing California amendments.)

1503.1.3 Complex System. *Any gray water system* ... (No change to existing California amendment.)

(1) and (2) (No change to existing California amendments.)

1503.2 System Requirements. Gray water shall ... (No change to existing California amendments.)

1503.2.1 Surge Capacity. Gray water systems ... (No change to existing California amendments.)

Exception: *It is not the intent ...* (No change to existing California amendment.)

1503.2.2 Diversion. The gray water system shall connect to the sanitary drainage system downstream of fixture traps and vent connections through a *an approved* gray water diverter valve. The ~~gray water~~ diverter valve shall ~~comply with IAPMO PS 59 and~~ be installed in ~~an~~ readily accessible location and clearly indicate the direction of flow.

Exception: *[HCD 1] A clothes washer system ...* (No change to existing California amendment.)

1503.2.3 Backwater Valves. Gray water drains ... (No change to existing California amendments.)

1503.3 Connections to Potable and Reclaimed (Recycled) Water Systems. Gray water systems shall have no direct connection to a potable water supply, on-site treated nonpotable *gray* water supply, or reclaimed (recycled) water *supply* systems.

Exceptions:

(1) Potable *water*, on-site treated nonpotable *gray water*, or reclaimed (recycled) water, or *rainwater* is permitted to be used as makeup water for a non-pressurized storage tank provided the connection is protected by an air gap in accordance with this code.

(2) *A potable water supply may be connected temporarily for the initial cross-connection test of the untreated graywater system as required in Section 1502.3.2.*

1503.4 Location. No gray water system ... (No change to model code text.)

Exception: *When there exists ...* (No change to existing California amendment.)

TABLE 1503.4 LOCATION OF GRAY WATER SYSTEM

(No change to existing California amendments.)

1503.5 Plot Plan Submission. No permit for ... (No change to model code text.)

Exception [HCD 1]: *A construction permit ...* (No change to existing California amendment.)

1503.6 Prohibited Location. Where there is ... (No change to existing California amendments.)

1503.7 Drawings and Specifications. The Authority Having Jurisdiction *may* require ... (No change to existing California amendments.)

(1) (No change to model code text.)

(2) Details of construction ... (No change to existing California amendment.)

(3) (No change to model code text.)

(4) A log of soil formations ... (No change to existing California amendment.)

Exceptions:

(1) through (3) (No change to existing California amendments including renumbering.)

(5) (No change to model code text.)

1503.8 Procedure for Estimating Gray Water Discharge. Gray water systems ... (No change to model code text.)

Exception: It is not the intent ... (No change to existing California amendment.)

~~**1503.8.1 Single Family Dwellings and Multi-Family Dwellings. Residential Occupancies.**~~ The gray water discharge for *residential* ... (No change to existing California amendments.)

(1) through (3) (No change to model code text.)

1503.8.3 Daily Discharge. Gray water systems ... (No change to existing California amendment.)

Exception: Approved on-site ... (No change to existing California amendment.)

1503.9 Gray Water System Components. Gray water system components ... (No change to existing California amendment.)

[HCD 1] Gray water system ... (No change to existing California amendment.)

1503.9.1 Surge Tanks. Where installed, ... (No change to model code text.)

(1) Surge tanks ... (No change to existing California amendments.)

(2) (No change to model code text.)

(3) (No change to model code text.)

(4) Each surge tank ... (No change to existing California amendments.)

(5) through (8) (No change to model code text.)

(9) Surge tanks ... (No change to existing California amendment.)

(10) (No change to existing California amendment.)

(11) **[HCD 1]** An overflow drain ... (No change to existing California amendment.)

~~**1503.9.3 Subsoil Irrigation Field Materials.**~~ Subsoil irrigation ... (Model code section continues to not be adopted by HCD.)

~~**1503.9.4 Subsurface Irrigation Field and Mulch Basin Supply Line Materials.**~~ Materials for gray water ... (Model code section continues to not be adopted by HCD.)

~~**1503.9.5 Valves.** Valves shall be accessible. (Model code section continues to not be adopted by HCD.)~~

~~**1503.9.6 Trap.** Gray water piping ... (Model code section continues to not be adopted by HCD.)~~

~~**1503.9.7 Backwater Valve.** A backwater valve ... (Model code section continues to not be adopted by HCD.)~~

1503.9.3 Animals and Insects. Gray water tank openings ... (No change to existing California amendment.)

1503.9.4 Freeze Protection. Tanks and piping ... (No change to existing California amendment.)

1504.0 Subsurface Irrigation System Zones.

TABLE 1504.2 DESIGN OF SIX TYPICAL SOILS

(No change to existing California amendment.)

1504.3 Determination of Maximum Absorption Capacity. The irrigation field ... (No change to model code text.)

Exceptions:

(1) and (2) (No change to existing California amendments.)

1504.4 Groundwater Level. No excavation ... (No change to model code text.)

Note: *The absence of groundwater...* (No change to existing California amendment.)

~~**1504.5 Subsurface and Subsoil Irrigation Field, and Mulch Basin Design and Construction.** Subsurface and ... (Model code section continues to not be adopted by HCD; replaced by California amendment.)~~

~~**1504.5.1 Subsurface Irrigation Field.** A subsurface irrigation field shall comply with Section 1504.5.2 through Section 1504.5.7. (Model code section continues to not be adopted by HCD; replaced by California amendment.)~~

~~**1504.5.2 Minimum Depth.** Supply piping, ... (Model code section continues to not be adopted by HCD; replaced by California amendment.)~~

~~**1504.5.3 Filter.** Not less than ... (Model code section continues to not be adopted by HCD; replaced by California amendment.)~~

~~**1504.5.4 Emitter Size.** Emitters shall ... (Model code section continues to not be adopted by HCD.)~~

~~**1504.5.5 Number of Emitters.** The minimum number ...~~

~~**1504.5.6 Controls.** The system design shall provide user controls, such as valves, switches, timers, and other controllers, to rotate the distribution of gray water between irrigation zones. (Model code section continues to not be adopted by HCD.)~~

~~**1504.5.7 Maximum Pressure.** Where pressure ... (Model code section continues to not be adopted by HCD.)~~

~~**1504.6 Mulch Basin.** A mulch basin ... (Model code section continues to not be adopted by HCD.)~~

~~**1504.6.1 Single Family and Multi-Family Dwellings.** The gray water ... (Model code section continues to not be adopted by HCD.)~~

~~**1504.6.2 Size.** Mulch basins ... (Model code section continues to not be adopted by HCD.)~~

~~**1504.6.3 Minimum Depth.** Gray water ... (Model code section continues to not be adopted by HCD.)~~

~~**1504.6.4 Maintenance.** The mulch basin ... (Model code section continues to not be adopted by HCD.)~~

~~**1504.7 Subsoil Irrigation Field.** Subsoil irrigation ... (Model code section continues to not be adopted by HCD.)~~

~~**1504.7.1 Minimum Pipe Size.** Subsoil irrigation ... (Model code section continues to not be adopted by HCD.)~~

~~**1504.7.2 Filter Material and Backfill.** Filter material, ... (Model code section continues to not be adopted by HCD.)~~

~~**1504.7.3 Subsoil Irrigation Field Construction.** Subsoil irrigation ... (Model code section continues to not be adopted by HCD.)~~

1504.5 Irrigation, Disposal Field and Mulch Basin Construction. (No change to existing California amendment.)

Irrigation fields, ... (No change to existing California amendment.)

[HCD 1] Irrigation design ... (No change to existing California amendment.)

1504.5.1 Mulch Basin. *A mulch basin ... (No change to existing California amendment.)*

1504.5.2 Irrigation Field. *The provisions ... (No change to existing California amendment except #2.)*

(1) Filters used ... (No change to existing California amendment.)

(2) Emitters shall be designed to resist root intrusion and shall be of a design recommended by the manufacturer for the intended gray water flow and use. For emitter ratings, refer to Irrigation Equipment Performance Report, Drip Emitters

~~and Micro-Sprinklers, Center for Irrigation Technology, California State University, 5730 N. Chestnut Avenue, Fresno, California 93740-0018.~~

(3) Each irrigation zone shall be designed to include no less than the number of emitters specified in Table 1504.5 1504.5.5, or through a procedure designated by the Enforcing Agency. Minimum spacing between emitters in any direction shall be sufficient to prevent surfacing or runoff.

(4) through (7) (No change to existing California amendments.)

1504.5.3 Disposal Field. The provisions ... (No change to existing California amendment.)

(A) through (D) (No change to existing California amendments.)

TABLE 1504.7.3 5.3 SUBSOIL IRRIGATION FIELD CONSTRUCTION

(No change to remainder of table.)

1504.8 Gray Water System Color and Marking Information. Pressurized gray water ... *Marking shall be* ... (No change to existing California amendments.)

1504.9 Other Collection and Distribution Systems. Other collection ... (No change to existing California amendments.)

~~**1504.9.1 Higher Requirements.** Nothing contained ... (Model code text not adopted.)~~

1504.9.1 Future Connections. Gray water ... (No change to existing California amendment.)

1504.11 Maintenance. Gray water systems and components shall be maintained in accordance with ~~Table~~ Section 1501.5. (No change to existing California amendments.)

1505.0 Reclaimed (Recycled) Water Systems. (Not adopted by HCD) (Model code section continues to not be adopted by HCD.)

1506.0 On-Site Treated Nonpotable Gray Water Systems. (No change to existing California amendment.)

1506.1 General. The provisions of ... (No change to existing California amendment.)

Other approved ... (No change to existing California amendment.)

1506.2 Plumbing Plan Submission. No permit for ... (No change to existing California amendment.)

[HCD 1] Prior to ... (No change to existing California amendment.)

1506.3 System Changes. No changes ... (No change to existing California amendment.)

1506.4 Connections to Potable or Reclaimed (Recycled) Water Systems. On-site treated ... (No change to existing California amendments.)

Exceptions:

(1) and (2) (No change to existing California amendments.)

1506.6 On-Site Treated Nonpotable Gray Water System Materials. On-site treated ... (No change to existing California amendment.)

1506.7 On-Site Treated Nonpotable Gray Water Devices and Systems. Devices or equipment ... (No change to existing California amendment.)

1506.8 On-Site Treated Nonpotable Gray Water System Color and Marking Information. On-site treated *nonpotable* ... (No change to existing California amendment.)

1506.9 Design and Installation. The design ... (No change to existing California amendments.)

1506.9.1 Listing Terms and Installation Instructions. On-site treated ... (No change to existing California amendment.)

1506.9.2 Minimum Water Quality. [HCD 1] On-site treated ... (No change to existing California amendments.)

1506.9.3 Deactivation and Drainage. The on-site treated ... (No change to existing California amendment.)

1506.9.4 Near Underground Potable Water Pipe. On-site treated ... (No change to existing California amendment.)

1506.9.5 Required Filters. A filter permitting the passage of particulates no larger than 100 microns (100 µm) shall be provided for on-site treated nonpotable *gray* water supplied to water closets, urinals, trap primers, and drip irrigation systems.

1506.9.6 Disinfection. *Where the intended* ... (No change to existing California amendment.)

1506.11 Signs. Signs in buildings ... (No change to existing California amendments.)

1506.12 Inspection and Testing. On-site treated ... (No change to existing California amendments.)

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1

and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 17: HCD proposes to adopt Chapter 16 from the 2021 UPC into the 2022 CPC, with new and existing amendments as follows. HCD proposes to not adopt Sections 1601.5.2, 1605.3.4 and Table 1601.5.

CHAPTER 16 NONPOTABLE RAINWATER CATCHMENT SYSTEMS

1601.0 General.

1601.2 System Design. Rainwater catchment systems shall be designed in accordance with this chapter by a ~~licensed plumbing contractor or~~ person registered or licensed to perform plumbing design work or who demonstrates competency to design the rainwater catchment system as required by the Authority Having Jurisdiction design professional. Components, piping, and fittings used in a rainwater catchment system shall be listed.

[HCD 1] *Irrigation design plans shall meet the requirements of the California Code of Regulations, Title 23, Division 2, Chapter 2.7, Model Water Efficient Landscape Ordinance. (No change to existing California amendment.)*

Exceptions: (No change to model code text.)

- (1) A person registered or licensed to perform plumbing design work is not required to design rainwater catchment systems used for irrigation with a maximum storage capacity of 360 gallons (1363 L).
- (2) A person registered or licensed to perform plumbing design work is not required to design rainwater catchment systems for single family dwellings where outlets, piping, and system components are located on the exterior of the building.

1601.3 Permit. It shall be unlawful ... (No change to existing California amendment.)

Exceptions: (No change to existing California amendment.)

- (1) *A permit is not required ... (No change to existing California amendment.)*
- (2) **[HCD 1 & HCD 2]** *A permit is not required ... (No change to existing California amendment.)*

1601.5 Maintenance and Inspection. Rainwater catchment systems and components shall be inspected and maintained in accordance ~~Section 1601.5.1 through Section 1601.5.3~~ with the manufacturer's recommendations and/or as required by the enforcing agency. (No change to existing California amendment; add "with".)

~~**1601.5.1 Frequency.** Rainwater catchment ... (Delete model code text.)~~

~~**1601.5.2 Maintenance Log.** A maintenance log ... (Delete model code text.)~~

~~**1601.5.3 1601.5.1 Maintenance Responsibility.** The required maintenance ... (No change to existing California amendment.)~~

**TABLE 1601.5 MINIMUM ALTERNATE WATER SOURCE TESTING, INSPECTION,
AND MAINTENANCE FREQUENCY**

(Model code table continues to not be adopted by HCD.)

1601.6 Operation and Maintenance Manual. An operation and ... (No change to existing California amendment.)

(1) *Diagram(s)* of ... (No change to existing California amendment.)

(2) (No change to model code text.)

(3) *Instructions* on ... (No change to existing California amendment.)

(4) Details on *startup*, ... (No change to existing California amendment.)

(5) Applicable testing, ... (No change to existing California amendment.)

(6) A method of ... (No change to existing California amendment.)

(7) *Directions to* ... (No change to existing California amendment.)

1601.7 Minimum Water Quality Requirements. The minimum water quality for rainwater catchment systems shall comply with the applicable water quality requirements for the intended application as determined by the Authority Having Jurisdiction. Water quality for nonpotable rainwater catchment systems shall comply with Section 1603.5. *In the absence of water quality requirements for harvested rainwater, Table ~~1602.9.6~~ 1603.5 shall apply.*

Exceptions:

(1) Water treatment ... (No change to model code text.)

(2) Water treatment ... (No change to existing California amendment.)

1602.4 Connections to Potable or Reclaimed (Recycled) Water Systems. Rainwater catchment systems shall have no direct connection to a potable water supply or alternate water source system.

Exceptions:

1. Potable *water, on-site treated nonpotable gray water,* or reclaimed (recycled) water is permitted to be used as makeup water for a rainwater catchment system provided the potable or reclaimed (recycled) water supply connection is protected by an air gap or reduced-pressure principle backflow preventer in accordance with this code.

2. A potable water supply may be connected temporarily for initial cross-connection test of the rainwater catchment system as required in Section 1605.3.2.

1603.0 (formerly 1602.9) Design and Installation. (No change to model code text.)

1603.4 (formerly 1602.9.3) Rainwater Catchment Collection Surfaces. Rainwater shall be collected from roof surfaces or other *impervious* manmade, aboveground collection surfaces.

1603.4.1 (formerly 1602.9.3 and 1602.9.4) Other Surfaces. Natural precipitation collected from surface water runoff, vehicular parking surfaces, or manmade surfaces at or below grade shall be in accordance with the ~~stormwater~~ water quality requirements for on-site treated nonpotable gray water systems in Section 1506.0.

Exception: Collected rainwater or storm water used exclusively for subsurface landscape irrigation.

1603.5 (Formerly 1602.9.6) Minimum Water Quality. (No change to model code text.)

~~1602.9.6.1~~ **1603.5.2 Disinfection.** *Where the initial quality of the collected rainwater requires disinfection or other treatment or both, the collected rainwater shall be treated as necessary to ensure the required water quality is delivered at the point of use. Where chlorine is used for disinfection or treatment, water shall be tested for residual chlorine in accordance with ASTM D1253. The levels of residual chlorine shall not exceed the levels allowed for the intended use in accordance with the requirements of the local Enforcing Agency.*

TABLE 1603.5 (formerly 1602.9.6) MINIMUM WATER QUALITY

(No change to existing California amendment.)

1603.8 (Formerly 1603.4) Above Grade. Above grade, ... (No change to existing California amendment.)

Exception: Tanks may be installed directly on grade in accordance with Section 1601.3

1603.9 (Formerly 1603.5) Below Grade. Rainwater storage tanks ... (No change to existing California amendment.)

1603.10 (Formerly 1603.6) Drainage and Overflow. Rainwater storage ... (No change to existing California amendment.)

1603.11 (Formerly 1603.7) Opening and Access Protection. Rainwater tank openings ... (No change to existing California amendment.)

(A) and (B) (No change to existing California amendments.)

1603.13 (Formerly 1603.9) Storage Tank Venting. Where venting using drainage or overflow piping is not provided or is considered insufficient, a vent shall be installed on each tank. The vent shall extend from the top of the tank and terminate not less than 6 inches (152 mm) above grade and shall be ~~not less than 1 ½ inches (40 mm) in diameter~~ *provided with a vent sized in accordance with this code, and based on the size of the influent pipe.* The vent terminal shall be directed downward and covered with a ~~3/32 1/16 of an inch (2.4 mm)~~ *(1.6 mm)* mesh screen to prevent the entry of vermin and insects. *Tank vent pipes shall not be connected to the sanitary drainage system vent.*

1603.19 (Formerly 1603.15) Required Filters. A filter permitting ... (No change to existing California amendment (“s”).)

1604.0 Signs.

1604.1 General. Signs in buildings ... (No change to existing California amendment.)

1604.2 Commercial, Industrial, and Institutional, and Residential Restroom Signs. A sign shall be installed ... (No change to existing California amendment.)

1604.3 Equipment Room Signs. Each equipment room ... (No change to model code text.)

CAUTION NONPOTABLE WATER, ... (No change to existing California amendment.)

1605.0 Inspection and Testing.

1605.3 Annual Cross-Connection Inspection and Testing. An initial *visual* inspection ... (No change to existing California amendments.)

1605.3.2 Cross-Connection Test. A *cross-connection* ... (No change to existing California amendment.)

(1) through (5) and (7) through (10) (No change to model code text.)

(6) The rainwater catchment ...

When rainwater ... (No change to existing California amendment.)

1605.3.3 Discovery of Cross-Connection. In the event ... (No change to existing California amendment.)

(1) Rainwater catchment ... (No change to existing California amendment.)

(2) through (6) (No change to model code text.)

~~**1605.3.4 Annual Inspection.** An annual inspection ... (Section continues to not be adopted by HCD.)~~

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 18: HCD proposes to adopt Chapter 17 from the 2021 UPC into the 2022 CPC with new and existing amendments as follows:

**CHAPTER 17
REFERENCED STANDARDS**

**TABLE 1701.1
REFERENCED STANDARDS**

| STANDARD NUMBER | STANDARD TITLE | APPLICATION | REFERENCED SECTIONS |
|---|--|---------------|--|
| ASTM D1253-2014 | Standard Test Method for Residual Chlorine in Water | Miscellaneous | 1506.9.6, 1602.9.6.1 1603.5.2 |
| IAPMO PS 59-2016a^{e1} | Wastewater Diverter Valves and Diversion Systems | Fittings | 1503.2.2 |
| NSF/ANSI 350-2014 | Onsite Residential and Commercial Water Reuse Treatment Systems Note: NSF/ANSI 350, amended sections follow: 5.6 Electrical components. Electrical components...The California Electrical Code shall be followed for all electrical components, system installation, and system operation. | Miscellaneous | 1506.7 1506.9.2 |
| ... | | | |

**TABLE 1701.2
STANDARDS, PUBLICATIONS, PRACTICES, AND GUIDES**

| DOCUMENT NUMBER | DOCUMENT TITLE | APPLICATION |
|---------------------------------------|---|-----------------|
| <u>IAPMO PS 59-2016a^{e1}</u> | <u>Wastewater Diverter Valves and Diversion Systems</u> | <u>Fittings</u> |

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 19: HCD proposes to adopt Appendix A from the 2021 UPC into the 2022 CPC without amendments:

**APPENDIX A
RECOMMENDED RULES FOR SIZING THE WATER SUPPLY SYSTEM**

The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 20: HCD proposes to NOT adopt Appendix B from the 2021 UPC.

**APPENDIX B
EXPLANATORY NOTES ON COMBINATION WASTE AND VENT SYSTEMS**

The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 21: HCD proposes to NOT adopt Appendix C from the 2021 UPC.

**APPENDIX C
ALTERNATE PLUMBING SYSTEMS**

The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 22: HCD proposes to adopt Appendix D from the 2021 UPC into the 2022 CPC without amendment:

**APPENDIX D
SIZING STORM WATER DRAINAGE SYSTEMS**

The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 23: HCD proposes to NOT adopt Appendix E from the 2021 UPC.

**APPENDIX E
MANUFACTURED/MOBILE HOME PARKS AND RECREATIONAL VEHICLE PARKS**

The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 24: HCD proposes to NOT adopt Appendix F from the 2021 UPC.

**APPENDIX F
FIREFIGHTER BREATHING AIR REPLENISHMENT SYSTEMS**

The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

Notation:

Authority Cited: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 25: HCD proposes to NOT adopt Appendix G from the 2021 UPC.

**APPENDIX G
SIZING OF VENTING SYSTEMS**

The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 26: HCD proposes to adopt Appendix H from the 2021 UPC into the 2022 CPC without amendment:

**APPENDIX H
PRIVATE SEWAGE DISPOSAL SYSTEMS**

The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 27: HCD proposes to adopt Appendix I, IAPMO IS 31-2014 only, from the 2021 UPC into the 2022 CPC without amendment:

**APPENDIX I
INSTALLATION STANDARD FOR PEX TUBING SYSTEMS FOR
HOT- AND COLD-WATER DISTRIBUTION
IAPMO IS 31-2014**

The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

Note: The following new standards were added in the 2021 Uniform Plumbing Code:

IAPMO IS 26-2019 Trenchless Insertion of Polyethylene (PE) Pipe for Sewer Laterals

IAPMO IS 33-2019 Thrust Blocking for Rubber Gasketed and Solvent Cement Joints

TCNA Handbook-2018 For Ceramic, Glass, and Stone Tile Installation

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

Item 28: HCD proposes to NOT adopt Appendix J from the 2021 UPC.

**APPENDIX J
COMBINATION OF INDOOR AND OUTDOOR COMBUSTION AND VENTILATION
OPENING DESIGN**

The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

ITEM 29: HCD proposes to NOT adopt Appendix K from the 2021 UPC.

**APPENDIX K
POTABLE RAINWATER CATCHMENT SYSTEMS**

The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

ITEM 30: HCD proposes to NOT adopt Appendix L from the 2021 UPC.

**APPENDIX L
SUSTAINABLE PRACTICES**

The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

ITEM 31: HCD proposes to NOT adopt Appendix M from the 2021 UPC.

**APPENDIX M
PEAK WATER DEMAND CALCULATOR**

The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201 and 1954.202; and Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

ITEM 32: HCD proposes to NOT adopt Appendix N from the 2021 UPC.

**APPENDIX N
IMPACT OF WATER TEMPERATURE ON THE POTENTIAL FOR SCALDING
AND LEGIONELLA GROWTH**

The provisions contained in this appendix are not mandatory unless specifically adopted by a state agency, or referenced in the adopting ordinance.

Note: This is a new Appendix in the 2021 Uniform Plumbing Code.

Notation:

Authority: Health and Safety Code Sections 17040, 17920.9, 17921, 17921.5, 17921.10, 17922, 17922.12, 17922.14, 17928, 18552, 18554, 18620, 18630, 18640, 18690, 18691, 18865, 18871.3, 18871.4, 18873, 18873.1, 18873.2, 18873.4, 18873.5, 18938.3, 18944.11, and 19990; and Government Code Sections 12955.1 and 12955.1.1.

Reference(s): Business and Professions Code Division 5; Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874, 18938.3 and 19960 through 19997; Civil Code Sections 1101.3, 1101.4, 1101.5, 1954.201, and 1954.202; Government Code Sections 12955.1, 12955.1.1 and 65852.2; Water Code Sections 516 and 517; and California Code of Regulations, Title 20, Sections 1605.1, 1605.3 and 1607.

APPROVED BY THE CALIFORNIA BUILDING STANDARDS COMMISSION

DECEMBER 14, 2021

**FINAL EXPRESS TERMS
FOR PROPOSED BUILDING STANDARDS
OF THE OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
REGARDING THE 2022 CALIFORNIA PLUMBING CODE
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 5
(OSHDP 02/21)**

The State agency shall draft the regulations in plain, straightforward language, avoiding technical terms as much as possible and using a coherent and easily readable style. The agency shall draft the regulation in plain English. A notation shall follow the express terms of each regulation listing the specific statutes authorizing the adoption and listing specific statutes being implemented, interpreted, or made specific (Government Code Section 11346.2(a)(1)).

If using assistive technology, please adjust your settings to recognize underline, strikeout, italic and ellipsis.

LEGEND for EXPRESS TERMS (Based on model codes - Parts 2, 2.5, 3, 4, 5, 9, 10)

- Model Code language appears upright
- Existing California amendments appear in *italic*
- Amended model code or new California amendments appear *underlined & italic*
- Repealed model code language appears ~~upright and in strikeout~~
- Repealed California amendments appear in ~~*italic and strikeout*~~
- Ellipsis (...) indicate existing text remains unchanged

FINAL EXPRESS TERMS

Item 1

CHAPTER 1 ADMINISTRATION

DIVISION I CALIFORNIA ADMINISTRATION

DIVISION II ADMINISTRATION

Adopt 2021 Uniform Plumbing Code (UPC) Chapter 1 and carry forward existing amendments of the 2019 California Plumbing Code (CPC) for OSHDP 1, 1R, 2, 3, 4 and 5.

Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129790, and 129850

Reference(s): Health and Safety Code, Section 129850

Item 2

CHAPTERS 2, 3, and 4

Adopt entire 2021 Uniform Plumbing Code (UPC) Chapters 2, 3, and 4 and carry

forward existing amendments of the 2019 California Plumbing Code (CPC) for OSHPD 1, 1R, 2, 3, 4 and 5.

Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129790, and 129850

Reference(s): Health and Safety Code, Section 129850

Item 3

CHAPTER 5

Adopt entire 2021 Uniform Plumbing Code (UPC) Chapter 5 for OSHPD 1, 1R, 2, 3, 4 and 5.

Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129790, and 129850

Reference(s): Health and Safety Code, Section 129850

Item 4

CHAPTERS 6 and 7

Adopt entire 2021 Uniform Plumbing Code (UPC) Chapters 6 and 7 and carry forward existing amendments of the 2019 California Plumbing Code (CPC) for OSHPD 1, 1R, 2, 3, 4 and 5.

Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129790, and 129850

Reference(s): Health and Safety Code, Section 129850

Item 5

CHAPTER 8

Adopt entire 2021 Uniform Plumbing Code (UPC) Chapter 8 for OSHPD 1, 1R, 2, 3, 4 and 5.

Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129790, and 129850

Reference(s): Health and Safety Code, Section 129850

Item 6

CHAPTERS 9, 10, and 11

Adopt entire 2021 Uniform Plumbing Code (UPC) Chapters 9, 10, and 11 and carry forward existing amendments of the 2019 California Plumbing Code (CPC) for OSHPD 1, 1R, 2, 3, 4 and 5.

Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129790, and 129850

Reference(s): Health and Safety Code, Section 129850

Item 7

CHAPTER 12

Adopt entire 2021 Uniform Plumbing Code (UPC) Chapter 12 for OSHPD 1, 1R, 2, 3, 4 and 5.

Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129790, and 129850

Reference(s): Health and Safety Code, Section 129850

Item 8

CHAPTER 13 HEALTH CARE FACILITIES AND MEDICAL GAS AND MEDICAL VACUUM SYSTEMS

Adopt 2021 Uniform Plumbing Code (UPC) Chapter 13. Adopt specific sections and carry forward existing amendments of the 2019 California Plumbing Code (CPC) for OSHPD 1, 1R, 2, 3, 4 and 5 with the following amendments:

...

1304.1.1 [OSHPD 1, 1R, 2, 3, 4 & 5] *Medical gas systems for health care facilities that are regulated by OSHPD (hospitals, skilled nursing facilities, and intermediate care facilities, licensed clinics, and correctional treatment centers) shall be in accordance with NFPA 99, Standard for Health Care Facilities. See California Fire Code Referenced Standards (Chapter 80) for applicable version of the Standard. See California Building Code Table 1224.4.6.1 for location and number of station outlets for oxygen, vacuum, and medical air.*

1304.1.2 [OSHPD 1, 1R, 2, 3, 4 & 5] *A medical gas source system shall not be located in an OSHPD 1R or OSHPD 3 building. OSHPD 1R buildings shall be served by an individual main supply line separate from other OSHPD buildings, with a main line valve as per NFPA 99. [NFPA 99:5.1.4.2.1, 5.1.4.2.2, 5.1.4.3.1, 5.1.4.3.2] Valves shall be readily accessible and clearly labeled.*

Exception: A medical gas source system serving only an OSHPD 1R or 3 building may be located within it.

...

Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129790, and 129850

Reference: Health and Safety Code, Section 129850

Item 9

CHAPTERS 14 and 15

Adopt entire 2021 Uniform Plumbing Code (UPC) Chapters 14 and 15 for OSHPD 1, 1R, 2, 3, 4 and 5.

Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129790, and 129850

Reference(s): Health and Safety Code, Section 129850

Item 10

CHAPTER 16

Entire Chapter 16 not adopted by OSHPD.

Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129790, and 129850

Reference(s): Health and Safety Code, Section 129850

Item 11

CHAPTER 17 REFERENCED STANDARDS

Adopt entire 2021 Uniform Plumbing Code (UPC) Chapter 17 and carry forward existing amendments of the 2019 California Plumbing Code (CPC) for OSHPD 1, 1R, 2, 3, 4 and 5 with the following amendment:

**TABLE 1701.1
REFERENCED STANDARDS**

| STANDARD NUMBER | STANDARD TITLE | APPLICATION | REFERENCED SECTIONS |
|------------------------|--|----------------------|----------------------------|
| <i>ANSI/AAMI RD62</i> | <i>Water Treatment Equipment for Hemodialysis Applications</i> | <i>Miscellaneous</i> | <i>Section 614.7</i> |
| ASME A112.1.2-2012 | Air Gaps in Plumbing Systems (For Plumbing Fixtures and Water-Connected Receptors) | Fittings | Table 603.2... |

Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129790, and 129850

Reference(s): Health and Safety Code, Section 129850

Item 12

Appendices A and B

Adopt entire 2021 Uniform Plumbing Code (UPC) Appendices A and B for OSHPD 1, 1R, 2, 3, 4 and 5.

Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129790, and 129850

Reference(s): Health and Safety Code, Section 129850

Item 13
Appendix C

Entire Appendix C not adopted by OSHPD.

Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129790, and 129850

Reference(s): Health and Safety Code, Section 129850

Item 14
Appendix D

Adopt entire 2021 Uniform Plumbing Code (UPC) Appendix D for OSHPD 1, 1R, 2, 3, 4 and 5.

Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129790, and 129850

Reference(s): Health and Safety Code, Section 129850

Item 15
Appendices E, F, G, and H

Entire Appendices E, F, G, and H not adopted by OSHPD.

Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129790, and 129850

Reference(s): Health and Safety Code, Section 129850

Item 16
Appendix I

Adopt entire 2021 Uniform Plumbing Code (UPC) Appendix I for OSHPD 1, 1R, 2, 3, 4 and 5.

Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129790, and 129850

Reference(s): Health and Safety Code, Section 129850

Item 17
Appendices J, K, L, and M

Appendices J, K, L, and M not adopted by OSHPD.

Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129790, and 129850

Reference(s): Health and Safety Code, Section 129850

APPROVED BY THE CALIFORNIA BUILDING STANDARDS COMMISSION

DECEMBER 14, 2021

**FINAL EXPRESS TERMS
FOR PROPOSED BUILDING STANDARDS
OF THE STATE FIRE MARSHAL
REGARDING THE 2022 CALIFORNIA PLUMBING CODE,
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 5
(SFM 02/21)**

The State agency shall draft the regulations in plain, straightforward language, avoiding technical terms as much as possible and using a coherent and easily readable style. The agency shall draft the regulation in plain English. A notation shall follow the express terms of each regulation listing the specific statutes authorizing the adoption and listing specific statutes being implemented, interpreted, or made specific (Government Code Section 11346.2(a)(1)).

If using assistive technology, please adjust your settings to recognize underline, strikeout, italic and ellipsis.

LEGEND for EXPRESS TERMS (Based on model codes - Parts 2, 2.5, 3, 4, 5, 9, 10)

- Model Code language appears upright
- Existing California amendments appear in *italic*
- Amended model code or new California amendments appear *underlined & italic*
- Repealed model code language appears ~~upright and in strikeout~~
- Repealed California amendments appear in ~~*italic and strikeout*~~
- Ellipsis (...) indicate existing text remains unchanged

The Office of the State Fire Marshal (SFM) proposes to adopt the 2021 edition of the Uniform Plumbing Code (UPC) into the 2022 edition of the California Plumbing Code (CMC). SFM further proposes to:

Repeal the adoption by reference of the 2018 Uniform Plumbing Code and incorporate and adopt by reference in its place the 2021 Uniform Plumbing Code for application and effectiveness in the 2022 California Plumbing Code.

Repeal certain amendments to the 2018 Uniform Plumbing Code and/or California Building Standards not addressed by the model code that are no longer necessary.

Adopt new building standards or necessary amendments to the 2021 Uniform Plumbing Code that address inadequacies of the 2021 Uniform Plumbing Code as they pertain to California laws.

Bring forward previously existing California building standards or amendments, which represent no change in their effect from the 2019 California Building Standards Code.

Codify non-substantive editorial and formatting amendments from the format based upon the 2018 Uniform Plumbing Code to the format of the 2021 Uniform Plumbing Code.

FINAL EXPRESS TERMS

CHAPTER 1 ADMINISTRATION DIVISION I CALIFORNIA ADMINISTRATION

Item 1-1

Chapter 1, Administration, Division I, California Administration, Section 1.1.1 Title

1.1.1 Title. These regulations shall be known as the California Plumbing Code, may be cited as such and will be referred to herein as “this code.” The California Plumbing Code is Part 5 of thirteen parts of the official compilation and publication of the adoption, amendment, and repeal of building regulations to the California Code of Regulations, Title 24, also referred to as the California Building Standards Code. This part incorporates by adoption the ~~2018~~ 2021 Uniform Plumbing Code of the International Association of Plumbing and Mechanical Officials with necessary California amendments.

...

Item 1-2

Chapter 1, Administration, Division I, California Administration, Section 1.1.0 General through 1.1.12

[The SFM is proposing to maintain the adoption of those existing California provisions contained Sections 1.1.0 through 1.1.12.]

Item 1-3

Chapter 1, Administration, Division I, California Administration, Section 1.11.0 through 1.11.11

[The SFM is proposing to maintain the adoption of those existing California provisions contained in Sections 1.11.0 through 1.11.11.]

Item 1-4

Chapter 1, Administration, Division I, California Administration, Section 1.11.4.4 Fire Clearance Preinspection

[For Items 1-4 through Item 1-7, the SFM is proposing to maintain the adoption of those existing California provisions contained in Sections 1.11.0 through 1.11.11 with modifications as shown below.]

[The SFM is proposing to amend the section listed below]

1.11.4.4 Fire Clearance Preinspection. Pursuant to Health and Safety Code Section 13235, Fire Clearance Preinspection, fee, upon receipt of a request from a prospective licensee of a community care facility, as defined in Section 1502, of a residential care facility for the elderly, as defined in Section 1569.2, or of a child day care facility, as defined in Section 1596.750, the local fire enforcing agency, as defined in Section 13244, or State Fire Marshal, whichever has primary jurisdiction, shall conduct a preinspection of the facility prior to the final fire clearance approval. At the time of the preinspection, the primary fire enforcing agency shall price consultation and interpretation of the fire safety regulations and shall notify the prospective licensee of the facility in writing of the specific fire safety regulations which shall be enforced in order to obtain fire clearance approval. A fee equal to, but not exceeding, the actual cost of the of the preinspection services not more than \$50.00 may be charged for the preinspection of a facility, with a capacity to serve 25 or fewer persons. A fee of not more than \$100.00 may be charged for a preinspection of a facility with a capacity to serve 26 or more persons.

Item 1-5

Chapter 1, Administration, Division I, California Administration, Section 1.11.4.5 Care Facilities

[The SFM is proposing to amend the section listed below]

1.11.4.5 Care Facilities. The primary fire enforcing agency shall complete the final fire clearance inspection for a community care facility, residential care facility for the elderly, or child day care facility within 30 days of receipt of the request for the final inspection, or as of the date the prospective facility requests the final precicensure inspection by the State Department of Social Services, whichever is later.

Pursuant to Health and Safety Code Section 13235, a preinspection fee equal to, but not exceeding, the actual cost of the of the preinspection services of not more than \$50.00 may be charged for the preinspection of a facility, with a capacity to serve 25 or less clients. A fee of not more than \$100.00 may be charged for a preinspection of a facility with a capacity to serve 26 or more clients.

...

Item 1-6

Chapter 1, Administration, Division I, California Administration, Section 1.11.6 Certificate of Occupancy

[The SFM is proposing to amend the section listed below]

1.11.6 Certificate of Occupancy. A Certificate of Occupancy shall be issued as specified in Title 24, Part 2, California Building Code, Section 111.

Exception: ~~Group R, Division 3 and Group U occupancies. Certificates of occupancy are not required for work exempt from permits in accordance with Section 105.2 of the California Building Code.~~

Item 1-7

**Chapter 1, Administration, Division I, California Administration, Section 1.11.7
Temporary Structures and Uses**

[The SFM is proposing to amend the section listed below]

1.11.7 Temporary Structures and Uses. See Title 24, Part 2, California Building Code, Section 1078.

**CHAPTER 1
ADMINISTRATION**

**DIVISION II
ADMINISTRATION**

Item 1-8

Chapter 1, Administration, Division II, Administration

[The SFM proposes to not adopt Chapter 1, Administration, Division II Administration.]

Notation:

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

**CHAPTER 2
DEFINITIONS**

Item 2-1

Chapter 2, Definitions

[The SFM proposes to adopt Chapter 2 without amendments.]

Notation:

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

CHAPTER 3 GENERAL REGULATIONS

Item 3-1 Chapter 3, General Regulations

[The SFM proposes to adopt Chapter 3 and carry forward existing amendments.]

Notation:

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

CHAPTER 4 PLUMBING FIXTURES AND FIXTURE FITTINGS

Item 4-1 Chapter 4, Plumbing Fixtures and Fixture Fittings

[The SFM proposes to not adopt Chapter 4.]

Notation:

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

CHAPTER 5 WATER HEATERS

Item 5-1
Chapter 5, Water Heaters

[The SFM proposes to adopt Chapter 5 and carry forward existing amendments.]

Notation:

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

CHAPTER 6
WATER SUPPLY AND DISTRIBUTION

Item 6-1
Chapter 6, Water Supply And Distribution, Section 603.5.14 Protection from Fire Systems

[The SFM is proposing to maintain the adoption by reference California amendment Section 603.5.14 Note.]

Item 6-2
Chapter 6, Water Supply and Distribution, Section 612.1 Where Required

[Associated proposals 6-3 and 17-1]

612.1 Installation. Residential Sprinkler Systems shall be installed in compliance with the California Residential Code or the California Fire Code. ~~Where Required. Where residential sprinkler systems are required in one and two family dwellings or townhouses, the systems shall be installed by personnel, installer, or both, certified in accordance with ASSE Series 7000 in accordance with this section or NFPA 13D. This section shall be considered equivalent to NFPA 13D. Partial residential sprinkler systems shall be permitted to be installed in buildings not required to be equipped with a residential sprinkler system.~~

Item 6-3
Chapter 6, Water Supply and Distribution, Sections 612.2 through 612.7.2

[Delete and remove Sections 612.2 through 612.7.2, including all Tables in Section 612. Associated proposals 6-2 and 17-1]

~~**612.2 Types of Systems.** This section shall apply to standalone and multipurpose wet-pipe sprinkler systems that do not include the use of antifreeze. A multipurpose fire sprinkler system shall provide potable water to both fire sprinklers and plumbing~~

~~fixtures. A stand-alone sprinkler system shall be separate and independent from the potable water distribution system. A backflow preventer shall not be required to separate a stand-alone sprinkler system from the water distribution system where the sprinkler system material is in accordance with the requirements of Section 604.0.~~

~~**612.3 Sprinklers.** Sprinklers shall be installed in accordance with Section 612.3.1 through Section 612.3.7.~~

~~**612.3.1 Required Sprinkler Locations.** Sprinklers shall be installed to protect all floor areas of a dwelling unit in one and two-family dwellings or townhouses.~~

Exceptions:

~~(1) Attics, crawl spaces, and normally unoccupied concealed spaces that do not contain fuel-fired appliances do not require sprinklers. In attics, crawl spaces, and normally unoccupied concealed spaces that contain fuel-fired equipment, a sprinkler shall be provided to protect the equipment; however, sprinklers shall not be required in the remainder of the space.~~

~~(2) Clothes closets, linen closets, and pantries that do not exceed 24 square feet (2.2 m²) in area, with the smallest dimension not exceeding 3 feet (914 mm) and having wall and ceiling surfaces of gypsum board.~~

~~(3) Bathrooms and toilet rooms that do not exceed 55 square feet (5.1 m²) in area.~~

~~(4) Garages; carports; *with no habitable space above*; open *attached* exterior porches; unheated entry areas, such as mud rooms, that are adjacent to an exterior door; and similar areas.~~

~~(5) Covered unheated projections of the building at entrances/exits provided it is not the only means of egress from the dwelling unit.~~

~~(6) Ceiling pockets that meet the following requirements:~~

~~(a) The total volume of an unprotected ceiling pocket does not exceed 100 cubic feet (2.83 m³).~~

~~(b) The entire floor under the unprotected ceiling pocket is protected by the sprinklers at the lower ceiling elevation.~~

~~(c) Each unprotected ceiling pocket is separated from an adjacent unprotected ceiling pocket by not less than a 10 feet (3048 mm) horizontal distance.~~

~~(d) The interior finish of the unprotected ceiling pocket is noncombustible material.~~

~~(e) Skylights not exceeding 32 square feet (2.97 m²).~~
~~612.3.2 Sprinkler Installation. Sprinklers shall be listed residential sprinklers and shall be installed in accordance with the sprinkler manufacturer's installation instructions.~~
~~612.3.3 Temperature Rating and Separation from Heat Sources. Sprinklers shall have a temperature rating of not less than 135°F (57°C) and not more than 170°F (77°C). Sprinklers shall be separated from heat sources in accordance with the sprinkler manufacturer's installation instructions.~~

612.3.2 Sprinkler Installation. Sprinklers shall be listed residential sprinklers and shall be installed in accordance with the sprinkler manufacturer's installation instructions.

612.3.3 Temperature Rating and Separation from Heat Sources. Sprinklers shall have a temperature rating of not less than 135°F (57°C) and not more than 170°F (77°C). Sprinklers shall be separated from heat sources in accordance with the sprinkler manufacturer's installation instructions.

Exception: Sprinklers located close to a heat source in accordance with Section 612.3.3.1 shall be intermediate temperature sprinklers.

612.3.3.1 Intermediate Temperature Sprinklers. Sprinklers shall have an intermediate temperature rating of not less than 175°F (79°C) and not more than 225°F (107°C) where installed in the following locations:

- ~~(1) Directly under skylights, where the sprinkler is exposed to direct sunlight.~~
- ~~(2) In attics and concealed spaces located directly beneath a roof.~~
- ~~(3) Within the distance to a heat source in accordance with Table 612.3.3.1.~~

612.3.4 Freezing Areas. The piping system shall be protected in accordance with the requirements of Chapter 3. Where sprinklers are required in areas that are subject to freezing, dry sidewall or dry pendent sprinklers extending from a non-freezing area into a freezing area shall be installed. *Where fire sprinkler piping cannot be adequately protected against freezing, the system shall be designed and installed in accordance with NFPA 13D.*

612.3.5 Coverage Area Limit. The area of coverage of a single sprinkler shall be based on the sprinkler listing and the sprinkler manufacturer's installation instructions. The area of coverage of a single sprinkler shall not exceed 400 square feet (37.16 m²).

**TABLE 612.3.3.1
LOCATIONS WHERE INTERMEDIATE TEMPERATURE
SPRINKLERS ARE REQUIRED**

| HEAT SOURCE | DISTANCE FROM HEAT SOURCE ¹ | |
|---|--|---------------------------|
| | MINIMUM DISTANCE ² (inches) | MAXIMUM DISTANCE (inches) |
| Fireplace, Side of Open or Recessed Fireplace | 12 | 36 |
| Fireplace, Front of Recessed Fireplace | 36 | 60 |
| Coal and Wood Burning Stove | 12 | 42 |
| Kitchen Range Top | 9 | 18 |
| Oven | 9 | 18 |
| Vent Connector or Chimney Connector | 9 | 18 |
| Heating Duct, Not Insulated | 9 | 18 |
| Hot Water Pipe, Not Insulated | 6 | 12 |
| Side of Ceiling or Wall Warm Air Register | 12 | 24 |
| Front of Wall Mounted Warm Air Register | 18 | 36 |
| Water Heater, Furnace, or Boiler | 3 | 6 |
| Luminaire up to 250 Watts | 3 | 6 |
| Luminaire 250 Watts up to 499 Watts | 6 | 12 |

For SI units: 1 inch = 25.4 mm

Notes:

1 Distances shall be measured in a straight line from the nearest edge of the heat source to the nearest edge of the sprinkler.

2 Sprinklers shall not be located at distances less than the minimum table distance unless the sprinkler listing allows a lesser distance.

612.3.6 Obstructions to Sprinkler Coverage. The water discharge from a sprinkler shall not be blocked by obstructions unless additional sprinklers are installed to protect the obstructed area. Additional sprinklers shall not be required where sprinkler separation from obstructions is in accordance with the requirements of Table 612.3.6, or the minimum distances specified in the sprinkler manufacturer's installation instructions.

~~**612.3.6.1 Additional Requirements for Pendent Sprinklers.** Pendent sprinklers located within 3 feet (914 mm) of the center of a ceiling fan, surface-mounted ceiling luminaire, or similar object shall be considered to be obstructed, and additional sprinklers shall be provided.~~

~~**612.3.6.2 Additional Requirements for Sidewall Sprinklers.** Sidewall sprinklers located within 5 feet (1524 mm) of the center of a ceiling fan, surface-mounted ceiling luminaire, or similar object shall be considered to be obstructed, and additional sprinklers shall be provided.~~

~~**612.3.7 Sprinkler Modifications Prohibited.** Sprinklers shall not be painted, caulked, or modified. A sprinkler that has been painted, caulked, modified, or damaged shall be replaced with a new sprinkler.~~

~~**612.3.8 Backflow Protection.** A backflow preventer shall not be required to separate a sprinkler system from the water distribution system, provided that:~~

~~(1) The system complies with NFPA 13D or Section R313, and~~

~~(2) Piping material are suitable for potable water in accordance with the California Plumbing Code, and~~

~~(3) The system does not contain antifreeze or have a fire department connection.~~

~~**612.4 Sprinkler Piping System.** Sprinkler piping systems shall be installed in accordance with Section 612.4.1 through Section 612.4.5.~~

~~**612.4.1 General.** Sprinkler piping shall be installed in accordance with the requirements for water distribution piping. Sprinkler piping shall comply with the material requirements for cold water distribution piping. For multipurpose piping systems, the sprinkler piping shall connect to and be a part of the cold water distribution piping system.~~

~~**612.4.2 Nonmetallic Pipe and Tubing.** Nonmetallic pipe and tubing, such as CPVC, PEX-AL-PEX, PE-RT, and PEX, shall be certified for residential sprinkler installations and shall have a pressure rating of not less than 130 psi (896 kPa) at 120°F (49°C).~~

~~**612.4.2.1 Nonmetallic Pipe Protection.** Nonmetallic pipe and tubing systems shall be protected from exposure to the occupied space by a layer of not less than 3/8 of an inch (9.5 mm) thick gypsum wallboard, 1/2 of an inch (12.7 mm) thick plywood, or other material having a 15-minute fire rating.~~

~~**Exceptions:**~~

~~(1) Pipe protection shall not be required in areas that are not required to be protected with sprinklers in accordance with Section 612.3.1.~~

~~(2) Pipe protection shall not be required where exposed piping is permitted by the pipe third party listing.~~

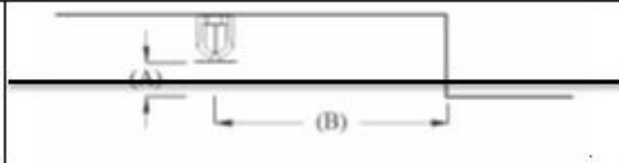
~~**612.4.2.2 Sprinkler Installation on Systems Assembled with Solvent Cement.** The solvent cementing of fittings shall be completed, and threaded adaptors for sprinklers shall be verified as being clear of excess cement before the installation of sprinklers on systems assembled with solvent cement.~~

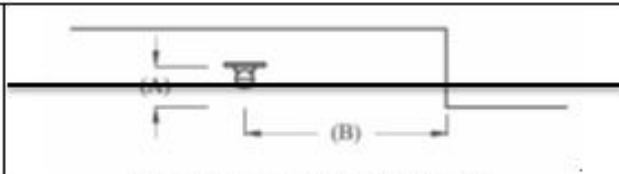
~~**612.4.3 Shutoff Valves Prohibited.** Shutoff valves shall not be installed in a location where the valve would isolate piping serving one or more sprinklers. Shutoff valves shall only be permitted for the entire water distribution system.~~

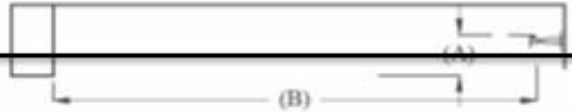
~~**612.4.4 Single Dwelling Limit.** The sprinkler piping beyond the service valve located at the beginning of the water distribution system shall serve only one dwelling unit.~~

~~**612.4.5 Drain.** A 1/2 inch (15 mm) drain for the sprinkler system shall be provided on the system side of the water distribution shutoff valve.~~

**TABLE 612.3.6
 MINIMUM SEPARATION FROM OBSTRUCTION**

| <p>PENDENT SPRINKLERS</p> |  |
|--|--|
| <p>DISTANCE FROM DEFLECTOR TO PLANE AT BOTTOM OF OBSTRUCTION (A) (inches)</p> | <p>MINIMUM DISTANCE TO OBSTRUCTION (B) (feet)</p> |
| 4 | 4 ^{1/2} |
| 3 | 3 |
| 5 | 4 |
| 7 | 4 ^{1/2} |
| 9 | 6 |
| 11 | 6 ^{1/2} |
| 14 | 7 |

| <p>SIDEWALL SPRINKLER SIDE OBSTRUCTION</p> |  |
|--|--|
| <p>DISTANCE FROM DEFLECTOR TO PLANE AT BOTTOM OF OBSTRUCTION (A) (inches)</p> | <p>MINIMUM DISTANCE TO OBSTRUCTION (B) (feet)</p> |
| 4 | 4 ^{1/2} |
| 3 | 3 |
| 5 | 4 |
| 7 | 4 ^{1/2} |
| 9 | 6 |
| 11 | 6 ^{1/2} |
| 14 | 7 |

| SIDEWALL SPRINKLER FORWARD OBSTRUCTION |  |
|--|--|
| DISTANCE FROM DEFLECTOR TO PLANE AT BOTTOM OF OBSTRUCTION (A) (inches) | MINIMUM DISTANCE TO OBSTRUCTION (B) (feet) |
| 1 | 8 |
| 2 | 10 |
| 3 | 11 |
| 4 | 12 |
| 6 | 13 |
| 7 | 14 |
| 9 | 15 |
| 11 | 16 |
| 14 | 17 |

For SI units: 1 inch = 25.4 mm, 1 foot = 304.8 mm

612.5 Sprinkler Piping Design. Sprinkler piping systems shall be sized in accordance with Section 612.5.1 through Section 612.5.3.2.2.

612.5.1 Determining System Design Flow. The sizing of the sprinkler piping system shall be based on the flow rate and pressure of each sprinkler in accordance with Section 612.5.1.1 and the number of sprinklers in accordance with Section 612.5.1.3.

612.5.1.1 Determining Required Flow Rate for Each Sprinkler. The minimum flow rate and pressure for each residential sprinkler shall be in accordance with the manufacturer's published data for the specific sprinkler model based on the following:

- (1) The area of coverage.
- (2) The ceiling configuration.
- (3) The temperature rating.
- (4) Additional conditions specified by the sprinkler manufacturer.

612.5.1.2 System Flow Rate. The flow rate used for sizing the sprinkler piping system shall be based on the following:

- (1) The flow rate for a room having only one sprinkler shall be the flow rate required for the sprinkler in accordance with Section 612.5.1.1.
- (2) The flow rate for a room having two or more sprinklers shall be determined by identifying the sprinkler in the room with the highest

~~required flow rate in accordance with Section 612.5.1.1 and multiplying that flow rate by 2.~~

~~(3) Where the sprinkler manufacturer specifies different criteria for ceiling configurations that are not smooth, flat, and horizontal the required flow rate for that room shall be in accordance with the sprinkler manufacturer's instructions.~~

~~(4) The flow rate used for sizing the sprinkler system shall be the flow required by the room with the largest flow rate in accordance with Section 612.5.1.2(1), Section 612.5.1.2(2), and Section 612.5.1.2(3).~~

~~(5) For the purpose of this section, it shall be permissible to reduce the flow rate for a room by subdividing the space into two or more rooms, where each room is evaluated separately on the required design flow rate. Each room shall be bounded by walls and a ceiling. Openings in walls shall have a lintel not less than 8 inches (203 mm) in depth, and each lintel shall form a solid barrier between the ceiling and the top of the opening.~~

~~**612.5.1.3 Fire Sprinklers Attached Garages, and Carports with Habitable Space Above.** Attached garages, and carports with habitable space above shall be protected by fire sprinklers in accordance with this section and Section R313. Protection shall be provided in accordance with one of the following:~~

~~(1) Residential Sprinklers installed in accordance with their listing.~~

~~(2) Extended Coverage sprinklers discharging water not less than their listed flow rate for Light Hazard in accordance with NFPA 13.~~

~~(3) Quick-Response spray sprinklers at light hazard spacing in accordance with NFPA 13 designed to discharge at 0.05 gpm/ft² density (minimum). The system demand shall be permitted to be limited to the number of sprinklers in the compartment but shall not exceed two sprinklers for hydraulic calculation purposes. Garage doors shall not be considered obstructions and shall be permitted to be ignored for placement and calculation of sprinklers.~~

~~**612.5.2 Sprinkler Pipe Water Supply.** The water supply for a multipurpose or stand-alone sprinkler system shall be provided by the public water main, private water main, private well system, or storage tank. The water supply required shall be determined in accordance with Section 612.5.1.2 at a pressure not less than that used in accordance with Section 612.5.3. Where a water supply serves both domestic and fire sprinkler systems, 5 gpm (19 L/min) shall be added to the sprinkler system demand at the point where the systems are connected, to determine the size of common piping and the size of the total water supply~~

requirements where no provision is made to prevent flow into the domestic water system upon operation of a sprinkler.

612.5.2.1 Water Pressure from Individual Sources. Where a dwelling unit water supply is from a tank system, a private well system, a pump, or a combination of these, the available water pressure shall be based on the minimum pressure control setting of the pump.

612.5.2.2 Required Capacity. The water supply shall have the capacity to provide the required flow rate to the sprinklers for a period of time as follows:

(1) Seven minutes for one-story dwelling units less than 2000 square feet (185.8 m²) in area. *For the purpose of determining the area of the dwelling unit, the area of attached garages and attached open carports, porches, balconies and patios shall not be included.*

(2) Ten minutes for multi-level dwelling units and one-story dwelling units not less than 2000 square feet (185.8 m²) in the area. *For the purpose of determining the area of the dwelling unit, the area of attached garages and attached open carports, porches, balconies, and patios shall not be included.* Where a well system, a water supply tank system, a pump, or a combination thereof is used *the water supply shall serve both domestic and fire sprinkler systems.* A combination of well capacity and tank storage shall be permitted to meet the capacity requirement.

612.5.3 Sprinkler Pipe Sizing. The sprinkler piping shall be sized for the flow rate in accordance with Section 612.5.1. The flow rate required to supply the plumbing fixtures shall not be required to be added to the sprinkler design flow for multipurpose or stand-alone piping systems. The sizing of the water supply to the plumbing fixtures shall be determined in accordance with this chapter. For multipurpose piping systems, the largest pipe size required based on either the sprinkler piping calculations or the water distribution piping calculations shall be installed.

612.5.3.1 Sprinkler Pipe Sizing Method. The sprinkler pipe shall be sized using the prescriptive method in Section 612.5.3.2 or by hydraulic calculation in accordance with NFPA 13D. The sprinkler pipe size from the water supply source to a sprinkler shall be not less than 3/4 of an inch (20 mm) in diameter. Threaded adapter fittings at the point where sprinklers are attached to the piping shall be not less than 1/2 of an inch (15 mm) in diameter.

612.5.3.2 Prescriptive Pipe Sizing Method. The sprinkler pipe shall be sized by determining the available pressure to offset friction loss in piping and based on the piping material, diameter and length using the equation in Section 612.5.3.2.1 and the procedure in Section 612.5.3.2.2.

~~**612.5.3.2.1 Available Pressure Equation.** The available system pressure (P_t) for sizing the sprinkler piping shall be determined in accordance with the Equation 612.5.3.2.1.~~

~~(Equation 612.5.3.2.1)~~

$$~~P_t = P_{sup} - PL_{ws} - PL_m - PL_d - PL_e - P_{sp}~~$$

~~Where:~~

~~P_t = Pressure used for sizing the system in Table 612.5.3.2(4) through Table 612.5.3.2(9)~~

~~P_{sup} = Pressure available from the water supply source~~

~~PL_{ws} = Pressure loss in the water service pipe~~

~~PL_m = Pressure loss through the water meter~~

~~PL_d = Pressure loss from devices other than the water meter~~

~~PL_e = Pressure loss associated with changes in elevation~~

~~P_{sp} = Maximum pressure required by a sprinkler~~

~~**612.5.3.2.2 Calculation Procedure.** The following procedure shall be used to determine the minimum size of the residential sprinkler piping:~~

~~**Step 1 – Determine P_{sup}**~~

~~Obtain the supply pressure available from the water main from the water purveyor, or for an individual source; the available supply pressure shall be in accordance with Section 612.5.2.1.~~

TABLE 612.5.3.2(1)
WATER SERVICE PRESSURE LOSS (PL_{ws})^{1, 2, 3}

| FLOW RATE (gpm) | 3/4 INCH WATER SERVICE PRESSURE LOSS (psi) | | | | 1 INCH WATER SERVICE PRESSURE LOSS (psi) | | | | 1 1/4 INCH WATER SERVICE PRESSURE LOSS (psi) | | | |
|-----------------|--|--------------------|---------------------|----------------------|--|--------------------|---------------------|----------------------|--|--------------------|---------------------|----------------------|
| | 40 FEET OR LESS | 44 FEET TO 76 FEET | 76 FEET TO 100 FEET | 104 FEET TO 160 FEET | 40 FEET OR LESS | 44 FEET TO 76 FEET | 76 FEET TO 100 FEET | 104 FEET TO 160 FEET | 40 FEET OR LESS | 44 FEET TO 76 FEET | 76 FEET TO 100 FEET | 104 FEET TO 160 FEET |
| 8 | 5.1 | 8.7 | 11.8 | 17.4 | 1.5 | 2.5 | 3.4 | 5.1 | 0.6 | 1.0 | 1.3 | 1.9 |
| 10 | 7.7 | 13.1 | 17.8 | 26.3 | 2.3 | 3.8 | 5.2 | 7.7 | 0.8 | 1.4 | 2.0 | 2.9 |
| 12 | 10.8 | 18.4 | 24.9 | NP | 3.2 | 5.4 | 7.3 | 10.7 | 1.2 | 2.0 | 2.7 | 4.0 |
| 14 | 14 | 24.5 | NP | NP | 4.2 | 7.1 | 9.6 | 14.3 | 1.6 | 2.7 | 3.6 | 5.4 |
| 16 | 4 | NP | NP | NP | 5.4 | 9.1 | 12.4 | 18.3 | 2.0 | 3.4 | 4.7 | 6.9 |
| 18 | 18.4 | NP | NP | NP | 6.7 | 11.4 | 15.4 | 22.7 | 2.5 | 4.3 | 5.8 | 8.6 |
| 20 | 22 | NP | NP | NP | 8.1 | 13.8 | 18.7 | 27.6 | 3.1 | 5.2 | 7.0 | 10.4 |
| 22 | 9 | NP | NP | NP | 9.7 | 16.5 | 22.7 | NP | 3.7 | 6.2 | 8.4 | 12.4 |
| 24 | 27 | NP | NP | NP | 11.4 | 19.3 | 27.6 | NP | 4.3 | 7.3 | 9.9 | 14.6 |
| 26 | 8 | NP | NP | NP | 13.2 | 22.4 | NP | NP | 5.0 | 8.5 | 11.4 | 16.9 |
| 28 | NP | NP | NP | NP | 15.1 | 25.7 | NP | NP | 5.7 | 9.7 | 13.1 | 19.4 |
| 30 | NP | NP | NP | NP | 17.2 | NP | NP | NP | 6.5 | 11.0 | 14.9 | 22.0 |
| 32 | NP | NP | NP | NP | 19.4 | NP | NP | NP | 7.3 | 12.4 | 16.8 | 24.8 |
| 34 | NP | NP | NP | NP | 21.7 | NP | NP | NP | 8.2 | 13.9 | 18.8 | NP |
| 36 | NP | NP | NP | NP | 24.1 | NP | NP | NP | 9.1 | 15.4 | 20.9 | NP |

For SI units: 1 gallon per minute = 0.06 L/s, 1 pound-force per square inch = 6.89 kPa, 1 inch = 25 mm, 1 foot = 304.8 mm

Notes:

1 Values are applicable for underground piping materials and are based on polyethylene pipe having an SDR of 11 and a Hazen Williams C Factor of 150.

2 Values include the following length allowances for fittings: 25 percent length increase for actual lengths up to 100 feet (30 480 mm) and 15 percent length increase for actual lengths over 100 feet (30 480 mm).

3 NP — Means not permitted.

The pressure shall be the flowing pressure available at the flow rate used when applying Table 612.5.3.2(1).

Step 2 – Determine PL_{ws}

Use Table 612.5.3.2(1) to determine the pressure loss in the water service pipe based on the size of the water service. Where the water service supplies more than one dwelling unit, 5 gpm (0.3 L/s) shall be added to the sprinkler flow rate.

Step 3 – Determine PL_m

Use Table 612.5.3.2(2) to determine the pressure loss from the water meter based on the water meter size.

Step 4 – Determine PL_d

~~Determine the pressure loss from devices, other than the water meter, installed in the piping system supplying sprinklers such as pressure-reducing valves, backflow preventers, water softeners, or water filters. Device pressure losses shall be based on the device manufacturer's specifications. The flow rate used to determine pressure loss shall be the sprinkler flow rate from Section 612.5.1.2. As an alternative to deducting pressure loss for a device, an automatic bypass valve shall be installed to divert flow around the device when a sprinkler activates.~~

Step 5 – Determine PL_e

~~Use Table 612.5.3.2(3) to determine the pressure loss associated with changes in elevation. The elevation used in applying the table shall be the difference between the elevation where the water source pressure was measured and the elevation of the highest sprinkler.~~

Step 6 – Determine P_{sp}

~~Determine the maximum pressure required by an individual sprinkler based on the flow rate from Section 612.5.1.1. The minimum pressure required is specified in the sprinkler manufacturer's published data for the specific sprinkler model based on the selected flow rate.~~

Step 7 – Calculate P_t

~~Using Equation 612.5.3.2.1, calculate the available system pressure for sizing the sprinkler piping.~~

Step 8 – Determine the maximum allowable pipe length

~~Use Table 612.5.3.2(4) through Table 612.5.3.2(9) to select a material and size for the residential sprinkler piping. The piping material and size shall be acceptable where the developed length of pipe between the inside water service valve and the most remote sprinkler does not exceed the maximum allowable length specified by the applicable table. Interpolation of P_t between the tabular values shall be permitted. The maximum allowable length of piping in Table 612.5.3.2(4) through Table 612.5.3.2(9) incorporates an adjustment for pipe fittings, and no additional consideration of friction losses associated with pipe fittings shall be required.~~

TABLE 612.5.3.2(2)
MINIMUM WATER METER PRESSURE LOSS (PL_m)^{1,2}

| FLOW RATE (gpm) | 5/8 INCH METER PRESSURE LOSS (psi) | 3/4 INCH METER PRESSURE LOSS (psi) | 1 INCH METER PRESSURE LOSS (psi) |
|----------------------------|---|---|---|
| 8 | 2 | 1 | 1 |
| 10 | 3 | 1 | 1 |
| 12 | 4 | 1 | 1 |
| 14 | 5 | 2 | 1 |
| 16 | 7 | 3 | 1 |
| 18 | 9 | 4 | 1 |
| 20 | 11 | 4 | 2 |
| 22 | NP | 5 | 2 |
| 24 | NP | 5 | 2 |
| 26 | NP | 6 | 2 |
| 28 | NP | 6 | 2 |
| 30 | NP | 7 | 2 |
| 32 | NP | 7 | 3 |
| 34 | NP | 8 | 3 |
| 36 | NP | 8 | 3 |

For SI units: 1 gallon per minute = 0.06 L/s, 1 pound-force per square inch = 6.89 kPa, 1 inch = 25 mm

Notes:

1 Table 612.5.3.2(2) establishes conservative values for water meter pressure loss for installations where the water meter loss is unknown. Where the actual water meter pressure loss is known, PL_m shall be the pressure loss as specified by the meter manufacturer.

2 NP— Means not permitted.

612.6 Instructions and Signs. ~~An owner’s manual for the fire sprinkler system shall be provided to the owner. A sign or valve tag shall be installed at the main shutoff valve to the water distribution system stating the following: “Warning, the water system for this home supplies fire sprinklers that require certain flow and pressure to fight a fire. Devices that restrict the flow, decrease the pressure, or automatically shut-off the water to the fire sprinkler system, such as water softeners, filtration systems, and automatic shutoff valves shall not be added to this system without a review of the fire sprinkler system by a fire protection specialist. Do not remove this sign.”~~

612.7 Inspection and Testing. ~~The inspection and testing of sprinkler systems shall be in accordance with Section 612.7.1 and Section 612.7.2.~~

612.7.1 Pre-Concealment Inspection. ~~The following shall be verified prior to the concealment of any sprinkler system piping:~~

- ~~(1) Sprinklers are installed in all areas in accordance with Section 612.3.1.~~

~~(2) Where sprinkler water spray patterns are obstructed by construction features, luminaires or ceiling fans, additional sprinklers are installed in accordance with Section 612.3.6.~~

~~(3) Sprinklers are the correct temperature rating and are installed at or beyond the required separation distances from heat sources in accordance with Section 612.3.3 and Section 612.3.3.1.~~

~~(4) The minimum pipe size in accordance with the requirements of Table 612.5.3.2(4) through Table 612.5.3.2(9) or, where the piping system was hydraulically calculated in accordance with Section 612.5.3.1, the size used in the hydraulic calculation.~~

~~(5) The pipe length does not exceed the length permitted by Table 612.5.3.2(4) through Table 612.5.3.2(9) or, where the piping system was hydraulically calculated in accordance with Section 612.5.3.1, pipe lengths and fittings shall not exceed those used in the hydraulic calculation.~~

~~(6) Nonmetallic piping that conveys water to sprinklers is certified as having a pressure rating of not less than 130 psi (896 kPa) at 120°F (49°C).~~

~~(7) Piping is properly supported.~~

~~(8) The piping system is tested in accordance with Section 609.4.~~

612.7.2 Final Inspection. Upon completion of the residential sprinkler system, the system shall be inspected. The following shall be verified during the final inspection:

~~(1) Sprinklers are not painted, damaged, or otherwise hindered from the operation.~~

~~(2) Where a pump is required to provide water to the system, the pump starts automatically upon system water demand.~~

~~(3) Pressure reducing valves, water softeners, water filters, or other impairments to water flow that were not part of the original design has not been installed.~~

~~(4) The sign or valve tag in accordance with Section 612.6 is installed, and the owner's manual for the system is present.~~

**TABLE 612.5.3.2(3)
ELEVATION LOSS (PL_e)**

| ELEVATION (feet) | PRESSURE LOSS (psi) |
|------------------|---------------------|
| 5 | 2.2 |
| 10 | 4.4 |
| 15 | 6.5 |
| 20 | 8.7 |
| 25 | 10.9 |
| 30 | 13.0 |
| 35 | 15.2 |
| 40 | 17.4 |

For SI units: 1 foot = 304.8 mm, 1 pound-force per square inch = 6.89 kPa

**TABLE 612.5.3.2(4)
ALLOWABLE PIPE LENGTH FOR 3/4 INCH TYPE M COPPER WATER TUBING***

| SPRINKLER FLOW RATE (GPM) | WATER DISTRIBUTION SIZE (INCH) | AVAILABLE PRESSURE P (psi) | | | | | | | | | |
|---------------------------|--------------------------------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| | | ALLOWABLE LENGTH OF PIPE FROM SERVICE VALVE TO FARTHEST SPRINKLER (FEET) | | | | | | | | | |
| 1.5 | 1/2 | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP |
| 1.5 | 3/4 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 |
| 2.0 | 1/2 | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP |
| 2.0 | 3/4 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 2.5 | 1/2 | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP |
| 2.5 | 3/4 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 |
| 3.0 | 1/2 | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP |
| 3.0 | 3/4 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 |
| 3.5 | 1/2 | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP |
| 3.5 | 3/4 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 |
| 4.0 | 1/2 | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP |
| 4.0 | 3/4 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 |
| 4.5 | 1/2 | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP |
| 4.5 | 3/4 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
| 5.0 | 1/2 | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP |
| 5.0 | 3/4 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 |
| 5.5 | 1/2 | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP |
| 5.5 | 3/4 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 |
| 6.0 | 1/2 | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP |
| 6.0 | 3/4 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 |
| 6.5 | 1/2 | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP |
| 6.5 | 3/4 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 |
| 7.0 | 1/2 | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP |
| 7.0 | 3/4 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 |
| 7.5 | 1/2 | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP |
| 7.5 | 3/4 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 |
| 8.0 | 1/2 | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP |
| 8.0 | 3/4 | 75 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 |
| 8.5 | 1/2 | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP |
| 8.5 | 3/4 | 80 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 |
| 9.0 | 1/2 | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP |
| 9.0 | 3/4 | 85 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 |
| 9.5 | 1/2 | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP |
| 9.5 | 3/4 | 90 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 |
| 10.0 | 1/2 | NP | NP | NP | NP | NP | NP | NP | NP | NP | NP |
| 10.0 | 3/4 | 95 | 100 | 105 | 110 | 115 | 120 | 125 | 130 | 135 | 140 |

For SI units: 1 pound-force per square inch = 6.89 kPa, 1 gallon per minute = 0.06 L/s, 1 inch = 25 mm, 1 foot = 304.8 mm

* NP — Means not permitted.

TABLE 612.5.3.2(5)
ALLOWABLE PIPE LENGTH FOR 1 INCH TYPE M COPPER WATER TUBING

| SPRINKLER FLOW RATE (gpm) | WATER DISTRIBUTION SIZE (inch) | AVAILABLE PRESSURE - P _r (psi) | | | | | | | | | |
|---------------------------------|---|---|------|------|------|------|------|------|------|------|------|
| | | 45 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| | | ALLOWABLE LENGTH OF PIPE FROM SERVICE VALVE TO FARTHEST SPRINKLER (feet) | | | | | | | | | |
| 8 | 4 | 806 | 1075 | 1243 | 1412 | 1581 | 2140 | 2418 | 2687 | 2956 | 3224 |
| 9 | 4 | 648 | 884 | 1080 | 1298 | 1412 | 1728 | 1945 | 2164 | 2377 | 2603 |
| 10 | 4 | 533 | 714 | 880 | 1067 | 1245 | 1422 | 1600 | 1778 | 1956 | 2134 |
| 11 | 4 | 447 | 598 | 745 | 894 | 1043 | 1192 | 1341 | 1491 | 1640 | 1789 |
| 12 | 4 | 381 | 508 | 624 | 741 | 858 | 1015 | 1142 | 1269 | 1396 | 1523 |
| 13 | 4 | 328 | 438 | 547 | 657 | 766 | 875 | 985 | 1094 | 1204 | 1313 |
| 14 | 4 | 288 | 382 | 477 | 572 | 668 | 763 | 860 | 954 | 1049 | 1145 |
| 15 | 4 | 252 | 338 | 420 | 504 | 588 | 672 | 766 | 840 | 924 | 1008 |
| 16 | 4 | 224 | 308 | 373 | 447 | 522 | 596 | 671 | 745 | 820 | 894 |
| 17 | 4 | 200 | 266 | 323 | 400 | 466 | 533 | 600 | 666 | 733 | 799 |
| 18 | 4 | 180 | 240 | 300 | 360 | 420 | 470 | 530 | 590 | 650 | 710 |
| 19 | 4 | 163 | 217 | 271 | 325 | 380 | 434 | 488 | 542 | 597 | 651 |
| 20 | 4 | 148 | 197 | 247 | 296 | 345 | 395 | 444 | 493 | 543 | 592 |
| 21 | 4 | 135 | 180 | 225 | 270 | 315 | 360 | 406 | 451 | 496 | 541 |
| 22 | 4 | 124 | 165 | 207 | 248 | 289 | 331 | 372 | 413 | 455 | 496 |
| 23 | 4 | 114 | 152 | 190 | 228 | 267 | 305 | 343 | 381 | 419 | 457 |
| 24 | 4 | 108 | 144 | 176 | 211 | 246 | 282 | 317 | 352 | 387 | 422 |
| 25 | 4 | 98 | 134 | 163 | 196 | 228 | 261 | 294 | 326 | 359 | 392 |
| 26 | 4 | 91 | 124 | 152 | 182 | 212 | 243 | 273 | 304 | 334 | 364 |
| 27 | 4 | 85 | 113 | 142 | 170 | 198 | 226 | 255 | 283 | 311 | 340 |
| 28 | 4 | 79 | 106 | 132 | 160 | 185 | 212 | 238 | 265 | 291 | 318 |
| 29 | 4 | 74 | 99 | 124 | 149 | 174 | 198 | 223 | 248 | 273 | 298 |
| 30 | 4 | 70 | 93 | 116 | 140 | 163 | 186 | 210 | 233 | 256 | 280 |
| 31 | 4 | 66 | 88 | 110 | 132 | 153 | 175 | 197 | 219 | 241 | 263 |
| 32 | 4 | 62 | 83 | 103 | 124 | 145 | 165 | 186 | 207 | 227 | 248 |
| 33 | 4 | 59 | 78 | 98 | 117 | 137 | 156 | 176 | 195 | 215 | 234 |
| 34 | 4 | 55 | 74 | 92 | 111 | 129 | 148 | 166 | 185 | 203 | 222 |
| 35 | 4 | 53 | 70 | 88 | 105 | 123 | 140 | 158 | 175 | 193 | 210 |
| 36 | 4 | 50 | 66 | 83 | 100 | 118 | 133 | 150 | 166 | 183 | 199 |
| 37 | 4 | 47 | 63 | 79 | 95 | 111 | 126 | 142 | 158 | 174 | 190 |
| 38 | 4 | 45 | 60 | 75 | 90 | 105 | 120 | 135 | 150 | 165 | 181 |
| 39 | 4 | 43 | 57 | 72 | 88 | 100 | 115 | 129 | 143 | 158 | 172 |
| 40 | 4 | 41 | 55 | 68 | 82 | 96 | 109 | 123 | 137 | 150 | 164 |

For SI units: 1 pound force per square inch = 6.89 kPa, 1 gallon per minute = 0.06 L/s, 1 inch = 25 mm, 1 foot = 304.8 mm

TABLE 612.5.3.2(6)
ALLOWABLE PIPE LENGTH FOR 3/4 INCH IPS CPVC PIPE

| SPRINKLER FLOW RATE (GPM) | WATER DISTRIBUTION SIZE (inch) | AVAILABLE PRESSURE P_a (psi) | | | | | | | | | |
|---------------------------------|---|---|-----|-----|-----|-----|-----|------|------|------|------|
| | | 45 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| | | ALLOWABLE LENGTH OF PIPE FROM SERVICE VALVE TO FARTHEST SPRINKLER (feet) | | | | | | | | | |
| 8 | 3/4 | 348 | 465 | 584 | 697 | 813 | 929 | 1045 | 1161 | 1278 | 1394 |
| 9 | 3/4 | 289 | 374 | 467 | 560 | 654 | 747 | 841 | 934 | 1027 | 1121 |
| 10 | 3/4 | 231 | 307 | 384 | 461 | 538 | 615 | 692 | 780 | 846 | 922 |
| 11 | 3/4 | 193 | 258 | 322 | 387 | 451 | 515 | 580 | 644 | 709 | 773 |
| 12 | 3/4 | 165 | 219 | 274 | 329 | 384 | 439 | 494 | 549 | 603 | 658 |
| 13 | 3/4 | 142 | 189 | 237 | 284 | 331 | 378 | 428 | 473 | 520 | 568 |
| 14 | 3/4 | 124 | 165 | 208 | 247 | 289 | 330 | 371 | 412 | 454 | 496 |
| 15 | 3/4 | 109 | 145 | 182 | 218 | 254 | 290 | 327 | 363 | 399 | 438 |
| 16 | 3/4 | 97 | 129 | 164 | 193 | 228 | 263 | 299 | 332 | 364 | 397 |
| 17 | 3/4 | 88 | 115 | 144 | 173 | 202 | 230 | 259 | 288 | 317 | 346 |
| 18 | 3/4 | 78 | 104 | 130 | 155 | 181 | 207 | 233 | 259 | 285 | 311 |
| 19 | 3/4 | 70 | 94 | 117 | 141 | 164 | 188 | 211 | 234 | 258 | 281 |
| 20 | 3/4 | 64 | 86 | 107 | 128 | 149 | 171 | 192 | 213 | 236 | 258 |
| 21 | 3/4 | 58 | 78 | 97 | 117 | 138 | 158 | 176 | 196 | 214 | 234 |
| 22 | 3/4 | 54 | 71 | 89 | 107 | 125 | 143 | 161 | 179 | 197 | 214 |
| 23 | 3/4 | 49 | 66 | 82 | 99 | 115 | 132 | 148 | 165 | 181 | 198 |
| 24 | 3/4 | 46 | 61 | 76 | 91 | 107 | 122 | 137 | 152 | 167 | 183 |
| 25 | 3/4 | 42 | 58 | 71 | 86 | 99 | 113 | 127 | 141 | 156 | 169 |
| 26 | 3/4 | 39 | 52 | 66 | 79 | 92 | 105 | 118 | 131 | 144 | 157 |
| 27 | 3/4 | 37 | 49 | 61 | 73 | 86 | 98 | 110 | 122 | 135 | 147 |
| 28 | 3/4 | 34 | 46 | 57 | 69 | 80 | 92 | 103 | 114 | 126 | 137 |
| 29 | 3/4 | 32 | 43 | 54 | 64 | 75 | 86 | 96 | 107 | 118 | 129 |
| 30 | 3/4 | 30 | 40 | 50 | 60 | 70 | 81 | 91 | 101 | 111 | 121 |
| 31 | 3/4 | 28 | 38 | 47 | 57 | 66 | 76 | 85 | 95 | 104 | 114 |
| 32 | 3/4 | 27 | 36 | 45 | 54 | 63 | 71 | 80 | 89 | 98 | 107 |
| 33 | 3/4 | 26 | 34 | 42 | 51 | 59 | 68 | 76 | 84 | 93 | 101 |
| 34 | 3/4 | 24 | 32 | 40 | 48 | 56 | 64 | 72 | 80 | 88 | 96 |
| 35 | 3/4 | 23 | 30 | 38 | 46 | 53 | 61 | 68 | 76 | 83 | 91 |
| 36 | 3/4 | 22 | 29 | 36 | 43 | 50 | 57 | 65 | 72 | 79 | 86 |
| 37 | 3/4 | 20 | 27 | 34 | 41 | 48 | 55 | 61 | 68 | 75 | 82 |
| 38 | 3/4 | 20 | 26 | 33 | 39 | 46 | 52 | 59 | 65 | 72 | 78 |
| 39 | 3/4 | 19 | 25 | 31 | 37 | 43 | 50 | 56 | 62 | 68 | 74 |
| 40 | 3/4 | 18 | 24 | 30 | 36 | 41 | 47 | 53 | 59 | 65 | 71 |

For SI units: 1 pound force per square inch = 6.89 kPa, 1 gallon per minute = 0.06 L/s, 1 inch = 25 mm, 1 foot = 304.8 mm

TABLE 612.5.3.2(7)
ALLOWABLE PIPE LENGTH FOR 1 INCH IPS CPVC PIPE

| SPRINKLER FLOW RATE (gpm) | WATER DISTRIBUTION SIZE (inch) | AVAILABLE PRESSURE - P _r (psi) | | | | | | | | | |
|---------------------------|--------------------------------|--|------|------|------|------|------|------|------|------|------|
| | | 45 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| | | ALLOWABLE LENGTH OF PIPE FROM SERVICE VALVE TO FARTHEST SPRINKLER (feet) | | | | | | | | | |
| 8 | 4 | 4040 | 4308 | 4748 | 2008 | 2447 | 2707 | 3148 | 3408 | 3845 | 4105 |
| 9 | 4 | 343 | 4125 | 4408 | 4887 | 4068 | 2240 | 2630 | 2811 | 3003 | 3274 |
| 10 | 4 | 604 | 925 | 1157 | 1328 | 1610 | 1854 | 2682 | 2314 | 2645 | 2778 |
| 11 | 4 | 582 | 776 | 970 | 1184 | 1358 | 1652 | 1748 | 1040 | 2133 | 2327 |
| 12 | 4 | 406 | 680 | 828 | 904 | 1158 | 1324 | 1488 | 1854 | 1816 | 1084 |
| 13 | 4 | 427 | 570 | 712 | 854 | 907 | 1130 | 1284 | 1424 | 1668 | 1700 |
| 14 | 4 | 372 | 497 | 624 | 745 | 880 | 993 | 1117 | 1241 | 1388 | 1400 |
| 15 | 4 | 328 | 437 | 548 | 666 | 785 | 874 | 983 | 1003 | 1202 | 1211 |
| 16 | 4 | 291 | 388 | 485 | 582 | 679 | 776 | 873 | 970 | 1067 | 1164 |
| 17 | 4 | 280 | 347 | 433 | 520 | 607 | 693 | 780 | 867 | 954 | 1040 |
| 18 | 4 | 234 | 312 | 390 | 488 | 548 | 624 | 702 | 780 | 868 | 936 |
| 19 | 4 | 212 | 282 | 353 | 423 | 494 | 565 | 635 | 706 | 778 | 847 |
| 20 | 4 | 193 | 257 | 324 | 385 | 449 | 513 | 578 | 642 | 706 | 770 |
| 21 | 4 | 176 | 235 | 293 | 352 | 410 | 469 | 528 | 586 | 645 | 704 |
| 22 | 4 | 161 | 215 | 269 | 323 | 377 | 430 | 484 | 538 | 592 | 646 |
| 23 | 4 | 140 | 198 | 248 | 297 | 347 | 398 | 448 | 498 | 545 | 595 |
| 24 | 4 | 137 | 183 | 229 | 275 | 321 | 368 | 412 | 458 | 504 | 550 |
| 25 | 4 | 127 | 170 | 212 | 256 | 297 | 340 | 382 | 425 | 467 | 510 |
| 26 | 4 | 118 | 158 | 197 | 237 | 276 | 316 | 355 | 395 | 434 | 474 |
| 27 | 4 | 111 | 147 | 184 | 224 | 268 | 305 | 332 | 368 | 405 | 442 |
| 28 | 4 | 103 | 138 | 172 | 207 | 244 | 275 | 310 | 344 | 379 | 413 |
| 29 | 4 | 97 | 129 | 164 | 194 | 228 | 258 | 290 | 323 | 355 | 387 |
| 30 | 4 | 94 | 124 | 162 | 182 | 212 | 242 | 273 | 303 | 333 | 364 |
| 31 | 4 | 86 | 114 | 143 | 174 | 200 | 228 | 257 | 285 | 314 | 342 |
| 32 | 4 | 84 | 108 | 134 | 164 | 188 | 215 | 242 | 269 | 296 | 323 |
| 33 | 4 | 78 | 102 | 127 | 152 | 178 | 203 | 229 | 254 | 280 | 305 |
| 34 | 4 | 72 | 98 | 120 | 144 | 168 | 192 | 216 | 240 | 265 | 290 |
| 35 | 4 | 68 | 94 | 114 | 137 | 160 | 182 | 205 | 228 | 254 | 273 |
| 36 | 4 | 65 | 87 | 108 | 130 | 154 | 173 | 195 | 216 | 238 | 260 |
| 37 | 4 | 62 | 82 | 103 | 123 | 144 | 165 | 185 | 206 | 226 | 247 |
| 38 | 4 | 60 | 78 | 98 | 117 | 137 | 157 | 176 | 196 | 215 | 235 |
| 39 | 4 | 58 | 75 | 93 | 112 | 131 | 149 | 168 | 187 | 205 | 224 |
| 40 | 4 | 53 | 74 | 89 | 107 | 125 | 142 | 160 | 178 | 196 | 214 |

For SI units: 1 pound force per square inch = 6.89 kPa, 1 gallon per minute = 0.06 L/s, 1 inch = 25 mm, 1 foot = 304.8 mm

**TABLE 612.5.3.2(8)
ALLOWABLE PIPE LENGTH FOR 3/4 INCH PEX TUBING***

| SPRINKLER FLOW RATE (gpm) | WATER DISTRIBUTION SIZE (inch) | AVAILABLE PRESSURE - P _a (psi) | | | | | | | | | |
|---------------------------|--------------------------------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| | | ALLOWABLE LENGTH OF PIPE FROM SERVICE VALVE TO FARTHEST SPRINKLER (feet) | | | | | | | | | |
| 8 | 3/4 | 93 | 123 | 154 | 185 | 216 | 247 | 278 | 309 | 339 | 370 |
| 9 | 3/4 | 74 | 99 | 124 | 149 | 174 | 199 | 223 | 248 | 273 | 298 |
| 10 | 3/4 | 64 | 82 | 102 | 123 | 143 | 163 | 184 | 204 | 225 | 246 |
| 11 | 3/4 | 54 | 68 | 86 | 103 | 120 | 137 | 154 | 171 | 188 | 206 |
| 12 | 3/4 | 44 | 58 | 73 | 87 | 102 | 117 | 131 | 148 | 160 | 176 |
| 13 | 3/4 | 38 | 50 | 63 | 75 | 88 | 101 | 113 | 128 | 138 | 151 |
| 14 | 3/4 | 33 | 44 | 55 | 66 | 77 | 88 | 99 | 110 | 121 | 132 |
| 15 | 3/4 | 29 | 39 | 48 | 58 | 68 | 77 | 87 | 96 | 106 | 116 |
| 16 | 3/4 | 26 | 34 | 43 | 51 | 60 | 68 | 77 | 86 | 94 | 103 |
| 17 | 3/4 | 23 | 31 | 38 | 46 | 54 | 61 | 69 | 77 | 84 | 92 |
| 18 | 3/4 | 21 | 28 | 34 | 41 | 48 | 55 | 62 | 69 | 76 | 83 |
| 19 | 3/4 | 19 | 25 | 31 | 37 | 44 | 50 | 56 | 62 | 69 | 75 |
| 20 | 3/4 | 17 | 23 | 28 | 34 | 39 | 45 | 51 | 57 | 62 | 68 |
| 21 | 3/4 | 16 | 21 | 26 | 31 | 36 | 41 | 47 | 52 | 57 | 62 |
| 22 | 3/4 | NP | 19 | 24 | 28 | 33 | 38 | 43 | 47 | 52 | 57 |
| 23 | 3/4 | NP | 17 | 22 | 26 | 30 | 35 | 40 | 44 | 48 | 52 |
| 24 | 3/4 | NP | 16 | 20 | 24 | 28 | 32 | 36 | 40 | 44 | 49 |
| 25 | 3/4 | NP | NP | 19 | 23 | 27 | 31 | 35 | 39 | 43 | 47 |
| 26 | 3/4 | NP | NP | 17 | 21 | 25 | 29 | 33 | 37 | 41 | 45 |
| 27 | 3/4 | NP | NP | 16 | 20 | 24 | 28 | 32 | 36 | 40 | 44 |
| 28 | 3/4 | NP | NP | 15 | 19 | 23 | 27 | 31 | 35 | 39 | 43 |
| 29 | 3/4 | NP | NP | NP | 17 | 21 | 25 | 29 | 33 | 37 | 41 |
| 30 | 3/4 | NP | NP | NP | 16 | 20 | 24 | 28 | 32 | 36 | 40 |
| 31 | 3/4 | NP | NP | NP | 15 | 19 | 23 | 27 | 31 | 35 | 39 |
| 32 | 3/4 | NP | NP | NP | NP | 18 | 22 | 26 | 30 | 34 | 38 |
| 33 | 3/4 | NP | NP | NP | NP | NP | 18 | 22 | 26 | 30 | 34 |
| 34 | 3/4 | NP | NP | NP | NP | NP | 17 | 21 | 25 | 29 | 33 |
| 35 | 3/4 | NP | NP | NP | NP | NP | 16 | 20 | 24 | 28 | 32 |
| 36 | 3/4 | NP | NP | NP | NP | NP | 15 | 19 | 23 | 27 | 31 |
| 37 | 3/4 | NP | NP | NP | NP | NP | NP | 16 | 20 | 24 | 28 |
| 38 | 3/4 | NP | NP | NP | NP | NP | NP | 15 | 19 | 23 | 27 |
| 39 | 3/4 | NP | NP | NP | NP | NP | NP | NP | 16 | 20 | 24 |
| 40 | 3/4 | NP | NP | NP | NP | NP | NP | NP | 15 | 19 | 23 |

For SI units: 1 pound force per square inch = 6.89 kPa, 1 gallon per minute = 0.06 L/s, 1 inch = 25 mm, 1 foot = 304.8 mm

* NP – Means not permitted.

TABLE 612.5.3.2(9)
ALLOWABLE PIPE LENGTH FOR 1 INCH PEX TUBING

| SPRINKLER FLOW RATE (gpm) | WATER DISTRIBUTION SIZE (inch) | AVAILABLE PRESSURE P_r (psi) | | | | | | | | | |
|---------------------------|--------------------------------|--|-----|-----|-----|-----|-----|-----|------|------|------|
| | | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| | | ALLOWABLE LENGTH OF PIPE FROM SERVICE VALVE TO FARTHEST SPRINKLER (feet) | | | | | | | | | |
| 8 | 4 | 314 | 418 | 523 | 628 | 732 | 837 | 941 | 1048 | 1154 | 1255 |
| 9 | 4 | 252 | 326 | 421 | 505 | 589 | 673 | 767 | 841 | 926 | 1000 |
| 10 | 4 | 208 | 277 | 346 | 415 | 485 | 554 | 623 | 692 | 761 | 831 |
| 11 | 4 | 174 | 232 | 290 | 348 | 406 | 464 | 522 | 580 | 638 | 696 |
| 12 | 4 | 148 | 198 | 247 | 296 | 346 | 395 | 445 | 494 | 543 | 593 |
| 13 | 4 | 128 | 170 | 213 | 256 | 298 | 341 | 383 | 426 | 469 | 511 |
| 14 | 4 | 111 | 140 | 182 | 223 | 260 | 297 | 334 | 371 | 409 | 446 |
| 15 | 4 | 98 | 124 | 163 | 198 | 229 | 262 | 294 | 327 | 360 | 392 |
| 16 | 4 | 87 | 116 | 145 | 174 | 203 | 232 | 261 | 290 | 319 | 348 |
| 17 | 4 | 78 | 104 | 130 | 156 | 182 | 208 | 233 | 259 | 285 | 311 |
| 18 | 4 | 70 | 93 | 117 | 140 | 163 | 187 | 210 | 233 | 257 | 280 |
| 19 | 4 | 63 | 84 | 106 | 127 | 148 | 169 | 190 | 211 | 232 | 253 |
| 20 | 4 | 58 | 77 | 98 | 118 | 134 | 154 | 173 | 192 | 211 | 230 |
| 21 | 4 | 53 | 70 | 88 | 105 | 123 | 140 | 158 | 175 | 193 | 211 |
| 22 | 4 | 48 | 64 | 80 | 97 | 113 | 129 | 145 | 161 | 177 | 193 |
| 23 | 4 | 44 | 59 | 74 | 89 | 104 | 119 | 133 | 148 | 163 | 178 |
| 24 | 4 | 41 | 55 | 69 | 82 | 96 | 110 | 123 | 137 | 151 | 164 |
| 25 | 4 | 38 | 51 | 64 | 78 | 90 | 102 | 114 | 127 | 140 | 152 |
| 26 | 4 | 35 | 47 | 59 | 71 | 82 | 95 | 108 | 118 | 130 | 142 |
| 27 | 4 | 33 | 44 | 55 | 66 | 77 | 88 | 99 | 110 | 121 | 132 |
| 28 | 4 | 31 | 41 | 52 | 62 | 72 | 82 | 93 | 103 | 113 | 124 |
| 29 | 4 | 29 | 39 | 48 | 58 | 68 | 77 | 87 | 97 | 106 | 116 |
| 30 | 4 | 27 | 36 | 45 | 54 | 63 | 72 | 81 | 91 | 100 | 109 |
| 31 | 4 | 26 | 34 | 43 | 51 | 60 | 68 | 77 | 85 | 94 | 102 |
| 32 | 4 | 24 | 32 | 40 | 48 | 56 | 64 | 72 | 80 | 89 | 97 |
| 33 | 4 | 23 | 30 | 38 | 46 | 53 | 61 | 68 | 76 | 84 | 91 |
| 34 | 4 | 22 | 29 | 36 | 43 | 50 | 58 | 65 | 72 | 79 | 86 |
| 35 | 4 | 20 | 27 | 34 | 41 | 48 | 55 | 61 | 68 | 75 | 82 |
| 36 | 4 | 19 | 26 | 32 | 39 | 45 | 52 | 58 | 65 | 71 | 78 |
| 37 | 4 | 18 | 25 | 31 | 37 | 43 | 49 | 55 | 62 | 68 | 74 |
| 38 | 4 | 18 | 23 | 29 | 35 | 41 | 47 | 53 | 59 | 64 | 70 |
| 39 | 4 | 17 | 22 | 28 | 33 | 39 | 45 | 50 | 56 | 61 | 67 |
| 40 | 4 | 16 | 21 | 27 | 32 | 37 | 43 | 48 | 53 | 59 | 64 |

For SI units: 1 pound force per square inch = 6.89 kPa, 1 gallon per minute = 0.06 L/s, 1 inch = 25 mm, 1 foot = 304.8 mm

Notation:

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

CHAPTER 7 SANITARY DRAINAGE

Item 7-1 Chapter 7, Sanitary Drainage

[The SFM proposes to not adopt Chapter 7.]

Notation:

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

CHAPTER 8 INDIRECT WASTES

Item 8-1 Chapter 8, Indirect Wastes

[The SFM proposes to not adopt Chapter 8.]

Notation:

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

CHAPTER 9 VENTS

Item 9-1 Chapter 9, Vents

[The SFM proposes to not adopt Chapter 9.]

Notation:

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government

Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

CHAPTER 10 TRAPS AND INTERCEPTORS

Item 10-1 Chapter 10, Traps and Interceptors

[The SFM proposes to not adopt Chapter 10.]

Notation:

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

CHAPTER 11 STORM DRAINAGE

Item 11-1 Chapter 11, Storm Drainage

[The SFM proposes to not adopt Chapter 11.]

Notation:

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

CHAPTER 12 FUEL GAS PIPING

Item 12-1

Chapter 12, Fuel Gas Piping, Section 1211.7 Earthquake-Actuated Gas Shutoff Valves

[The SFM proposes to adopt Chapter 12 carry forward existing amendments with the following editorial correction to Section 1211.7.]

1211.78 Earthquake-Actuated Gas Shutoff Valves. *[Text remains unchanged]*

Notation:

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

CHAPTER 13 HEALTH CARE FACILITIES AND MEDICAL GAS AND MEDICAL VACUUM SYSTEMS

Item 13-1

Chapter 13, Health Care Facilities and Medical Gas And Medical Vacuum Systems

[The SFM proposes to adopt Chapter 13 without amendments.]

Notation:

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

CHAPTER 14 FIRESTOP PROTECTION

Item 14-1
Chapter 14, Firestop Protection

[The SFM proposes to adopt Chapter 14 without amendments.]

Notation:

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

CHAPTER 15
ALTERNATE WATER SOURCES FOR NONPOTABLE APPLICATIONS

Item 15-1
Chapter 15, Alternate Water Sources for Nonpotable Applications

[The SFM proposes to not adopt Chapter 15.]

Notation:

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

CHAPTER 16
NONPOTABLE RAINWATER CATCHMENT SYSTEMS

Item 16-1
Chapter 16, Nonpotable Rainwater Catchment Systems

[The SFM proposes to not adopt Chapter 16.]

Notation:

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government

Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

**CHAPTER 17
REFERENCED STANDARDS**

[The SFM proposes to adopt Chapter 17 with amendments.]

Item 17-1

Chapter 17, Table 1701.1, NFPA 13D Installation of Sprinkler Systems in One and Two Family Dwellings and Manufactured Homes

[The SFM proposes to delete and remove the reference standard for NFPA 13D Installation of Sprinkler Systems in One and Two Family Dwellings and Manufactured Homes. Associated proposals 6-2 and 6-3]

**TABLE 1701.1 (continued)
REFERENCED STANDARDS**

| STANDARD NUMBER | STANDARD TITLE | APPLICATION | REFERENCED SECTION |
|--------------------------|---|--------------------------|------------------------------|
| NFPA 13D-2019 | Installation of Sprinkler Systems in One and Two Family Dwellings and Manufactured Homes | Miscellaneous | 6.12.1, 612.5.3.1 |

Item 17-2

Chapter 17, Table 1701.1, NFPA 30A Motor Fuel Dispensing Facilities and Repair Garages

NFPA 30A-2014~~21~~

Item 17-3

Chapter 17, Table 1701.1, NFPA 31 Standard for the installation of Oil-Burning Equipment

NFPA 31-2014~~20~~

Item 17-4

Chapter 17, Table 1701.1, NFPA 58 Liquefied Petroleum Gas Code

NFPA 58-201720

Item 17-5

Chapter 17, Table 1701.1, NFPA 70 National Electrical Code

NFPA 70-201720

**See California Electrical Code for amendments*

Item 17-6

Chapter 17, Table 1701.1, NFPA 99 Health Care Facilities Code

NFPA 99-201721

Notation:

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

APPENDICES

Item 18-1

Appendices, Appendix A through N

[The SFM proposes to not adopt Appendix A through N.]

Notation:

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204

USEFUL TABLES

Item 19-1
Useful Tables

[The SFM proposes to adopt Useful Tables without amendment.]

Notation:

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.45, 1597.46, 1597.54, 1597.65, 13108, 13108.5, 13114, 13143, 13143.2, 13143.6, 13146, 13210, 13211, 17921, 18949.2, 25500 through 25545, Government Code Section 51189, Public Education Code 17074.50

Reference(s): Health and Safety Code Sections 13143, 13211, 18949.2, 25500 through 25545, Government Code Sections 51176, 51177, 51178 and 51179, Public Resources Code Sections 4201 through 4204