APPROVED BY THE CALIFORNIA BUILDING STANDARDS COMMISSION

DECEMBER 14, 2021

# FINAL EXPRESS TERMSFOR PROPOSED BUILDING STANDARDSOF THE CALIFORNIA BUILDING STANDARDS COMMISSIONREGARDING 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* Repealed model code language appears ~~upright and in strikeout~~
* Repealed California amendments appear in *~~italic and strikeout~~*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 Califonria 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 coveys … [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*.

**Exception*s*:**

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]*

 *…*

1. ***[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 a~~n~~ *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 followinbg equation:

 ***(Equation 15.1***)

 *Occupants X Lavatory flow rate X 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 my 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 Constrution.** *[No change to Table]*

*1Manufactured 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 system*s*.

***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 Sectio 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 ~~E~~enforcing ~~A~~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]*

1. ***Animals and Insects****. Screens installed on vent pipe, inlets, and … [No change to existing California amendment]*
2. ***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 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 *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 |
| --- | --- | --- | --- |
| *ASTM D1235-2014* | *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~~ |
| 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 |
| --- | --- | --- | --- |
| *IAPMO PS 59-2016* | *Wastewater Diverter Valves and Diversion Systems* | *Fittings* |  |

**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