

**FINAL EXPRESS TERMS FOR
PROPOSED BUILDING STANDARDS OF THE
CALIFORNIA BUILDING STANDARDS COMMISSION**

**REGARDING PROPOSED CHANGES TO THE
2016 CALIFORNIA PLUMBING CODE
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 5**

LEGEND FOR EXPRESS TERMS

1. Existing California amendments or code language being modified are in italics when they appear in the model code text: All such language appears in *italics*, modified language is underlined.
2. New California amendments: All such language appears underlined and in italics.
3. Repealed text: All such language appears in ~~strikeout~~.
4. *[Information for the reader: All such language is bracketed and in red italics]*

FINAL EXPRESS TERMS

The California Building Standards Code (California Code of Regulations, Title 24, Parts 1, 2, 2.5, 3, 4, 5, 6, 8, 9, 10, 11, and 12) is published in its entirety every three years and is applicable to all buildings for which an application for a building permit is made during the Code's effective period. The 2016 Intervening Code Adoption Cycle serves as the 18-month cycle and provides State agencies the ability to propose amendments (Supplements) to the 2016 California Building Standards Code. These Express Terms are applicable to the 2016 edition of CCR Title 24, Part 5. The supplement will become effective on July 1, 2018. These proposed regulations amend the 2016 edition California Plumbing Code (CPC), by incorporating regulation proposals found in the California Green Building Standards Code (Part 11, Title 24, CCR) and identified with the BSC-CG banner.

Items 1-4 pertain to amendments specific to hybrid urinals, as well as the alignment of flow rates for showerheads and other plumbing fixtures with those in Title 20 of the California Code of Regulations. For these elements, CBSC proposes to adopt and amend Chapters 2, 4, 6, and 7.

Items 5-9 pertain to mandatory recycled water building standards for outdoor use, as follows:

The California Building Standards Commission (CBSC) is proposing to add appropriate sections to the code that require the installation of recycled water supply systems for outdoor landscape irrigation in new nonresidential construction. Pursuant to AB 2282 (Gatto, Chapter 606, Statutes of 2014), which added Section 18940.6 to the Health and Safety Code, the legislature mandated that CBSC, along with the Department of Housing and Community Development (HCD) and other interested parties, research, develop, and propose for adoption mandatory recycled water infrastructure standards during the 2016 Intervening Code Adoption Cycle. This would result in the installation of recycled water supply systems in new residential and nonresidential construction, as specified. CBSC proposes to adopt and amend Chapters 1, 2, 6, and 15. These provisions will aid in the reduction of potable water use. HCD and the Department of Water Resources are also proposing similar amendments this cycle.

PROPOSED NEW AMENDMENTS

ITEM 1. CBSC proposes to amend Chapter 2 as follows:

**CHAPTER 2
DEFINITIONS**

201.0 General

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203.0

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223.0

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Urinal, Hybrid. [BSC-CG] *A urinal that conveys waste into the drainage system without the use of water for flushing and automatically performs a drain-cleansing action after a predetermined amount of time as defined in Chapter 2 of the California Green Building Standards Code (CALGreen).*

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Notation:

Authority: Health and Safety Code Sections 18928, 18929.1, 18930.5, 18934.5 and 18940.5

Reference: Health and Safety Code Section 18928.1, 18940.5 and 18940.6

ITEM 2. CBSC proposes to amend Chapter 4, Section 408.0 Showers, Sections 411.0 Water closets, and Section 412.0 Urinals

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408.0 Showers

408.1 Application. Manufactured shower receptors and shower bases...

408.2 Water Consumption. [HCD1] *Showerheads shall have a maximum flow rate...*

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408.2.1 Single Showerhead. [BSC-CG] *Showerheads shall have a maximum flow rate of not more than ~~2-0~~1.8 gallons (~~7-57~~ 6.8 L) per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads in compliance with Chapter 5, Division 5.3 of the California Green Building Standards Code (CALGreen).*

408.2.2 Multiple Showerheads Serving One Shower. [BSC-CG] *When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed ~~2-0~~ 1.8 (~~7-57~~ 6.8 L) gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time in compliance with Chapter 5, Division 5.3 of the California Green Building Standards Code (CALGreen).*

Note: A hand-held shower shall be considered a showerhead.

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411.0 Water Closets

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411.2.3 Flushometer Valve Activated Water Closets. Flushometer valve activated water closets shall have a maximum flush volume...

411.2.3.1 Flushometer Valve Activated Water Closets. [BSC-CG] *Flushometer valve activated water closets shall have a maximum flush volume of 1.28 gallons (4.8 L) per flush in accordance with ASME A112.19.2/CSA B45.1.*

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412.1.3 Nonwater Urinals. Nonwater urinals shall have a barrier liquid sealant to maintain a trap seal. Nonwater urinals shall permit the uninhibited flow of waste through the urinal to the sanitary drainage system. Nonwater urinals shall be cleaned and maintained in accordance with the manufacturer's instructions after installation. Where nonwater urinals are installed, not less than one water supplied fixture rated at not less than 1 water supply fixture unit (WSFU) shall be installed upstream on the same drain line to facilitate drain line flow and rinsing. Where nonwater urinals are installed they shall have a water distribution line rough-in to the urinal location to allow for the installation of an approved backflow prevention device in the event of a retrofit. *For additional information, see Health and Safety Code Section 17921.4.*

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412.1.3.1 Urinal, Hybrid. [BSC-CG] *Where approved, hybrid urinals shall be considered nonwater urinals in compliance with Chapter 5, Division A5.3 of the California Green Building Standards Code (CALGreen).*

Notation:

Authority: Health and Safety Code Sections 18928, 18929.1, 18930.5, 18934.5 and 18940.5

Reference: Health and Safety Code Section 18928.1, 18940.5 and 18940.6

ITEM 3. CBSC proposes to amend Chapter 6 as follows:

**CHAPTER 6
WATER SUPPLY AND DISTRIBUTION**

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**TABLE 610.3
WATER SUPPLY FIXTURE UNITS (WSFU) AND MINIMUM FIXTURE BRANCH PIPES SIZES³**

APPLIANCES, APPURTENANCES OR FIXTURES²	MINIMUM FIXTURE BRANCH PIPE SIZE^{1,4} (inches)	PRIVATE	PUBLIC	ASSEMBLY⁶
<i>Urinal, Hybrid</i>	<u><i>1/2</i></u>	<u><i>1.0</i></u>	<u><i>1.0</i></u>	<u><i>1.0</i></u>

[Portions of Table 610.3 not shown remain unchanged]

Notation:

Authority: Health and Safety Code Sections 18928, 18929.1, 18930.5, 18934.5 and 18940.5

Reference: Health and Safety Code Section 18928.1, 18940.5 and 18940.6

ITEM 4. CBSC proposes to amend Chapter 7, Table 702.1

**CHAPTER 7
SANITARY DRAINAGE**

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

PLUMBING APPLIANCES, APPURTENANCES, OR FIXTURES	MINIMUM SIZE 1/2 TRAP AND TRAP ARM⁷ (inches)	PRIVATE	PUBLIC	ASSEMBLY⁸
<i>Urinal, Hybrid</i>	<u><i>2</i></u>	<u><i>1.0</i></u>	<u><i>1.0</i></u>	<u><i>1.0</i></u>

[Portions of Table 610.3 not shown remain unchanged]

Notation:

Authority: Health and Safety Code Sections 18928, 18929.1, 18930.5, 18934.5 and 18940.5

Reference: Health and Safety Code Section 18928.1, 18940.5 and 18940.6

ITEM 5. CBSC proposes to amend Chapter 1, Section 1.2.3 BSC-CG as follows:

CHAPTER 1 ADMINISTRATION

DIVISION I, CALIFORNIA ADMINISTRATION

1.2.0 Building Standards Commission.

1.2.1 BSC *Specific scope of application of the agency responsible for enforcement, the enforcement agency, and the specific authority to adopt and enforce such provisions of this code, unless otherwise stated.*

1. State Buildings for all Occupancies.

Application – State buildings (all occupancies), including buildings constructed by the Trustees of the California State University (CSU) and the Regents of the University of California (UC) where no state agency has the authority to adopt building standards applicable to such buildings.

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

Authority Cited – Health and Safety Code Section 18934.5.

Reference – Health and Safety Code, Division 13, Part 2.5, commencing with Section 18901.

2. University of California, California State Universities, and California Community Colleges.

Application – Standards for lighting for parking lots and primary campus walkways at the University of California, California State Universities, and California Community Colleges.

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

Authority Cited – Government Code Section 14617.

Reference – Government Code Section 14617.

3. Existing State-Owned Buildings, including those owned by the University of California and by the California State University – Building seismic retrofit standards including abating falling hazards of structural and nonstructural components and strengthening of building structures. See also Division of the State Architect.

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

Authority Cited – Government Code Section 16600

Reference – Government Code Sections 16600 through 16604

4. Unreinforced Masonry Bearing Wall Buildings.

Application – Minimum seismic strengthening standards for buildings specified in the California Existing Building Code, except for buildings subject to building standards adopted pursuant to Part 1.5 (commencing with Section 17910).

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

Authority Cited – Health and Safety Code Section 18934.7

Reference – Health and Safety Code Division 13, Part 2.5 commencing with Sections 18901.

1.2.1.1 1.2.2.1 State building. For purposes of this code, a “state building” is a structure for which a state agency or state entity has authority to construct, alter, enlarge, replace, repair or demolish.

1.2.1.2 1.2.2.2 Enforcement. [CSU, UC, Judicial Council and California Department of Corrections Rehabilitation] state agencies or state entities authorized to construct state buildings may appoint a building official who is responsible to the agency for enforcement of the provisions of the California Building Standards Code.

Exception: State buildings regulated by other sections of this code remain the enforcement responsibility of the designated entities.

1.2.2.3 Enforcement, Reserved for DGS.

1.2.2.4 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 BSC.*

1.2.2 4.2-3 BSC-CG. *Specific scope of application of the agency responsible for enforcement, the enforcement agency, and the specific authority to adopt and enforce such provisions of this code, unless otherwise stated.*

1. Green building standards for nonresidential occupancies.

Application – *All occupancies where no other state agency has the authority to adopt green building standards applicable to those occupancies.*

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

Authority cited – *Health and Safety Code Sections 18930.5, 18938 and 18940.5.*

Reference – *Health and Safety Code, Division 13, Part 2.5, commencing with Section 18901.*

2. Graywater systems for nonresidential occupancies.

Application – *The construction, installation, and alteration of graywater systems for indoor and outdoor uses in nonresidential occupancies*

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

Authority cited – *Health & Safety Code Section 18941.8.*

Reference – *Health & Safety Code Section 18941.8.*

1.2.3 4.2-2 Alternate Materials, Design, and Methods of Construction and Equipment. *The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material, design, or method of construction shall be approved where the building official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method of work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quantity, strength, effectiveness, fire resistance, durability and safety.*

1.2.23.1 Research Reports. *Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from approved sources.*

1.2.23.2 Tests. *Whenever there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, the building official shall have the authority to require tests as evidence of compliance to be made at no expense to the jurisdiction. Test methods shall be as specified in this code or by other recognized test standards.*

In the absence of recognized and accepted test methods, the building official shall approve the testing procedures. Tests shall be performed by an approved agency. Reports of such tests shall be retained by the building official for the period required for retention of public records.

Notation:

Authority: Health and Safety Code Sections 18928, 18930.5, 18934.5, 18940.6, and 18941.8.

Reference: Health and Safety Code Section 18928.1, 18940.6, and 18941.8.

ITEM 6. CBSC proposes to amend existing definitions, and adopt new definitions, in Chapter 2 of the 2016 California Plumbing Code as follows:

**CHAPTER 2
DEFINITIONS**

205.0

Complex System [BSC-CG]. Gray water systems

Construction Site [BSC-CG]. A parcel of land bounded by lot line(s) or a designated portion of a public right-of-way where construction is taking place. A construction site may include, but not be limited to, buildings and accessory structures, walks, sidewalks, curbs, curb ramps, parking facilities, planting areas, pools, promenades, exterior gathering or assembly areas, raised or depressed paved areas, open spaces, golf courses, and/or landscape areas.

206.0

Disinfected Tertiary Recycled Water. [BSC-CG] 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.

Disposal Field [BSC-CG]. An intended destination

207.0

Enforcing Agency [BSC, BSC-CG]. "Enforcing Agency" is

209.0

Graywater [BSC-CG]. Pursuant to Health and Safety Code Section 17922.12, "graywater" means

Gray Water System [BSC-CG]. A system designed to collect gray water

211.0

Irrigation Field [BSC-CG]. An intended destination....

215.0

Mulch Basin [BSC-CG]. A subsurface type of irrigation

217.0

On-Site Treated Nonpotable Water [BSC-CG]. Nonpotable water

220.0

Rainwater [BSC-CG]. Precipitation on any public or private parcel

Rainwater Catchment System [BSC-CG]. A facility designed to capture

Receiving Landscape [BSC-CG & HCD 1]. Includes features such as

Reclaimed (Recycled) Water. [BSC-CG] Nonpotable water that meets California Department of Public Health 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".

Recycled Water Supply System. [BSC-CG] 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.

Notation:

Authority: Health and Safety Code Sections 18928, 18930.5, 18934.5, and 18940.6
Reference: Health and Safety Code Section 18928.1 and 18940.6

ITEM 7. CBSC proposes to adopt and amend existing exceptions, and adopt a new exception, in Chapter 6 of the 2016 California Plumbing Code as follows:

**CHAPTER 6
WATER SUPPLY AND DISTRIBUTION**

601.2 Hot and Cold Water Required. 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 by means of an approved flush tank or flushometer valve.

Exceptions:

1. Listed fixtures that do not require water for their operation and are not connected to the water supply.
2. "...".
3. "...".
4. **[BSC-CG]** *For non-residential occupancies, alternate water sources may be allowed as specified in Chapter 15 of this code.*
5. ~~4.~~ **[BSC-CG]** *Where a public agency requires a building to use recycled water to flush water closets and urinals in accordance with California Water Code 13554.*

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.

601.3 Identification of a Potable and Nonpotable Water System. [No change]

601.3.1 Potable Water. [No change]

601.3.2 Color and Information. [No change]

ITEM 8. CBSC proposes to adopt and amend Chapter 15, Sections 1501 and 1502 of the 2016 California Plumbing Code as follows:

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

Intent

The provisions of this chapter are intended to:

1. *Conserve potable water by facilitating greater reuse of laundry, shower, lavatory and similar sources of discharge, or by the use of alternate water sources, where available, for irrigation and/or indoor use.*
2. *Reduce the number of non-compliant gray water systems by making legal compliance easily achievable.*
3. *Provide guidance for avoiding potentially unhealthful conditions.*
4. *Provide an alternative way to relieve stress on a private sewage disposal system by diverting the graywater.*

...

1501.1 Applicability. [BSC-CG] The provisions of this chapter shall apply to the construction, alteration,

discharge, use and repair of alternate water source systems for nonpotable applications.

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 in lieu of potable water for the applications identified in this chapter. *[no change, shown for clarity]*

1501.1.1.1 Outdoor Recycled Water Supply Systems. [BSC-CG] *All newly constructed residential and nonresidential developments, where disinfected tertiary recycled water is available from a municipal source to a construction site, shall be provided with both a potable water supply system and a recycled water supply system. The recycled water supply system shall allow the use of reclaimed (recycled) water for aboveground and subsurface irrigation to all landscape irrigation systems.*

For the purposes of Section 1501.1.1.1, when a recycled water supply pipe is located within 300 feet from a construction site boundary, it shall be considered that reclaimed (recycled) water is available from a municipal source.

Exceptions:

- (1) Service areas in which the only reclaimed (recycled) water is used for potable purposes, or in which net nonpotable deliveries are anticipated to remain level or decrease as a result of the potable reuse project.
- (2) Where access to disinfected tertiary recycled water is not feasible and/or cost-efficient, as determined by the Authority Having Jurisdiction in consultation with the recycled water purveyor.

Note: A city, county, or city and county, in consultation with the recycled water purveyor, may further reduce the area for the mandate to install recycled water supply systems if the recycled water purveyor is unable to accommodate new services or unable to provide uninterrupted service.

- (3) A potable water supply system is not required for landscape irrigation if the landscape irrigation system is supplied with recycled water at the time of final inspection.
- (4) Potable water may be used with the recycled water supply system on a temporary basis, as allowed by the Authority Having Jurisdiction in consultation with the recycled water purveyor.

1501.1.1.2 Technical Requirements for Outdoor Recycled Water Supply Systems. Recycled water supply systems for outdoor applications shall meet the requirements of this code, and the California Code of Regulations, Title 17, Division 1, Chapter 5, Subchapter 1; Title 22, Division 4, Chapter 3; and Title 23, Division 2, Chapter 2.7, as applicable.

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

Exceptions:

- (1) A registered design professional 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 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).
- (3) 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.

1501.3 Permit. [BSC-CG] 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. ~~Prior to commencing the issuance of permits for indoor gray water systems pursuant to state requirements relating to gray water, a city, county, city and county or other local agency shall seek consultation with the local public health department to ensure that local public health concerns are addressed in local standards or ordinances, or in issuing permits. See California Water Code Section 14877.3. 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.~~

Exception: [BSC-CG] A construction permit shall not be required for a clothes washer system meeting the requirements of Section 1502.1.1.

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1501.5 Maintenance and Inspection. [BSC-CG] Alternate water source systems and components shall be inspected and maintained in accordance with the manufacturer's recommendations and/or as required by the Enforcing Agency Authority Having Jurisdiction. ~~Where no manufacturers recommendations exist, additional recommendations are listed in Table 1501.5.~~

1501.5.1 Maintenance Responsibility.

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1501.6 Operation and Maintenance Manual. [BSC-CG] 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 Sections 1501.3, 1503.2 and 1504.2 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) 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.
- (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.

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 graywater systems, the requirements of NSF 350 shall apply.~~ Water quality requirements for on-site treated nonpotable graywater shall comply with Section 1504.10.2. Recycled water shall comply with the water quality requirements of Section 1503.14.

Exception: Water treatment is not required for gray water used in a disposal field or for subsurface or

subsoil irrigation.

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1501.10 Signage. Signage for on-site treated nonpotable gray water shall comply with Sections 1501.10.1 and 1501.10.2. Signage for reclaimed (recycled) water shall comply with Section 1503.12.

1501.10.1 Commercial, Industrial, Institutional, and Residential Restroom Signs. A sign shall be installed in restrooms in commercial, industrial, and institutional occupancies, ~~and shall also be installed in residential common use areas restrooms~~ using reclaimed (recycled) water and on-site treated nonpotable gray water for water closets, urinals, or both. Signs shall comply with all applicable requirements of the California Building Code. Each sign shall contain the following text:

TO CONSERVE WATER, THIS BUILDING USES * _____ * ON-SITE TREATED NONPOTABLE GRAY WATER TO FLUSH TOILETS AND URINALS.

1501.10.42 Equipment Room Signs. Each room containing reclaimed (recycled) and on-site treated nonpotable gray water equipment shall have a sign posted in a location that is visible to anyone working on or near nonpotable gray water equipment with the following wording in 1 inch (25.4 mm) letters:

CAUTION: ON-SITE TREATED NONPOTABLE GRAY WATER * _____ *, DO NOT DRINK. DO NOT CONNECT TO DRINKING WATER SYSTEM. NOTICE: CONTACT BUILDING MANAGEMENT BEFORE PERFORMING ANY WORK ON THIS WATER SYSTEM.

* _____ * Shall indicate RECLAIMED (RECYCLED) WATER or ON-SITE TREATED GRAY WATER accordingly.

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1501.11 Inspection and Testing. Alternate water source systems shall be inspected and tested in accordance with Section 1501.11.1 and Section 1501.11.2 *and/or as required by the Authority Having Jurisdiction.*

1501.11.1 Supply System Inspection and Test. Alternate water source systems shall be inspected and tested in accordance with this code for testing of potable water piping.

1501.11.2 Cross-Connection Inspection and Testing. **[BSC-CG]** An initial inspection and test shall be performed on both the potable and alternate water source systems. The potable and alternate water source system shall be isolated from each other and independently inspected and tested to ensure there is no cross-connection in accordance with Section 1501.11.2.1 through Section ~~1501.11.2.4~~ 1501.11.2.3.

1501.11.2.1 Visual System Inspection. *[no change]*

1501.11.2.2 Cross-Connection Test. ~~The procedure for determining cross-connection shall be followed by the applicant~~ A cross-connection test shall be performed in the presence of the Authority Having Jurisdiction ~~and~~ 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 alternate water source 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 alternate water source system is empty. The minimum period the alternate water source 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 alternate water source distribution systems, but in no case shall that period be less than 1 hour.

- (3) The drain on the alternate water source system shall be checked for flow during the test, and all fixtures, potable and alternate water source, shall be tested and inspected for flow. Flow from an alternate water source system outlet indicates a cross-connection. No flow from a potable water outlet shall indicate that it is connected to the alternate water source system.
- (4) The potable water system shall then be depressurized and drained.
- (5) The alternate water source system shall then be activated and pressurized. When an alternate water source is not available for the initial test, a temporary connection to a potable water supply shall be required. At the conclusion of the test, the temporary connection to the potable water supply shall be disconnected.
- (6) The alternate water source 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.
- (7) Fixtures, potable and alternate water source, shall be tested and inspected for flow. Flow from a potable water system outlet indicates a cross-connection. No flow from an alternate water source outlet will indicate that it is connected to the potable water system.
- (8) The drain on the potable water system shall be checked for flow during the test and at the end test.
- (9) Where there is no flow detected in the fixtures which would indicate a cross-connection, the potable water system shall be repressurized.

1501.11.2.3 Discovery of Cross-Connection. In the event that a cross-connection is discovered, the following procedure, ~~in the presence of the Authority Having Jurisdiction,~~ shall be activated immediately:

- (1) Notify the Authority Having Jurisdiction of the cross connection.
- ~~(4)~~ (2) The alternate water source piping to the building and its premises shall be shut down at the meter, and the alternate water source riser shall be drained.
- ~~(2)~~ (3) Potable water piping to the building and its premises shall be shut down at the meter.
- ~~(3)~~ (4) The cross-connection shall be uncovered and disconnected.
- (4) (5) The building and its premises shall be retested in accordance with Section 1501.11.2.1 and Section 1501.11.2.2.
- ~~(5)~~ (6) The potable water system shall be chlorinated with 50 parts-per-million (ppm) chlorine for 24 hours.
- ~~(6)~~ (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.

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1501.12 Separation Requirements. Underground alternate water source service piping other than gray water shall be separated from the building sewer in accordance with this code. Treated nonpotable water pipes shall be permitted to be run or laid in the same trench as potable water pipes with a 12 inch (305 mm) minimum vertical and horizontal separation where both pipe materials are approved for use within a building. Where horizontal piping materials do not comply with this requirement the minimum separation

shall be increased to 60 inches (1524 mm). The potable water piping shall be installed at an elevation above the treated nonpotable water piping.

1501.13 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 1501.13.1 and Section 1501.13.2.

1501.13.1 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.

1501.13.2 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.

1501.14 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.

1502.0 Gray Water Systems.

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1502.3 Connections to Potable and Reclaimed (Recycled) Water Systems. Gray water systems shall have no ~~direct unprotected~~ connection to a potable water supply, on-site treated nonpotable water supply, or reclaimed (recycled) water supply systems.

Exceptions:

- (1) Potable water, on-site treated nonpotable 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, ~~reduced-pressure principal backflow preventer, or other physical device which prevents backflow~~ in accordance with this code.
- (2) A potable water supply may be connected temporarily for initial testing of the untreated graywater system as required in Section 1501.11.2.2.

Notation:

Authority: Health and Safety Code Sections 18928, 18930.5, 18934.5, and 18940.6

Reference: Health and Safety Code Section 18928.1 and 18940.6

ITEM 9. CBSC proposes to not adopt Section 1503. CBSC proposes to adopt and amend Chapter 15, Section 1504 of the 2016 California Plumbing Code as follows:

1504.0 On-Site Treated Nonpotable Gray Water Systems.

....

1504.2 Plumbing Plan Submission. No permit for an on-site treated nonpotable *gray* water system shall be issued until complete plumbing plans, with data satisfactory to the Authority Having Jurisdiction, have been submitted and approved. ***(BSC-CG) Prior to commencing the issuance of permits for indoor gray water systems pursuant to state requirements relating to graywater, a city, county, city and county or other local agency shall seek consultation with the local public health department to ensure that local public health concerns are addressed in local standards or ordinances, or in issuing permits. See California Water Code Section 14877.3.***

1504.4 Connections to Potable or Reclaimed (Recycled) Water Systems. On-site treated nonpotable gray water systems shall have no ~~direct unprotected~~ connection to a potable water supply or reclaimed (recycled) water ~~source~~ supply system.

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, ~~reduced-pressure principle backflow preventer or other physical device which prevents backflow~~ in accordance with this code.
- (2) A potable water supply may be connected temporarily for initial testing of the on-site treated nonpotable gray water system as required in Section 1501.11.2.2.

....

1504.10 Design and Installation.

....

1504.10.2 Minimum Water Quality. On-site treated nonpotable gray water supplied to toilets or urinals or for other uses in which it is sprayed or exposed shall be disinfected. Acceptable disinfection methods shall include chlorination, ultraviolet sterilization, ozone, or other methods as approved by the Authority Having Jurisdiction. The minimum water quality for on-site treated nonpotable gray water systems shall meet the applicable water quality requirements for the intended applications as determined by the public health Authority Having Jurisdiction. *In the absence of local water quality requirements for on-site treated nonpotable gray water, ~~Section 1601.7~~ 1504.7 the requirements of NSF/ANSI 350 shall apply.*

Exception:

Water treatment is not required for gray water used *in a disposal field or for subsurface or subsoil irrigation.*

....

Notation:

Authority: Health and Safety Code Sections 18928, 18930.5, 18934.5, and 18940.6

Reference: Health and Safety Code Section 18928.1 and 18940.6