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* Repealed model code language appears ~~upright and in strikeout~~
* Repealed California amendments appear in *~~italic and strikeout~~*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 us*e. *[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.***W*here 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 chacked 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\**** |
| --- | --- |
| *Inspect and clean filters and screens, and replace (where necessary).* | *Every 3 months.* |
| *Inspect pumps and verify operation.* | *After initial installation and every 12 months thereafter.* |
| *Inspect valves and verify operation.* | *After initial installation and every 12 months thereafter.* |
| *Inspect pressure tanks and verify operation.* | *After initial installation and every 12 months thereafter.* |
| *Clear debris from and inspect storage tanks, locking devices, and verify operation.* | *After initial installation and every 12 months thereafter.* |
| *Inspect caution labels and marking.* | *After initial installation and every 12 months thereafter.* |

*\* 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.