

**CALIFORNIA BUILDING STANDARDS COMMISSION
AB 2282 RECYCLED WATER REUSE SYSTEMS**

**DRAFT EXPRESS TERMS for the 2016
CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGreen), PART 11,
CALIFORNIA BUILDING STANDARDS CODE, TITLE 24,
CALIFORNIA CODE OF REGULATIONS**

LEGEND FOR DRAFT EXPRESS TERMS

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 Repealed text: All such language appears in ~~strikeout~~.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

DRAFT EXPRESS TERMS

Statement of specific purpose, problem, rationale and benefits:

The California Building Standards Commission (CBSC) is proposing to add a section to the code that requires the installation of recycled water systems for newly constructed non-residential buildings. 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), 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 dual plumbed systems in new residential and non-residential construction.

AB 2282 requires the installation of recycled water systems supplied from a municipal source for newly constructed commercial and public buildings and building site landscaped areas within a local jurisdiction that has feasible and cost-efficient access to a water recycling facility, or that have been identified within a planned service area with a specific implementation timeline for recycled water. CBSC proposes to adopt new definitions in Chapter 2, new mandatory standards in Section 5.305.1, and new voluntary standards in Appendix A5. The exceptions added in Section 5.305.1 are for jurisdictions without access to a water recycling facility and where it is not feasible or cost effective, which is consistent with those provided for in AB 2282.

These provisions will aid in the reduction of potable water use. CBSC and HCD are coordinating efforts to propose similar amendments during the 2016 Intervening Code Adoption Cycle.

**SECTION 202
DEFINITIONS**

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ALTERNATE WATER SOURCE. Nonpotable source of water that includes but is not limited to gray water, on-site treated nonpotable water, rainwater, and reclaimed (recycled) water.

DISINFECTED TERTIARY RECYCLED WATER. 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.

DUAL PLUMBED SYSTEM. A system that utilizes separate piping systems for reclaimed (recycled) water and potable water where the recycled water is used for either of the following purposes:

- (a) To serve plumbing outlets (excluding fire suppression systems) within a building or
- (b) Outdoor landscape irrigation.

ON-SITE TREATED NONPOTABLE WATER. Nonpotable water that has been collected, treated, and intended to be used on-site and is suitable for direct beneficial use. Sources for on-site treated

nonpotable water include, but are not limited to, gray water; rainwater; stormwater; reclaimed (recycled) water; cooling tower blow-down water; and foundation drainage.

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 system of municipal recycled water supply and distribution pipes and plumbing fixtures and devices for direct beneficial use in buildings and within the property lines of the premises; including associated joints, fittings, connections, devices, receptors, valves, backflow prevention devices, and other appurtenances carrying or supplying recycled water in or adjacent to the building or premise.*

CHAPTER 5 NONRESIDENTIAL MANDATORY MEASURES

Division 5.3 - WATER EFFICIENCY AND CONSERVATION

SECTION 5.305 WATER REUSE SYSTEMS (Reserved)

5.305.1 Recycled Water Supply Systems.

5.305.1.1 Indoor Recycled Water Supply Systems. Recycled water supply systems shall be installed in all new nonresidential occupancies intended to supply recycled water to water closets, urinals, trap primers for floor drains and floor sinks, industrial or commercial cooling or air conditioning, clothes washers, and other uses as approved by the authority having jurisdiction.

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 water service authority.

5.305.1.1.1 Reduce service area for mandatory application. In accordance with Health and Safety Code Section 18940.6, a city, county, or city and county, in consultation with the public water system and recycled water producer, may further reduce the service area for which the mandate to install recycled water piping applies, if the local public water system or recycled water producer finds that providing recycled water to an area is not feasible or cost effective.

5.305.1.2 Outdoor Recycled Water Systems. Recycled water systems shall be installed in all new nonresidential occupancies intended to supply recycled water to uses such as above ground and sub-surface irrigation, and other uses as approved by the authority having jurisdiction.

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 water service authority.
- (3) Potable water supply system is not required for landscape irrigation if the landscape irrigation system is supplied with recycled water.

5.305.1.2.1 Reduce service area for mandatory application. In accordance with Health and Safety Code Section 18940.6, a city, county, or city and county, in consultation with the public water system and recycled water producer, may further reduce the service area for which the mandate to install recycled water piping applies, if the local public water system or recycled water producer finds that providing recycled water to an area is not feasible or cost effective.

Question: The intent of AB 2282 was to give local jurisdictions flexibility in determining the feasibility and cost efficiency of mandating dual piping. With this in mind, are the exceptions listed above sufficient? If not, how can they be more specific and still applicable to 540+ jurisdictions statewide?

5.305.1.3 Recycled Water Systems Commissioning. (TBD)

Question: What is commissioned when using recycled water from a purveyor? Commissioning onsite (graywater) systems seems more appropriate considering the commissioning requirements in CALGreen (not dual piping from a purveyor).

Question: If the local water authority is the appropriate entity, do they commission both onsite (graywater) systems and dual piping (supply) systems from a purveyor?

**APPENDIX A5
NONRESIDENTIAL VOLUNTARY MEASURES**

Division A5.3 - WATER EFFICIENCY AND CONSERVATION

**SECTION A5.303
INDOOR WATER USE**

A5.303.2.3.4 Nonpotable water systems for indoor use. Utilizing nonpotable water systems (such as captured rainwater, ~~and treated graywater and recycled water~~) intended to supply water closets, urinals, and other allowed uses, may be used in the calculations demonstrating the 12-, 20- or 25-percent reduction. The nonpotable water systems shall comply with the current edition of the *California Plumbing Code*.

Question: Should recycled water be stricken? If recycled water is mandatory should it still be allowed for use in the calculations demonstrating potable water use reduction for voluntary credit?

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~~**A5.303.5 Dual plumbing.** New buildings and facilities shall be dual plumbed for potable and recycled water systems for toilet flushing when recycled water is available as determined by the enforcement authority.~~

[This section is now mandatory]

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**SECTION A5.305
WATER REUSE SYSTEMS**

~~**A5.305.1 Nonpotable water systems.** Nonpotable water systems for indoor and outdoor use shall comply with the current edition of the *California Plumbing Code*.~~

Question: Should this section be stricken?

~~**A5.305.2 Irrigation systems.** Irrigation systems regulated by a local water efficient landscape ordinance or by the California Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO) shall use recycled water.~~

Question: Should this section be stricken?

Tier 1

A5.305.1 Recycled Water Systems. Where recycled water is within a planned service area and a specific implementation timeline for the provision of recycled water has been identified by the public water system in its most recent recycled water master plan, all new nonresidential construction shall comply with Section A5.305.1.1 or A5.305.1.2.

Recycled water systems shall be designed and installed in accordance with the *California Plumbing Code* and shall be capped and identified by a sign containing the following text: “NONPOTABLE ALTERNATE WATER SOURCES – DO NOT DRINK”.

A5.305.1.1 Indoor. All newly constructed nonresidential buildings shall install recycled water systems for indoor use pursuant to 5.305.1.1 and subsections.

A5.305.1.2 Outdoor. All newly constructed nonresidential building site landscape areas shall install recycled water systems for outdoor use pursuant to Section 5.305.1.2 and subsections.

Tier 2

A5.305.2 Recycled Water Systems. Where recycled water is within a planned service area and a specific implementation timeline for the provision of recycled water has been identified by the public water system in its most recent recycled water master plan, all new nonresidential construction shall comply with both A5.305.1.1 and A5.305.1.2.

Recycled water systems shall be designed and installed in accordance with the *California Plumbing Code* and shall be capped and identified by a sign containing the following text: “NONPOTABLE ALTERNATE WATER SOURCES – DO NOT DRINK”.

Note: There was some consensus at the July 28-29 subcommittee meetings that mandating the installation of recycled water infrastructure for future use in a planned service area was not feasible, and would be more appropriately included as a voluntary Tier option that local jurisdictions could adopt to avoid concerns about stranded costs to building owners, developers, etc. However, comments received indicate this should be mandatory. Further discussion is necessary on this section.

A5.305.1.3 Onsite Graywater Reuse. In jurisdictions that do not have access to reclaimed (recycled) water from a local water purveyor, install onsite graywater systems in new nonresidential construction pursuant to the *California Plumbing Code*.

Question: Would local jurisdictions adopting this voluntary section and making it mandatory be able to determine if mandating the installation of an onsite graywater system would negatively impact (reduce) the local sewer flow? If so, should an exception be added if it is determined that the installation of graywater systems would negatively impact sewer flows?

Question: Should this voluntary section specify the installation of onsite graywater systems for indoor and outdoor use?

Question: If indoor is specified, should it be referred to as “onsite treated graywater systems”?