

**FINAL STATEMENT OF REASONS
FOR
PROPOSED BUILDING STANDARDS
OF THE
CALIFORNIA BUILDING STANDARDS COMMISSION (CBSC)

REGARDING THE 2016 CALIFORNIA PLUMBING CODE

CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 5**

The Administrative Procedure Act requires that every agency shall maintain a file of each rulemaking that shall be deemed to be the record for that rulemaking proceeding. The rulemaking file shall include a final statement of reasons. The Final Statement of Reasons shall be available to the public upon request when rulemaking action is being undertaken. The following are the reasons for proposing this particular rulemaking action:

UPDATES TO THE INITIAL STATEMENT OF REASONS:

(Government Code Section 11346.9(a)(1))

For Items 1-4 of the Final Express Terms, there were no changes made to the proposed regulations published during the 45-day public comment period to the final statement of reasons.

For Items 5-9 of the Final Express Terms, CBSC is relying on the Initial Statement of Reasons regarding specific adoptions, amendments, or repeals to CCR, Title 24, Part 5 except for the following amended sections, to which sufficiently related changes were proposed during a 15-day public comment period:

- **220 Recycled Water Supply System** (definition): In response to 45-day public comment, CBSC made an editorial amendment to this new definition by adding the words “or adjacent to.” This aligns with co-adopted amendments made by HCD and DWR and provides consistency and clarity for the code user. There is no intended change in regulatory effect.
- **1501.2 System Design**: In response to 45-day public comment and in coordination with HCD and DWR, CBSC withdrew its 45-day proposed language and instead adopting the model code language, including the two exceptions that were inadvertently omitted from the 2016 California Plumbing Code (CPC). CBSC concurs with HCD that the model code language provides the same measures as CBSC’s original 45-day proposal. This provides clarity and consistency for the code user and there is no intended change in regulatory effect.
- **1501.6 Operation and Maintenance Manual**: In response to 45-day public comment and in coordination with HCD and DWR, CBSC removed the words “or Section 1503.15 as applicable” because CBSC is not co-adopting DWR’s amendments to Section 1503 during this cycle. There is no intended change in regulatory effect.
- **1501.11.2.2 Cross-Connection Test, step (5)**: In response to 45-day public comment and in coordination with HCD and DWR, CBSC replaced the word “will” with “shall”, an editorial correction with no intended change in regulatory effect.
- **1502.3 Connections to Potable and Reclaimed (Recycled) Water Systems**: In response to 45-day public comment and in coordination with HCD and DWR, CBSC removed the word “gray” because this section addresses connections to on-site treated nonpotable water, which is not inclusive of graywater (see definition of “On-Site Treated Nonpotable Water”). There is no intended change in regulatory effect.

- **1504.4 Connections to Potable or Reclaimed (Recycled) Water Systems:** Based on 45-day public comment and in coordination with HCD and DWR, CBSC modified the original proposal by adding the word “inlet” for consistency and clarity for the code user. There is no intended change in regulatory effect.

MANDATE ON LOCAL AGENCIES OR SCHOOL DISTRICTS

(Government Code Section 11346.9(a)(2))

Regarding Items 1-4 of the Final Express Terms and Final Statement of Reasons:

CBSC has determined that projects following this regulation would not impose a mandate on local agencies because the requirements are already mandatory, as adopted by the California Energy Commission into Title 20 of the California Code of Regulations. There is no impact to schools since CBSC building standards do not apply to schools.

Regarding Items 5-9 of the Final Express Terms and Final Statement of Reasons:

Because CBSC does not have authority to promulgate regulations applicable to school districts, this proposed regulatory action would not impose a mandate on school districts. However, the proposal may impose a mandate on local agencies within jurisdictions that have access to recycled water from a purveyor.

OBJECTIONS OR RECOMMENDATIONS MADE REGARDING THE PROPOSED REGULATION(S).

(Government Code Section 11346.9(a)(3))

Regarding Items 1-4 of the 45-day Express Terms:

CBSC did not receive any objections or recommendations regarding the proposed regulations for items 1-4.

Regarding Items 5-9 of the 45-day Express Terms:

The following is a summary of the comments CBSC received on Items 5-9 during the 45-day public comment period, CBSC’s explanation for how changes were made in response to each comment, and reasons for making no changes, as specified:

Commenter 1: Paul Cook, Irvine Ranch Water District

Recommend: Approve as Amended

1. The commenter suggests modifications to Section 1501.1.1.1, Exceptions (2) and addition of two new exceptions (5 and 6).
2. The commenter does not support the inclusion of the proximity provision (300 feet) in Section 1501.1.1.1.
3. The commenter suggests the terms “Authority Having Jurisdiction” and “Enforcing Agency” not be used throughout the proposal without reference to the permitted recycled water provider to ensure consistency with Title 22 and recycled water permits.
4. The commenter suggests the definition of “Recycled Water Supply System” to be changed to clarify that the recycled water plumbing system is located downstream of the water meter and under the control of the property owners.
5. The commenter suggests adding a definition of “Initial Testing” to clarify the requirements for backflow prevention devices. The commenter also requests the use of a reduced pressure principle backflow prevention device on the potable connection.
6. The commenter suggests removing the requirements for recycled water systems in the “Operation and Maintenance Manual” (Section 1501.6).

Agency Response: CBSC acknowledges the commenter’s concerns and appreciates their support and participation in the code development process. However, after further review and coordination with DWR and HCD, no changes to the Final Express Terms were made as a result of these comments. CBSC’s responses for each comment are addressed below.

1. CBSC’s 45-day Express Terms state “as determined by the Authority Having Jurisdiction in consultation with the water purveyor.” Additionally, proposals for new exceptions 5 and

- 6 are based on service time frame, service area boundary and water uses proposed. Focus group meetings discussed AB 2282's requirement mandating recycled water supply systems "within a planned service area for the provision of recycled water for which a specific implementation timeline has been identified by the public water system in its most recent urban water management plan." The terminology used for this provision was ambiguous and difficult to interpret the application timeframe (5 years? 10 years?) and questions were raised as to what constituted an "urban management plan." As a result, CBSC did not propose requirements for recycled water supply systems in these areas. CBSC believes exception 2 already addresses issues of unavailability. While CBSC did not accept this comment, it may consider the issue during a future code cycle.
2. The distance threshold of 300 feet proposed by CBSC and HCD was requested by stakeholders in the enforcement community in response to their request for specificity in enforcement, and modified before the final distance was proposed as 300 feet (it was originally proposed at 500 feet). Furthermore, the Green-PEME Code Advisory Committee recommended that CBSC include this distance threshold in the nonresidential mandate language (in addition to HCD). As discussed during the precycle workshops and the Code Advisory Committee meeting, this distance threshold gives the enforcement community the specificity needed to enforce the code and does not conflict with the authority of the water purveyor to exempt recycled water developments that are not cost efficient or technically infeasible. Additionally, during the precycle workshops it was determined that enacting mandatory regulations for future use of recycled water supply systems in a planned service area was inappropriate for inclusion in Title 24 due to concerns of stranded costs of piping and infrastructure that would not be served with recycled water at the time of connection. This provision was then proposed as a voluntary Tier in CALGreen before its eventual removal when the indoor element of the mandate was recommended for further study by the Code Advisory Committee. While CBSC did not accept this comment, it may consider the issue during a future code cycle.
 3. The definitions of "Authority Having Jurisdiction" and "Enforcing Agency," as discussed during the precycle stakeholder workshops, are intentionally broad and inclusive, allowing local jurisdictions flexibility in enforcement. Referencing "permittee" as applicable, would cause some confusion on the enforcement side. Typically, in the California Plumbing Code (CPC), permittee is the person(s) having the permit to install, alter, or repair a plumbing system regulated by the CPC. While CBSC did not accept this comment, it may consider the issue during a future code cycle.
 4. As discussed during the precycle workshops and the Code Advisory Committee meeting, Title 24 only applies to buildings and building systems that are downstream of the water meter and owned/operated by the customer/building owner (this was understood by the building officials on the committee). While CBSC did not accept this comment, it may consider the issue during a future code cycle.
 5. Section 602.2 addresses cross-contamination and Section 602.3 addresses backflow prevention. Table 603.2 has a list of all the backflow prevention devices, assemblies, including the reduced principle backflow prevention assembly, methods, installations and applicable standards the backflow preventers are required to meet. While CBSC did not accept this comment, it may consider the issue during a future code cycle.
 6. While some local jurisdictions have sufficient oversight of recycled water supply systems, this may not apply to all communities serving recycled water. Additionally, this requirement would not conflict with the existing requirements of local water purveyors, which can modify the state codes to be more stringent if necessary. While CBSC did not accept this comment, it may consider the issue during a future code cycle.

Commenter 2: Michael Cudahy, Plastic Pipe and Fittings Association

Recommend: Approve as Amended

1. General comment – Replace the term "may" with "shall" throughout the proposal
2. General comment – Update markings of all nonpotable water systems as follows:
"CAUTION: NONPOTABLE WATER, DO NOT DRINK"

3. General comment – Update signage for nonpotable water systems as follows: “TO CONSERVE WATER, THIS BUILDING USES NONPOTABLE WATER TO FLUSH TOILETS AND URINALS”

Agency Response: CBSC acknowledges the commenter’s concerns and appreciates their support and participation in the code development process. However, after further review and coordination with DWR and HCD, no changes to the Final Express Terms were made as a result of these comments. CBSC’s responses for each comment are addressed below.

1. In coordination with DWR, the terms “may” and “shall” appear throughout the code and must be reviewed on a case-by-case basis. Because the commenter did not provide specific code sections where there was an objection, CBSC is not accepting this comment.
2. In coordination with DWR, CBSC disagrees with the commenter and did not revise because the pipe markings have more than one purpose. These markings prevent cross-connections between potable and nonpotable water systems. Additionally, not all nonpotable water has the same allowable uses. Furthermore, stakeholders in the plumbing industry have indicated the necessity to specify the different types of nonpotable water in signage and labeling, consistent with the model code. While CBSC did not accept this comment, it may consider the issue during a future code cycle.
3. In coordination with DWR, CBSC disagrees with the commenter and did not revise because the signage has more than one purpose. Signage prevents cross-connections between potable and nonpotable water systems. Additionally, not all nonpotable water has the same allowable uses. Furthermore, stakeholders in the plumbing industry have indicated the necessity to specify the different types of nonpotable water in signage and labeling, consistent with the model code. While CBSC did not accept this comment, it may consider the issue during a future code cycle.

Commenter 3: Daniel McIntyre, Dublin San Ramon Services District

Recommend: Approve as Amended

1. Section 220, Definition of “Recycled Water Supply System” – remove “Supply” to avoid confusion with the “supply side” (i.e. purveyor) of the system
2. Section 1501.1.1.1 Outdoor Recycled Water Supply Systems – remove “Supply” to avoid confusion with the “supply side” (i.e. water purveyor) of the system, and include exceptions for the following:
 - a. Availability of recycled water
 - b. Recycled water supply reliability
 - c. Potable reuse
3. Section 1501.1.2 Technical Requirements for Outdoor Water Supply Systems - Recommend language that outdoor applications also meet the requirements of the recycled water purveyor’s State Water Resources Control Board or Regional Water Quality Control Board water reuse permit.
4. Section 1501.2 System Design – recommend including language that recycled water irrigation design plans shall also meet the recycled water purveyor’s design requirements.
5. Section 1501.11.2.3 Discovery of Cross Connection – recommend adding language to step 1 that requires notifying the recycled water purveyor and potable water supplier.
6. Section 1501.15 Hose Bibbs for Single-Family Dwellings – recommend adding hose bib requirements for nonresidential properties and refer to Title 22.
7. Section 1504.2 Plumbing Plan Submission – recommend adding language requiring local agency consultation with local potable water authority for graywater connections.

Agency Response: CBSC acknowledges the commenter’s concerns and appreciates their support and participation in the code development process. However, after further review and coordination with DWR and HCD, no changes to the Final Express Terms were made as a result of these comments. CBSC’s responses for each comment are addressed below.

1. As discussed during the precycle stakeholder workshops, the term “Recycled Water Supply Systems” is consistent with the model code definition for “[Potable] Water Supply

- Systems.” Therefore, CBSC is retaining the existing definition in coordination with HCD and DWR.
2. Regarding recommendation to remove the word “Supply”, see previous CBSC response. Regarding the commenter’s request to add three additional exceptions, it is CBSC’s opinion that the current proposed exceptions address availability, reliability, and potable reuse as follows:
 - a. Availability of recycled water is currently addressed by Exception 2 and its corresponding Note
 - b. Recycled water supply reliability is currently addressed by Exception 2 and its corresponding Note
 - c. Potable reuse is currently addressed by Exception 1
 3. CBSC is unclear as to what the Recycled Water Purveyors design requirements are. Similar to local ordinances that make more restrictive amendments to building standards based on local conditions, it is generally understood that local requirements and/or requirements within other Titles of the CCR are applicable. With this in mind, it is unnecessary to clarify that requirements of the water reuse permit also be met be included in Title 24. While CBSC is not accepting this comment, it may revisit this issue during a future code cycle.
 4. CBSC is unclear as to what the Recycled Water Purveyors design requirements are. Similar to local ordinances that make more restrictive amendments to building standards based on local conditions, it is generally understood that local requirements and/or requirements within other Titles of the CCR are applicable. With this in mind, it is unnecessary to clarify that requirements of the water reuse permit also be met be included in Title 24. While CBSC is not accepting this comment, it may revisit this issue during a future code cycle.
 5. CBSC’s current proposal requires the code user to notify the Authority Having Jurisdiction, which will vary by jurisdiction (utility, water purveyor, etc.). The model code definition of Authority Having Jurisdiction is intentionally broad and inclusive, allowing local jurisdictions flexibility in enforcement (this was also discussed during the Code Advisory Committee). While CBSC is not accepting this comment, it may revisit this issue during a future code cycle.
 6. CBSC has determined that this comment has merit. During the precycle workshops, CBSC solicited feedback from industry stakeholders requesting feedback regarding the requirements for nonresidential hose bibbs. However, no feedback was provided at that time and CBSC did not include a proposed code change in its 45-day express terms. With this in mind, CBSC may address this issue during a future cycle.
 7. CBSC and HCD are simply relocating this existing language from Section 1501.3 to 1504.2. This language, originally adopted during the 2012 Triennial Code Adoption Cycle, incorporates language that aligns with Water Code Section 14877.3(c). As such, CBSC did not accept this comment.

Commenter 4: Michael L. Nearman, California Building Standards Commission

Recommend: Approve as Amended (see below)

1. Section 220, Definition for “Recycled Water Supply System” – add “or adjacent to” to last sentence (consistent with HCD and DWR)
2. Section 1501.2 System Design, Strike 45-day amendment and instead adopt model code language and exceptions (consistent with HCD and DWR)
3. Section 1501.6 Operation and Maintenance Manual – Remove “or Section 1503.15 as applicable” (consistent with HCD and DWR)
4. Section 1501.11.2.2 Cross-Connection Test – replace “will” with “shall” (consistent with HCD and DWR)
5. Section 1502.3 Connections to Potable (Reclaimed) Recycled Water Systems – Remove the word “gray” from the term “on-site treated nonpotable water supply;” remove “Reclaimed” from the term “Reclaimed (Recycled) Water” Supply Systems (consistent with HCD and DWR)

Agency Response: CBSC has accepted these comments and incorporated most of the suggested changes to its 45-day express terms. This modified language was published during a 15-day public comment period beginning May 9, 2017 and ending May 24, 2017. These modifications and the subsequent 15-day public comment period were coordinated with HCD and DWR to ensure consistency and clarity in the code.

Commenter 5: Toby J. Roy, San Diego County Water Authority

Recommend: Approve as Amended (see below)

1. Section 220 Definition of Reclaimed (Recycled) Water should use the term “recycled water” only throughout the entire CPC.
2. Section 220 Definition of Recycled Water Supply System should be changed to state “The recycled system located downstream of the water meter, including...”
3. Section 220 should also include the definition of on-site treated nonpotable water
4. Section 1501.2 System Design – include specific criteria for determining competency, including a licensed contractor, civil engineer, landscape architect, or architect with experience designing alternative source systems.
5. Section 1501.6 Operation and Maintenance Manual – Delete “and recycled water.”
6. Section 1501.3 Permit – Clarify that this section does not include washing machine to landscape graywater systems for subsurface irrigation.
7. Section 1503.14 Minimum Water Quality Requirements – reference Title 22 requirements for various types of recycled water from a purveyor.

Agency Response: CBSC acknowledges the commenter’s concerns and appreciates their support and participation in the code development process. However, after further review and coordination with DWR and HCD, no changes to the Final Express Terms were made as a result of these comments. CBSC’s responses for each comment are addressed below.

1. During the precycle workshops the state agencies originally proposed removing the word “Reclaimed” from the model code definition of Reclaimed (Recycled) Water, but industry stakeholders indicated this term (i.e. “Reclaimed Water”) is still widely used and must be kept synonymous with “Recycled Water.” Additionally, retaining the word “Reclaimed” maintains consistency with the existing model code definition. While CBSC did not accept this comment, it may revisit this issue during a future code cycle.
2. As discussed during the precycle workshops and the Code Advisory Committee meeting, Title 24 only applies to buildings and building systems that are downstream of the meter and owned/operated by the customer/building owner (the local building officials serving on the committee concurred with this statement). While CBSC did not accept this comment, it may revisit this issue during a future code cycle.
3. “On-site treated nonpotable water” is currently defined in Section 217 of the CPC. This appears to address the commenter’s suggestion.
4. The state agencies modified Section 1501.2 System Design during the 15-day public comment period to align with the model code. It is unnecessary to list specific licensed professionals; unintended consequences for doing so may include omitting one or more types of licensed professional from any list included in the code. This is why the model code contains general references to “Registered Design Professionals” or someone who demonstrates competency, allowing local jurisdictions the flexibility to make this determination. CBSC may revisit this issue during a future code cycle.
5. While some local jurisdictions have sufficient oversight or recycled water supply systems, this may not apply to all communities serving recycled water. Additionally, this requirement would not conflict with the existing requirements of local water purveyors, which can modify the state codes to be more stringent. CBSC may revisit this issue during a future code cycle.
6. CBSC is adopting HCD’s existing exception in Section 1501.2.3, which clarifies that permits are not required for “graywater to landscape” systems. This appears to address the commenter’s suggestion.
7. CBSC is not addressing this section, which is currently proposed for adoption by DWR.

**Committer 6: Michael A. Quiroz, 3rd Wave Construction Information & Technical Services/
Laborers International Union of North American (LIUNA) and their local affiliates**

Recommend: Disapprove

1. The commenter expressed disapproval of the original chaptered legislation (AB 2282, Chapter 606, Statutes of 2014), and also indicates concerns regarding the authority of the proposing state agencies, the local enforcement agencies, and water purveyors.
2. The commenter also indicates that non-potable regulatory requirements would be better placed within the California Green Building Standards Code (Part 11, Title 24, California Code of Regulations, also known as "CALGreen").
3. The commenter indicates that the subject matter of these regulations falls outside the scope of expertise of the commissioners.
4. The commenter indicates an absence of sufficient documentation regarding the cost efficiency of the regulations
5. The commenter expresses concerns regarding the application of the California Environmental Quality Act.
6. Lastly, the commenter formally requested an additional 15-day public comment period to address these concerns.

Agency Response:

CBSC appreciates these comments and the commenter's participation during the code development process, but is unable to accept these comments as they do not cite specific sections of the 45- and/or 15-day Express Terms. Despite this lack of clarity and specificity, CBSC has attempted to respond to these comments as follows:

1. Despite the commenter's opposition to the chaptered legislation, CBSC and HCD are required to research, develop, and propose for adoption mandatory recycled water building standards during the 2016 Intervening Code Cycle. This proposed rulemaking implements the chaptered legislation, which authorized CBSC and HCD to promulgate these regulations.
2. In addition to its proposed amendments to the 2016 California Plumbing Code, CBSC is also proposing corresponding amendments to the 2016 CALGreen Code. This appears to address the commenter's suggestion for inclusion of the requirements in CALGreen.
3. CBSC disagrees with the commenter in that the subject matter of the proposed building standards is within the scope of expertise of the commissioners.
4. In coordination with HCD and DWR, CBSC solicited technical feedback from various key stakeholders during the precycle research and development of these proposed building standards. Information relative to the cost efficiency, reasonable cost, and other fiscal impacts is contained within the Economic and Fiscal Impact Statement (form 399), which was approved by the Department of Finance and is included in the rulemaking file.
5. Pursuant to budget trailer bill language enacted by SB 88 (Chapter 27, Statutes of 2015), the development and approval of building standards by state agencies for recycled water systems is exempt from the California Environmental Quality Act during the 2016 Intervening Code Cycle (this provision becomes inoperative July 1, 2017, and is repealed as of January 1, 2018).
6. CBSC published sufficiently-related changes during a 15-day public comment period.

Committer 7: Matt Sigler, Plumbing Manufacturers International (PMI)

Recommend: Approve

The commenter expressed appreciation in providing additional comments to CBSC, HCD, and DWR, indicating support for each proposal and advocating that mandatory building standards for indoor recycled water use be referred for further study and not be pursued until key issues are addressed and resolved, including essential scientific studies and recycled water impact on plumbing products.

Agency Response: CBSC appreciates the commenter's support and participation in the code development process.

Committer 8: Jennifer West, WaterReuse California

Recommend: Approve as Amended

1. General Comment - Clarify references to “Authority Having Jurisdiction” and “Enforcing Agency”
2. General Comment - Use term “Recycled Water”
3. General Comment - For Recycled Water Use Title 22 Standard for Water Quality Requirements
4. General Comment - Clarify definition of “Recycled Water Supply System”
5. Section 1501.6 - Delete “Recycled Water” from the Operation and Maintenance Manual

Agency Response: CBSC acknowledges the commenter’s concerns and appreciates their support and participation in the code development process. However, after further review and coordination with DWR and HCD, no changes to the Final Express Terms were made as a result of these comments. CBSC’s responses for each comment are addressed below.

1. The definitions of “Authority Having Jurisdiction” and “Enforcing Agency,” as discussed during the precycle workshops, are intentionally broad and inclusive, allowing local jurisdictions flexibility in enforcement. Referencing “permittee” as applicable, would cause some confusion on the enforcement side. Typically, in the CPC, permittee is the person(s) having the permit to install, alter, or repair a plumbing system regulated by the CPC. CBSC may revisit this issue during a future code cycle.
2. During the precycle workshops the state agencies originally proposed removing the word “Reclaimed” from the model code definition of Reclaimed (Recycled) Water, but industry stakeholders indicated this term (i.e. “Reclaimed Water”) is still widely used and must be kept synonymous with “Recycled Water.” Additionally, retaining the word “Reclaimed” maintains consistency with the existing model code definition. CBSC may revisit this issue during a future code cycle.
3. Section 1503.14 is being proposed by DWR; CBSC cannot respond to comments addressing DWR proposals.
4. As discussed during the precycle workshops and Code Advisory Committee meeting, Title 24 only applies to buildings and building systems that are downstream of the water meter and owned/operated by the customer/building owner (the local building official committee members concurred with this assertion).
5. While some local jurisdictions have sufficient oversight of recycled water supply systems, this may not apply to all communities serving recycled water. Additionally, this requirement would not conflict with the existing requirement of local water purveyors, who can modify the state codes to be more stringent. Therefore, this information, and information on an on-site recycled water system, should be in the operation and maintenance manual. CBSC may revisit this issue during a future code cycle.

Public Comments received during 15-Day public comment period May 9, 2017 – May 24, 2017.

No comments received during the 15-Day public comment period.

DETERMINATION OF ALTERNATIVES CONSIDERED AND EFFECT ON PRIVATE PERSONS

(Government Code Section 11346.9(a)(4))

The CBSC has determined that no alternative considered would be more effective in carrying out the purpose for which the regulation is proposed, be as effective and less burdensome to affected private persons than the adopted regulation, or would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provisions of law.

REJECTED PROPOSED ALTERNATIVE THAT WOULD LESSEN THE ADVERSE ECONOMIC IMPACT ON SMALL BUSINESSES: (Government Code Section 11346.9(a)(5))

There were no proposed alternatives. The CBSC has determined that the proposed regulations will have no adverse impact on small businesses.