

**California Department of Water Resources
Initial Statement and Reasons for
Proposed Changes to the 2009 Uniform Plumbing Code for the
2010 California Plumbing Code**

(5/13/09)

Background

The 2002 California Recycled Water Task Force was convened on April 3, 2002 by the California Department of Water Resources (DWR) as directed by Assembly Bill 331, passed by the Legislature and signed by Governor Davis on October 7, 2001. The Task Force was chaired by the State Water Resources Control Board (SWRCB) member Richard Katz. The intent of the Task Force was to advise DWR on opportunities for and constraints to increasing the use of recycled water and to report to the Legislature no later than July 1, 2003.

Representatives of federal, state, and local agencies, private entities, environmental organizations, universities, concerned individuals and public-interest groups were appointed to the 40-member Task Force in April 2002. The Task Force included experts in the field of water recycling, including those involved in the production and use of recycled water, public health officials, world-renowned researchers, environmental organizations, and the general public. The Task Force established committees (workgroups) to focus on specific topics of concern and produce reports that served as a basis of Task Force decision-making. The California Environmental Protection Agency, U. S. Bureau of Reclamation, California Building Standards Commission, California Department of Food and Agriculture, Department of Water Resources (DWR), the State and Regional Water Resources Control Boards, and the Department of Public Health (DPH) provided technical assistance to the Task Force and its workgroups.

The Task Force identified and adopted 26 issues with respective recommendations to address obstacles, impediments, and opportunities for California to increase its recycled water usage. Recommendations associated with thirteen of these issues were adopted as important key recommendations deserving of more immediate attention.

Among the key findings of the Task Force was the lack of an adopted California Plumbing Code addressing the dual-plumbing of buildings to flush toilets and urinals. Among the findings in the White Paper from the Plumbing Code and Cross Connection Control Workgroup:

“Portions of three California Codes have been identified as including impediments to recycled water use and are addressed in this white paper. They are the California Plumbing Code (CPC) Section 601.2.2 and 601.2.3 and Appendix J dealing with dual plumbed systems, Title 17 Section 7583 et seq. dealing with cross-connection control, and Title 22 Sections 60313-60616 dealing with recycled water dual plumbed systems. These codes pose problems because of their adoption status in some cases, inconsistencies between codes, and possibly unnecessarily restrictive requirements.”

Based on these findings, the Task Force developed language specifically for adoption into the California Plumbing Code as a replacement to UPC Appendix J. Unlike the UPC language, the Task Force plumbing code language was developed in concert with the California agencies that have regulatory oversight with recycled water and other recycled water stakeholders.

2009 Uniform Plumbing Code

Since completion of the Task Force report, the California Legislature has directed the DWR to submit code language for adoption into the California Plumbing Code. This task is overdue and needs to be completed as soon as possible for inclusion in the next Triennial Code Cycle. The 2009 Uniform Plumbing Code (UPC) contains modified language from the former Appendix J which has been relocated to Chapter 16 Part II of the UPC. As was the case with Appendix J, the UPC language still has numerous conflicts with California regulation, has unnecessarily restrictive requirements, and included no California recycled water stakeholders in its development.

Accordingly DWR and California recycled water stakeholders have updated the Task Force code language that address these deficiencies and is consistent with the findings of the Task Force and California regulations pertaining to recycled water and dual plumbing. The specific reasons to modify the 2009 UPC language follows.

Section 1613.0 – Recycled Water Systems - General

The California Water Code has changed the term “reclaimed water” to “recycled water” and the correct term is used and changed throughout this document.

Local building officials are not authorized to pass judgment over the acceptable uses of recycled water in California. That is the domain of the DPH (formerly called the Department of Health Services or DHS) per the California Water Code Section 13521: *“The State Department of Health Services shall establish uniform statewide criteria for each varying type of use of recycled water where the use involves the protection of public health.”*

To fulfill the responsibility cited above, the DPH has established extensive and detailed regulatory criteria for Dual Plumbed Recycled Water Systems in Title 22, Article 5, Sections 60313 through 60316. The AHJ is not empowered to over rule or replace this authority.

The references to “irrigation, industrial processes, water features, and other uses approved by the Authority Having Jurisdiction” should be deleted. The Uniform Plumbing Code (UPC) and the California Plumbing Code (CPC) have limited scope which is governed by the definition of the term “plumbing systems”. This definition does not include “irrigation, industrial processes, or water features”. The details of this code were created specifically and exclusively for flushing water closets, urinals, and drain primers and should not be expanded to other applications, especially ones beyond the jurisdiction of the UPC and CPC.

Contrary to the 2009 UPC, the California DPH regulations prohibits potable water to be connected as a back up supply to dual plumbed systems. Title 22 Section 60315 states: *“The public water supply shall not be used as a backup or supplemental source of water for a dual-plumbed recycled water system unless the connection between the two systems is protected by an air gap separation which complies with the requirements of sections 7602 (a) and 7603 (a) of title 17, California Code of Regulations, and the approval of the public water system has been obtained.”*

Section 1614.0 - Definitions

There are no federal requirements for recycled water and the recycled water quality does not need to be approved by the Authority Having Jurisdiction (AHJ). California Water Code Section 13521 empowers the California Department of Public Health (DPH) to “establish uniform statewide recycling criteria for each varying type of use of recycled water where the use involves the protection of public health.” In Title 22, Chapter 3, Water Recycling Criteria, the DPH has already established that “disinfected tertiary recycled water” is the class of water required for flushing toilets and urinals. The AHJ has neither the technical expertise or authority to overrule the DPH in this area.

Section 1615.0 - Permit

Reclaimed water changed to recycled water.

Section 1616.0 – Drawings and Specifications

Like the previous UPC Appendix J, the 2009 UPC contains excessively severe requirements for recycled water dual plumbed systems compared to the drawings and specifications required for other types of plumbing. This was one of the items identified as obstacles and impediments in the California Recycled Water Task Force. The changes put recycled water on an equal footing with other types of plumbing design.

Section 1617.0 Pipe Material / Identification

Reclaimed water changed to recycled water.

Section 1617.1 – Pipe Materials

Reclaimed water changed to recycled water.

Section 1617.2 – Color and Information

Reclaimed water changed to recycled water.

2009 UPC only requires pipe labeling every 20 feet and requires marking to increase in size as pipe diameter increases. The pipe marking system agreed to in the California Recycled Water Task Force requires marking the entire length of the recycled water plumbing as a safeguard against cross connections.

Purple adhesive Mylar PVC tape is routinely used to mark metallic pipe by wrapping it in a spiral fashion. This tape is a hard-to-find specialty item and only comes in one size: background (1-3/4 inch wide tape) with lettering one-half inch high. This system has been in successful use in California dual-plumbed systems for almost 20 years without problems.

Section 1618.0 – Installation

- (A) The 2009 UPC prohibits hose bibbs for recycled water systems. DPH regulations allow hose bibbs to be used if quick couplers are also used. This change was made to be consistent with California recycled water regulations and practices.

- (B) Slight wording changes needed to be compatible with code language from the California Recycled Water Task Force.
- (C) Like the previous UPC Appendix J, the 2009 UPC contains excessively severe requirements for recycled water dual plumbed systems compared to that required for other non-potable piping systems. This was one of the items identified as obstacles and impediments in the California Recycled Water Task Force. The changes put recycled water on an equal footing with similar requirements for other non-potable plumbing in Sections 609.0 and 720.0 of the 2009 UPC.

Section 1619.0 – Signs

- (A) Reclaimed water changed to recycled water
- (B) Reclaimed water changed to recycled water
- (C) Reclaimed water changed to recycled water. The language in the 2009 UPC is confused about the purpose of the signs. There is no need to place an unsightly label on the outside of a tank-type toilet (water closet). The purpose of the sign is to warn against drinking the water within the toilet tank, in case that water is used as an emergency supply.
- (D) Reclaimed water changed to recycled water.
- (E) The 2009 UPC has no section that describes the purpose and description of valve seals, although they are mentioned elsewhere in the 2009 UPC. This is an oversight and is corrected by including paragraph (E).

Section 1620.0 - Inspection and Testing

The wording in this entire section, taken from the 2009 UPC, should be deleted and replaced by the Inspection and Testing language developed by the California Recycled Water Task Force.

The feasibility and necessity for testing and inspection was one of the primary topics addressed by the Task Force, an 18-month public process that involved over 40 members that represented various California regulatory authorities and recycled water stakeholders. The California Department of Public Health (DPH), which has authority over Title 17, Backflow Prevention and Cross Connection Control regulations as well as Title 22, Recycled Water Regulations, co-chaired the subcommittee that crafted and approved of this language from the task Force.

The DPH has also proposed amendments to Titles 17 and 22 which are designed to compliment the Inspection and Testing language from the Task Force. These amendments may be found via this link

<http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Draftregulations/Crossconnectiondraftreq-12-08-05.pdf>

Changes Required to Section 6.01.1 Of the Uniform Plumbing Code

Section 601.1 – Hot and Cold Water Required: An exception is needed to the 2009 UPC Section 601.1 that states that a public agency is empowered to require recycled water for flushing water closets and urinals in accordance with California Water Code Section 13554.

This can be accomplished by adding an exception to 2009 UPC Section 601.1 as follows:

Exception (2): “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 California, the local plumbing official is not empowered to overrule a public agency’s determination that a building is required to be dual-plumbed so that recycled water may be used to flush toilets and urinals. In 2007, legislation was passed (AB1406 Huffman) that expands the type of structures where public agencies may require dual plumbing. This legislation changed the California Water Code.

SECTION 1. Section 13553 of the Water Code is amended to read:

13553. (a) The Legislature hereby finds and declares that the use of potable domestic water for toilet and urinal flushing in structures is a waste or an unreasonable use of water within the meaning of Section 2 of Article X of the California Constitution if recycled water, for these uses, is available to the user and meets the requirements set forth in Section 13550, as determined by the state board after notice and a hearing.

(b) The state board may require a public agency or person subject to this section to furnish any information that may be relevant to making the determination required in subdivision (a).

(c) For the purposes of this section and Section 13554, “structure” or “structures” means commercial, retail, and office buildings, theaters, auditoriums, condominium projects, schools, hotels, apartments, barracks, dormitories, jails, prisons, and reformatories, and other structures as determined by the State Department of Public Health.

(d) Recycled water may be used in condominium projects, as defined in Section 1351 of the Civil Code, subject to all of the following conditions:

(1) Prior to the indoor use of recycled water in any condominium project, the agency delivering the recycled water to the condominium project shall file a report with the appropriate regional water quality control board and receive written approval of the report from the State Department of Public Health. The report shall be consistent with the provisions of Title 22 of the California Code of Regulations generally applicable to dual-plumbed structures and shall include all the following:

(A) That potable water service to each condominium project will be provided with a backflow protection device approved by the State Department of Public Health to protect the agency’s public water system, as defined in Section 116275 of the Health and Safety Code. The backflow protection device approved by the State Department of Public Health shall be inspected and tested annually by a person certified in the inspection of backflow prevention devices.

(B) That any plumbing modifications in the condominium unit or any physical alteration of the structure will be done in compliance with state and local plumbing codes.

(C) That each condominium project will be tested by the recycled water agency or the responsible local agency at least once every four years to ensure that there are no indications of a possible cross connection between the condominium’s potable and nonpotable systems.

(D) That recycled water lines will be color coded consistent with current statutes and regulations.

(2) The recycled water agency or the responsible local agency shall maintain records of all tests and annual inspections conducted.

(3) The condominium’s declaration, as defined in Section 1351 of the Civil Code, shall provide that the laws and regulations governing recycled

water apply, shall permit no exceptions to those laws and regulations, shall incorporate the report described in paragraph (1), and shall contain the following statement:

“NOTICE OF USE OF RECYCLED WATER

This property is approved by the State Department of Public Health for the use of recycled water for toilet and urinal flushing. This water is not potable, is not suitable for indoor purposes other than toilet and urinal flushing purposes, and requires dual plumbing. Alterations and modifications to the plumbing system require a permit and are prohibited without first consulting with the appropriate local building code enforcement agency and your property management company or homeowners’ association to ensure that the recycled water is not mixed with the drinking water.”