



# INFORMATIONAL BULLETIN

**Bulletin No.: 180**

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Chief Building Official

## **RECYCLED WATER SERVING LANDSCAPE IRRIGATION AND BUILDINGS**

**Reference:** California Plumbing Code (CPC), Chapter 15, ALTERNATE WATER SOURCES FOR NONPOTABLE APPLICATIONS

**Introduction:** The City of Irvine (City) in coordination with the Irvine Ranch Water District (IRWD) has a long history coordinating the technical and regulatory oversight of the use of recycled water serving certain non-potable uses as described in Title 22 of the California Code of Regulations including landscape irrigation and certain uses within buildings.

The CPC, includes provisions relating to the use of recycled water found in Chapter 15 referenced above.

**Purpose:** The purpose of this informational bulletin is to address these new provisions as well as defining roles and responsibilities between the City and IRWD.

### **LANDSCAPE IRRIGATION**

Added Section **1501.1.1.1 Outdoor Recycled Water Supply Systems** states in part (underlines added for emphasis):

*All newly constructed residential and nonresidential developments, where disinfected tertiary recycled water is available from a municipal source to a construction site, shall be provided with both a potable water supply system and a recycled water supply system.*

Exceptions found in Section 1501.1.1.1, however, allows for waiver of this requirement based on:

- (a) The proximity of the new development project to an available supply of recycled water; and
- (b) An evaluation of the feasibility and cost effectiveness for the new development project to utilize recycled water.

IRWD indicates that its current process identifies which development projects are in close proximity to recycled water and which can feasibly and cost effectively access and be served recycled water. As a result, **no changes**, in the process for evaluating recycled water use by new developments or in outcomes, is expected due to this new state code mandate and its exceptions.

### NONPOTABLE BUILDING SUPPLY

**1505.0 Recycled Water Supply Systems in Buildings** defines allowed uses for recycled water within buildings and technical requirements for recycled water systems. These technical provisions supplement the general plumbing code requirements for materials and design.

The following CPC code sections have been revised or added, which clarify and expand the allowed uses for recycled water for non-potable uses within buildings.

**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 and Section 1502.4 through Section 1502.6 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 and receive reclaimed (recycled) water provided by a water/wastewater utility. (Partial excerpt)*

**1505.1.1 Allowed Uses.** *Allowed uses shall include water closets, urinals, trap primers for floor drains and floor sinks above ground and surface 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.*

**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.*

IRWD indicates its current process is to identify which non-potable building supply projects will be served with recycled water and that identification and evaluation process is consistent with the non-potable building supply provisions. As a result, **no changes**, in the process for evaluating recycled water use by new developments or in outcomes, are expected due to this new state code mandate and its exceptions.

#### Procedural Roles and Responsibilities – Landscape Irrigation

- (1) Planning Phase: During this phase of any new development project, IRWD is to be consulted by the project proponent or its designee about service capacity including requirements to use recycled water at a project site.
- (2) Plan Review: IRWD's review of project plans includes a review of design requirements contained within Title 17 and Title 22 of the California Code of Regulations, IRWD's Procedural Guidelines and General Design Requirements (Guidelines), and all special provisions of Chapter 15 of the California Plumbing Code pertaining to recycled water [Note: IRWD's Guidelines may be accessed at <https://www.irwd.com/doing-business/engineering>].
- (3) Plan Approval and Permit Issuance: Prior to plan approval, the City (Public Works) plan reviewer confirms that the IRWD stamped and approved version is consistent with those presented for a permit.

At the conclusion of this stage, the applicant will have a plan approved by both IRWD and the City with the City approval stamp and signature of the Public Works plan checker as well as the set approved by IRWD. These sets are to be followed during the construction/inspection phase of the project.

- (4) Construction/Inspection: Building and Safety inspections for non-potable systems follow the same protocol as for potable systems. It is incumbent upon the contractor, however, to ensure that the non-potable system is also inspected at each milestone stage by IRWD per its requirements. See Guidelines referenced above.
- (5) Final Inspection: Cross-connection testing shall be completed and approved by IRWD, and irrigation coverage test as applicable shall be approved by the City prior to final approval of the recycled water system.

Procedural Roles and Responsibilities – Non-Potable Building Supply

- (1) Planning Phase: During this phase on any new development project, IRWD is to be consulted by the project proponent or its designee about service capacity including requirements to use recycled water at a project site.
- (2) Plan Review: A building project that includes a recycled water system is subject to parallel design and inspection reviews by the Building and Safety and IRWD.
  - a. Building and Safety's review covers all general plumbing code requirements for materials and design to verify compliance with the California Plumbing Code.
  - b. IRWD's review of project plans includes requirements contained within Title 17 and Title 22 of the California Code of Regulations, its Guidelines, and all special provisions from Chapter 15 of the California Plumbing Code pertaining to recycled water.
- (3) Plan Approval and Permit Issuance: Prior to plan approval, the Building and Safety plan reviewer confirms that the IRWD stamped and approved version is consistent with those presented for a plumbing permit.

At the conclusion of this stage, the applicant will have a stamped approved plan from the City as well as the set approved by IRWD. These sets are to be followed during the construction/inspection phase of the project.

- (4) Construction/Inspection: Building and Safety inspections for non-potable systems follow the same protocol as for potable systems. It is incumbent upon the contractor, however, to ensure that the non-potable system is **also inspected** at each milestone stage by IRWD per its requirements. See Guidelines referenced above under the "Procedural Roles and Responsibilities- Landscape Irrigation" section.
- (5) Final Inspection and Occupancy: Cross-connection testing shall be completed and approved by IRWD prior to final inspection and occupancy of the building served by recycled water.