

City of Livermore Water Reuse Program Requirements for Engineering Reports for Dual Plumbed Systems

Facilities where both recycled water and potable water are present inside a building are referred to as “dual plumbed systems.” Examples include facilities that use recycled water for toilet flushing or in industrial processes. California recycled water regulations require the submittal of a special report to the Regional Water Quality Control Board for dual-plumbed systems. The use of recycled water for fire suppression within a building is not technically defined as a dual plumbed system in the current version of Title 22. However, the City of Livermore requires recycled water users to submit of an engineering report to Livermore Municipal Water for **all** “in building” uses of recycled water. The City’s Water Reuse Program places responsibility for preparing this report on the recycled water user. The report must include:

- 1) A detailed discussion of the facility including the following:¹
 - The location and type of facility proposing to use a dual plumbed system.
 - The average number of persons estimated to be served by the facility on a daily basis.
 - The specific boundaries of the facility. This is best delineated using a site map.
 - The person(s) responsible for operation of the dual plumbed system. A facility must have a designated recycled water supervisor, who is familiar with and responsible for the proper use of recycled water. Requirements for proper use are described in the City of Livermore Water Reuse Program’s *Guidelines for the Use of Recycled Water*.
 - The specific use of recycled water at the facility.

- 2) Plans and specification which describe the following:
 - Proposed recycled water piping system(s) to be used.
 - Pipe locations for both the recycled and potable systems.
 - Type and locations of the outlets and plumbing fixtures that will be accessible to the public.
 - Methods and devices to be used to prevent backflow of recycled water into the public (potable) system.

If construction plans and specifications are used to meet this requirement, only the relevant plan sheets and specification sections should be included in the report. Drawings should be “as-built” versions. The recycled and potable water systems should be clearly delineated (and differentiated from each other) using highlighters or other suitable means. Show points-of-connection to City mains, meters, and backflow devices.

- 3) The methods to be used to assure that the installation and operation of the dual plumbed system will not result in cross connections between the recycled water system and the potable water system. This would typically include a description of “in-house” controls and procedures to prevent cross-connection, and a description of procedures for initial and periodic cross connection testing. For the latter, recycled water users may use the procedure specified in the Uniform Plumbing Code (1994) Appendix J. Cross-connection testing must be done by an AWWA-certified Cross Connection Control Specialist, and shall be performed at a minimum of every four years, or more frequently if required by the City.

¹ From Article 5, section 60314 of Title 22. If the reclaimed water use area includes more than one facility with a dual plumbed system, provide the required information for each facility.