

Typical Construction Notes for On-Site Recycled Water Irrigation Plans

General: The following notes and specifications are intended to assist irrigation Contractors in the installation of an irrigation system that complies with the Dublin San Ramon Services District (District) Standards Section IV, Recycled Water System Requirements. The notes included below are generally the most significant requirements. However, it should be noted that not all of the District standards are identified below. Where differences between District Standards Section IV and the following notes occur, District Standards shall apply. The Contractor is required to be familiar with and comply with all of the requirements of the District Standards Section IV.

1. No work shall start until the contractor has complete familiarization with the District Standards and issuance of the required permits.
2. Notify the District's authorized representative no less than 2 working days prior to the start of work for inspection schedule coordination.
3. The irrigation system design for this site is based on a static pressure at the recycled water meter of ____psi. The Contractor shall verify the available pressure at the point of connection prior to the start of construction. Any deviation from the design pressure shown above shall be reported to the irrigation system designer or property owner immediately.
4. All piping and irrigation systems shall be designed and constructed so that spray or runoff shall not enter a dwelling, food handling facility, or eating area and shall not contact any drinking water fountain. Irrigation with recycled water shall be accomplished at a time and manner that minimizes the possibility of public contact. The Contractor shall conduct pressure and coverage tests when wind conditions are such that water will not be windblown. Recycled water overspray on to areas not controlled by the owner is prohibited.
5. The Contractor shall properly supervise, inform and warn all individuals involved in the installation of the recycled water irrigation system regarding the hazards of contact with recycled water. A first aid kit shall be available at all times during installation and operation of irrigation system.
6. All recycled water piping shall use purple colored and stenciled pipe, purple recycled water warning tape continuously applied to the pipe, or marked plastic encasement. All marking shall include the following or similar words: "Caution: Recycled Water – Do not Drink". Purple pipe shall be "PWPurple Plus" manufactured by PWPipe, Inc., JM "Purple Save" or approved equal.
7. Warning tape or pipe encasement installed shall be as manufactured by T. Christy Enterprises, Rencor or equal.
8. Install valves, meters and appurtenances in purple colored valve boxes with purple lids. The valve box lid shall have the following warnings molded or hot-stamped upon it: "RECYCLED WATER", or use warning label by T. Christy Enterprises 3800 or equal.
9. All sprinklers used in customer recycled water facilities shall have an exposed surface colored purple to associate them with recycled water use. The exposed surface may be colored purple through the use of: (1) dyed plastic or rubber, or (2) weatherproof paint.
10. Install warning tags as manufactured by T. Christy Enterprises 3150 or equivalent to all such control valves, gate valves, quick coupler valves, controllers, meters, etc. Tags shall be weatherproof plastic,

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3-inch by 4-inch, purple in color with the words “Warning: Recycled Water – Do Not Drink” imprinted on one side and “Aviso: Aqua Impura – No Tomar” on the other side, or similar as approved by the District Engineer. Imprinting shall be permanent and black in color.

11. Prior to installation, locate domestic water mains and/or laterals (as appropriate). Recycled water irrigation pipelines and private potable water pipelines shall be installed in separate trenches with the greatest possible horizontal separation from private potable water pipelines. Where possible minimum clearances of 10’ foot horizontal and 1’ foot vertical shall be maintained between potable and recycled water lines. Where recycled water irrigation pipelines and private potable water pipelines cross, the potable water pipe shall be installed a minimum of twelve (12) inches above the recycled water piping.
12. Recycled water piping shall be installed at the following minimum depths from finished grade to top of pipe (minimum cover) shall be as follows:
 - a) Constant pressure lines 3 inches or larger: 24 inches
 - b) Constant pressure lines 2-1/2 inches and smaller: 18 inches
 - c) Intermittent pressure lines: 12 inches

Where piping is under paved areas, these dimensions shall be increased to include the roadway section and adequately protect the piping from damage from traffic loads.

13. (*Use this note only if PW service is available.*) No hose bibs shall be used for recycled water systems. Quick-coupling valves shall be constructed of brass with a purple rubber or vinyl cover, and shall have a 1-inch inlet with acme thread body, Nelson Model 7645 or equal, and key, Nelson Model 7640 or equal.
14. Record drawings of customer facility irrigation systems shall be provided to the District.
15. The irrigation controller shall be programmed to water between the hours of 9:00 PM and 7:00 AM only. Additional restricted watering times may be established based on site conditions as directed by the District representative.
16. Flushing of recycled water through irrigation system piping shall be performed in a manner that minimizes discharge from the site or creates ponding. Flushing shall not be permitted in a way that creates puddles that allows the recycled water to become stagnant. Flushing into the sanitary sewer is the most acceptable way to discharge recycled water. If this is not possible, then flushing may be done by diverting recycled water into a storage tank, tank truck or other approved holding facility. Holding facilities must be clearly marked with warning signs. Recycled water shall be transported and discharged at an approved site in an approved manner.
17. Where both potable and recycled water customer facilities exist at a site (dual system), a cross-connection inspection and test shall be performed on both the potable and recycled water systems. The cross-connection test will be conducted by District staff in accordance with Section IV-B3 of the District Standards. The Contractor shall request the cross-connection test by the District a minimum of 2 days prior to the performing the test. Recycled water piping shall be tested using potable water with an approved backflow prevention device. The backflow testing shall be performed in accordance with District specifications, Section II-B3 and shall be certified prior to any cross-connection testing.

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18. The Contractor shall perform a coverage test in the presence of District inspection staff to confirm that excessive overspray does not occur in accordance with Section IV-B3-4. Any modifications in either the system equipment, or adjustment identified by the District during the coverage test shall be completed in accordance with the schedule and conditions determined by the District at the time of the test.
19. In all areas where recycled water is used that is accessible to the public, place warning signs shall be installed at jointly approved City and District locations. Signs shall be supplied by the District for installation by the Contractor in accordance with the District's sign post detail.
20. *(Additional note for systems that will be connected to the potable water system for an indefinite period of time).* This irrigation system is designed to accommodate the future connection to recycled water source when it becomes available at this site. When this connection is made, the potable water source connection shall be completely disconnected from the irrigation system. There is currently no recycled water source available at this site and this irrigation system is designed to utilize a potable water source connection. Irrigation systems and equipment installed under this contract shall conform with the District's Recycled Water System Requirements, Section IV.