

RECYCLED WATER USERS' GUIDE

**Approved Pursuant to the Authority Established in
Rule 25**

Dukku Lee, Public Utilities General Manager

May 10, 2017



CITY OF ANAHEIM
PUBLIC UTILITIES DEPARTMENT
Water Engineering Division

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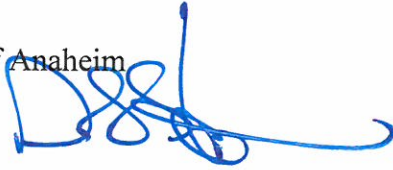
CITY OF ANAHEIM

PUBLIC UTILITIES DEPARTMENT
WATER SERVICES

RECYCLED WATER USERS' GUIDE

I hereby adopt the updated "Recycled Water Users' Guide" pursuant to the authority established in Rule 25 of the Water Rates, Rules, and Regulations of the Public Utilities Department of the City of Anaheim.

City of Anaheim



5/10/17

Dukku Lee
Public Utilities General Manager

Date

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1 INTRODUCTION

This document contains the City of Anaheim's requirements, conditions and standards for the design, installation, operation and maintenance of On-Site Recycled Water Systems.

Authority

The City of Anaheim Recycled Water program is guided by the California State Water Resources Control Board Division of Drinking Water (DDW) formerly the California Department of Public Health (CDPH) and Orange County Health Care Agency (OCHCA). In addition to this Recycled Water Users' Guide (Guide), Title 10 of the City of Anaheim Municipal Code and the Water Rates, Rules and Regulations (Water Rates, Rules and Regulations) of the City of Anaheim Public Utilities Department (Utility) set forth the Recycled Water rules and regulations within the Utility's Service Area.

This Guide is based on and consistent with the following: the California Code of Regulations, Title 22 and Title 17; the California Health and Safety Code; the California Water Code; the Guidelines for Distribution of Non-Potable Water and the Guidelines for the On-Site Retrofit of Facilities Using Disinfected Tertiary Recycled Water, developed by the California-Nevada Section of the American Water Works Association (AWWA); and the California Plumbing Code, Chapter 16A, part II. This Guide is also consistent with applicable permits issued by the California Regional Water Quality Control Board.

Liability

Since codes, laws, statutes and regulations can change without prior approval or knowledge, the City of Anaheim does not assume any liability for errors in this document. Within the Utility's Service Area, various Users or individual facilities may have site-specific requirements, which are usually set forth in an individual User Permit. It is the responsibility of the User to check with the Utility before initiating any changes to his On-Site Recycled Water System.

2 DEFINITIONS

Unless specifically defined below or within the Water Rates, Rules and Regulations, words or phrases used in this Guide shall be interpreted so as to give them the meaning they have in common usage and to give them their most reasonable application.

Anaheim Water Recycling Facility (AWRF)	A 100,000 gallon per day capacity advanced wastewater reclamation facility constructed, owned and operated by the City of Anaheim.
Applicable Laws	City Charter, the Municipal Code, the Water Rates, Rules and Regulations, the Recycled Water Users' Guide, Division 4 of Title 22 of the California Code of Regulations, and other Applicable Laws, regulations, rules, guidelines, permits, and statutes adopted by the Regulatory Agencies.
Approved Use	The use of Recycled Water in a manner, and for such purpose, as is specified in a User Permit approved by the Utility and in compliance with any and all applicable Regulatory Agency requirements and Applicable Laws.
Approved Use Area	An area which receives or will receive Recycled Water for an Approved Use, as delineated in a Recycled Water Service application approved by the Utility
City	The City of Anaheim, California, a municipal corporation.
Cross-Connection	Any physical connection between any part of a water system used or intended to supply water for drinking purposes and any source or system containing water or substance that is not or cannot be approved for human consumption. This includes direct piping between the two systems, regardless of the presence of valves, or other appurtenances.
Cross-Connection Control Specialist	An individual(s) possessing current certification issued by the California-Nevada American Water Works Association for a Cross-Connection Control Specialist.
Dual Plumbed	"Dual plumbed system" or "dual plumbed" means a system that utilizes separate piping systems for recycled water and potable water within a facility and where the recycled water is used for either of the following purposes: (a) To serve plumbing outlets (excluding fire suppression systems) within a building or (b) Outdoor landscape irrigation at individual residences.

Ground Water Replenishment System (GWRS)	The advanced wastewater reclamation facility constructed and operated by the Orange County Water District.
Inspector	Any person authorized by the City or a local health agency to perform inspections on or off an Approved Use Area before construction, during construction, after construction and during operation.
Intermittently Pressurized Line	Also known as a "Lateral," pipe section(s) between the irrigation control valve and the sprinkler head or drip emitters.
Landscape Impoundment	A body of Recycled Water that is stored or used for aesthetic enjoyment or which otherwise serves a function not intended to include bodily contact.
Lateral	See "Intermittently Pressurized Line."
Meter	The instrument used for measuring the Potable Water or Recycled Water delivered to a customer.
Non-Potable Water	Water that has not been treated for, or is not acceptable for, human consumption in conformance with federal, state and local water standards.
Off-Site System	Facilities which are upstream of the Meter and under the control of the Utility.
On-Site Recycled Water System	That portion of the On-Site System composed of Recycled Water facilities.
On-Site System	The Potable and/or Recycled Water facilities under the control of the applicant, Owner or customer. The On-Site System is located downstream of the point of delivery, which is normally downstream of the Meter tailpiece.
Owner	Any holder of legal title or lessee with an unexpired term of more than one (1) year, of property with an Approved Use or an application for Recycled Water.
Pantone	A color standard system referenced in the AWWA Guidelines for Distribution of Non-Potable Water.

Potable Water	Water that meets the standards for human consumption set by the applicable federal, state and local authorities.
Recycled Water	Water that is approved for purposes other than human consumption and meets the criteria set forth in Division 4 of Title 22 of the California Code of Regulation, as may be amended from time to time. Recycled Water does not include gray water. For the purpose of this Guide, Reclaimed Water will have the same meaning as Recycled Water.
Recycled Water Site Supervisor	See "Site Supervisor."
Recycled Water User	See "User."
Recycled Water User Permit	See "User Permit."
Regulatory Agency	A public entity legally constituted by federal, state, and local statutes that is authorized to protect public health and water quality within the Service Area.
Runoff	The movement of Recycled Water beyond the boundaries of the Approved Use Area along the surface of the ground or other natural man-made surfaces including, but not limited to, pedestrian walkways, streets, playground surfaces, grassy slopes and drainage courses.
Service	The furnishing of Potable or Recycled Water to a customer from and out of the water system or Recycled Water system owned and operated by the Utility through a Meter to the customer's piping. Service shall only refer to the furnishing of Potable Water where used in Rule 15 of the Water Rates, Rules and Regulations.
Service Area	The geographic area wherein the City of Anaheim is the designated public Potable Water or Recycled Water Service provider.
Site Supervisor	The individual designated by the User and approved by the Utility who provides a liaison to the City; oversees the use of Recycled Water on the User's premises; has the authority to carry out any requirements of the City; is responsible for the operation and maintenance of an On-Site Recycled Water System; and prevents potential Violations. The individual must have completed a Utility-approved Recycled Water Site Supervisor training program. The Site Supervisor is referred to as the Recycled Water Site Supervisor in the Water Rates, Rules and Regulations.
Unauthorized	

Discharge	Any release of Recycled Water that violates the Water Rates, Rules and Regulations, or all other Applicable Laws.
User	Any person, persons or firm issued an approved User Permit by the Utility. They may be the Owner, customer, tenant or property manager, as appropriate.
User Permit	A permit issued by the Utility to a Recycled Water Service applicant after the satisfactory completion of the Service application procedures set forth in the Water Rates, Rules and Regulations and the Recycled Water Users' Guide. This permit constitutes a contract that legally binds the User to all conditions in the Water Rates, Rules and Regulations, the Recycled Water Users' Guide, and any and all applicable Regulatory Agency requirements.
Violation	Noncompliance by any person with any requirement set forth in the Water Rates, Rules and Regulations, this Guide, a User Permit, and/or any other Applicable Laws, whether willfully or unintentional.

3 PLANNING FOR RECYCLED WATER USE

This section provides potential Users with general information about the use of Recycled Water in the City of Anaheim.

Determination to Use Recycled Water

As set forth in the Water Rates, Rules and Regulations, the Utility shall determine whether a given Service will be furnished with Recycled Water or Potable Water. The determination shall be in accordance with the standards of treatment and water quality requirements set forth in Division 4 of Title 22 of the California Code of Regulations, with the intent of the Utility to work in conjunction with the Regulatory Agencies to protect the public health, and shall also be based on the availability and/or feasibility of making available Recycled Water.

Protection of Public Health

At such time as it deems proper to safeguard public health, the Utility reserves the right to take any action necessary with respect to the operation of the Utility's or User's Recycled Water system.

Approved Uses of Recycled Water

The DDW regulates the use of Recycled Water, pursuant to Title 22 of the California Code of Regulations. The uses of Recycled Water must be approved by the DDW and may include but are not limited to:

1. landscape irrigation;
2. agricultural irrigation;
3. toilet and urinal flushing in non-residential facilities;
4. cooling towers;
5. construction uses such as dust control, soil compaction, and backfill consolidation;
6. industrial process water;
7. street sweeping;
8. commercial uses such as commercial laundries, commercial car washes, concrete mixing, process mixing and textile dyeing;
9. landscape impoundments such as fountains and water features; and
10. wildlife habitat enhancement.

The use of Recycled Water in swimming pools is not permitted.

Procedures for Obtaining Recycled Water Service

General

No person shall make connection to the Recycled Water systems of the Utility without a User Permit.

Application

Persons desiring to obtain Recycled Water Service shall make application for a User Permit by providing such information as the Utility deems appropriate to evaluate the request including, but not limited to:

- a. Name, address and contact phone number for:
 1. Applicant
 2. Owner of property to be served
 3. Site Supervisor
- b. Legal description of property to be served.
- c. Map showing proposed use area.
- d. The proposed use of Recycled Water within a specifically defined designated use area on the property (on-site usage plan).
- e. Plans and specifications of the proposed On-Site Recycled Water Systems, including scaled drawing delineating the proposed use area, identification of location and size of all Service connections, and a delineation of areas in which Recycled Water Service is to be specifically excluded.
- f. Anticipated use and requested amount of Recycled Water for the proposed use area.
- g. Evidence that the Site Supervisor has received appropriate training from the Utility or an equivalent training program or the date by which training will occur prior to delivery of Recycled Water such that the site is operated and maintained in compliance with Applicable Laws.
- h. Signed Recycled Water Service application.
- i. A project report for Dual Plumbed facilities as described below.

The application shall be made in writing, signed by the applicant, Owner and customer if they are not one and the same. By signing the application, the Owner/applicant agrees to comply with the Applicable Laws. Current requirements will be available at the Utility upon request.

Upon receipt of an application, the Utility or its designated representative will review the application and may prescribe requirements in writing to the applicant as to the design of the facilities, the manner of construction, the manner of connection, the method of operation, and the conditions of Service.

Project Report

The applicant shall submit a project report detailing the proposed use of Recycled Water. The project report shall include, but not be limited to the following:

- a. Detailed description of the intended area of use describing the following:
 1. Type, location and number of proposed Dual Plumbed facilities to be used within the Approved Use Area.
 2. The estimated daily average number of people to be served by each proposed Dual Plumbed facility.
 3. The specific boundaries of the area to be served including a scaled map showing the location of each facility intending to use the Dual Plumbed systems.
 4. The individual(s) responsible for the operation of Dual Plumbed systems at each facility.

- b. Plans and specifications describing the following:
 1. Proposed Dual Plumbed systems to be used or installed.
 2. Pipe locations of both the Recycled Water and Potable Water systems.
 3. Type and location of each outlet or plumbing fixture that will be accessible to the public.
 4. Proposed methods to be used at each Service connection to prevent backflow of Recycled Water into the Off-Site System.

- c. A description of preventing the installation of a Cross-Connection.

Dual Plumbed Engineering Report

For Dual Plumbed use areas, the Utility will use the above information to prepare a Dual Plumbed engineering report (per Sections 60313 and 60314 of Title 22), which will be submitted to DDW and OCHCA for review and approval. Additionally, an applicant shall submit construction and building plans for Dual Plumbed facilities to the Utility for review and approval prior to their construction. The Utility will review these plans to ensure compliance with the Applicable Laws. The construction and building plans shall also be submitted along with the Dual Plumbed engineering report to DDW and OCHCA for review and approval prior to construction.

User Permit

The Utility will issue a User Permit upon its review of the project report and approval of the application. The User Permit will authorize the applicant to receive Recycled Water Service; provided, he or she strictly complies with all Applicable Laws.

When issued, the User Permit will include: (1) name and address of applicant; (2) a drawing of the proposed system showing the location and size of all valves, pipes, outlets and appurtenances; (3) a statement that no changes in the proposed system will be undertaken without application and approval of an amended User Permit; (4) a statement recognizing potential penalties for a Violation; and (5) outline of the rate provisions, terms and conditions of Service.

4 GENERAL REQUIREMENTS

Recycled Water systems are separated into two categories: off-site and on-site. Off-site Recycled Water systems consist of those facilities that are, or will be, owned, operated, and maintained by the Utility such as transmission or distribution mains in public rights of way. On-Site Recycled Water Systems consist of facilities that will be owned, operated, and maintained by the User, and are located downstream of a Meter.

All off-site and On-Site Recycled Water Systems shall be designed and constructed according to the requirements, conditions and standards as adopted and revised by the Utility from time to time, which documents are open for inspection at the Utility's water engineering division, and by this reference are incorporated herein.

Off-Site Recycled Water Systems

Operation and surveillance of all of the Utility's off-site Recycled Water system facilities, including, but not limited to Recycled Water pipelines, reservoirs, valves, connections, supply interties, and other appurtenances beginning at the Utility's Meter at the GWRS or AWRP and ending at the point of connection with the customer's facilities, shall be under the management and control of the Utility.

On-Site Recycled Water Systems

The following general requirements apply to all On-Site Recycled Water Systems:

- a. The applicant shall refer to the Appendices of this Guide for more specific information and requirements regarding the preparation and approval requirements of construction plans for On-Site Recycled Water Systems.
- b. Recycled Water distribution and transmission system piping shall comply with the design requirements contained in the California-Nevada Section AWWA publication "Guidelines for Distribution of Recycled Water" and AWWA publication "Dual Water Systems (M-24)."
- c. The On-Site Recycled Water System shall not have any connections to the Potable Water system except via an air gap approved by the Regulatory Agencies or via a temporary connection to the Potable Water system for initial testing of the On-Site Recycled Water System piping.
- d. An air-gap separation or reduced pressure principle backflow prevention device as determined by the Cross-Connection Control Specialist shall be provided at all domestic water Service connections to properties having a Recycled Water Service connection.
- e. No changes or connections shall be made to either the On-Site Recycled Water System or the Potable Water system within any site containing an On-Site Recycled Water System without approval by the Utility and the Regulatory Agencies.
- f. An On-Site Recycled Water System shall be designed by a person registered or licensed to perform plumbing design work.

- g. All Recycled Water valves, outlets, quick couplers, and sprinkler heads shall be of a type or secured in a manner that only permits operation by personnel authorized by the User.
- h. Notification shall be provided by the User to inform the public that Recycled Water is being used. This notification shall be in the manner and form required by the Utility, including, but not limited to, the posting of conspicuous warning signs with proper wording of sufficient size to be clearly read.
- i. The Utility shall monitor and inspect the On-Site Recycled Water System, and for these purposes shall have reasonable access. Where necessary, keys and/or combinations shall be provided to the Utility to give such access.
- j. There shall be at least a 5-foot horizontal and 1-foot vertical separation (with the domestic water above the Recycled Water pipeline) between all pipelines transporting Recycled Water and those transporting water supplied from the Potable Water system. (If the Recycled Water is anything less than disinfected tertiary treated, then more stringent separation requirements shall apply, per the Applicable Laws.)

User's Responsibility

The operation and maintenance of On-Site Recycled Water System are the responsibility of the User. The User shall have the following responsibilities in relation to the operation and maintenance of on-site facilities:

- a. To make sure that all operations personnel are trained and familiarized with the use of Recycled Water.
- b. To prepare and submit to the City one (1) set of as-built drawings.
- c. To maintain as-built drawings of the On-Site Recycled Water Systems, Potable Water systems, and buildings or structures served by these systems. These drawings shall be updated as modifications are made. The User shall keep a copy of the drawings on-site and present them to the Utility as needed.
- d. To notify the Utility of any and all updates or proposed changes, modifications, or additions to the on-site facilities, which changes shall be subject to the approval of the Utility and shall be designed and constructed according to the requirements, conditions, and standards set by the Applicable Laws. Changes, modifications or additions must be submitted to the Utility for plan check and approval prior to construction. The construction shall be inspected by the Utility, and revised as-built drawings and controller charts shall be approved by the Utility.
- e. To ensure that the On-Site Recycled Water Systems remain in compliance with the Applicable Laws.

- f. To designate a Site Supervisor for Utility approval. The Site Supervisor shall be the contact person for the User in all matters between the User and the Utility concerning the operation of the On-Site Recycled Water System and the use of Recycled Water. The Site Supervisor's responsibilities are described in the following section. The User shall immediately notify the Utility whenever a change of the Site Supervisor occurs, and shall be responsible to obtain the Utility's acceptance and approval of his newly designated supervisor.

For single-family residences which have a Recycled Water Service connection, the Owner shall be considered to be the designated "Site Supervisor" unless otherwise indicated on the User Permit. In the event that someone other than the Owner is designated as the "Site Supervisor" and this person is no longer associated with the property, the Owner shall be considered the "Site Supervisor" until written notification is made to the Utility.

Responsibility of Site Supervisor

The Site Supervisor shall be responsible for the installation, operation, and maintenance of the On-Site Recycled Water System. He also shall ensure that the foregoing is performed and complies with all Applicable Laws. The Site Supervisor shall also maintain "as-built" drawings of the On-Site Recycled Water System.

Designated duties of the Site Supervisor include the responsibility for the Cross-Connection control program on the User's premises. The Site Supervisor shall review the installation and modification of pipelines and equipment to ensure that there are no Cross-Connections. The Utility may, from time to time, require that a Site Supervisor obtain training in the use of Recycled Water, such training being provided by or approved by the Utility. The Site Supervisor shall report to the Utility and the Regulatory Agencies any Cross-Connection incident within 24 hours of such an incident.

The Utility shall then submit a written report of the Cross-Connection incident to Regulatory Agencies describing the nature and severity of the backflow, the actions taken by the Utility in response to the incident, and the action plan intended to prevent such incident in the future.

In particular, but not by way of limitation, the Site Supervisor shall have the following responsibilities in relation to operation of the On-Site Recycled Water System:

- a. To oversee Recycled Water Service and maintain the On-Site Recycled Water System so as to minimize failures and to repair broken valves, pipes and sprinklers in a timely fashion.
- b. To ensure that all operations personnel are trained and familiarized with the use of Recycled Water, including any and all Applicable Laws.
- c. To furnish operations personnel with operating instructions, maintenance instructions, controller charts, and record drawings to ensure proper operation in accordance with the facilities design and all Applicable Laws. At least one complete set of this information shall be kept on-site or in the nearest field office or maintenance building.

- d. To maintain an accurate maintenance record of work done on the potable and recycled water system.
- e. To operate and control the On-Site Recycled Water Systems in order to prevent direct human contact of Recycled Water and to control and prevent Runoff.
- f. To provide a preventative maintenance program and carry out ongoing regular maintenance and upkeep to ensure the continued operation of all system elements within the requirements of all Applicable Laws.
- g. To prevent Cross-Connections to Potable Water systems, and also to protect the On-Site Recycled Water System from contamination from Cross-Connections to other sources.
- h. To ensure that testing and inspection of backflow prevention assemblies is conducted on an annual basis and repairs are made where required in accordance with Applicable Laws. More frequent tests may be required in those instances where successive tests indicate repeated failures.
- i. To educate occupants, residents and maintenance personnel on a continuing basis so that they understand the proper use of Recycled Water.
- j. To verbally report any failure in the On-Site Recycled Water Systems that causes an Unauthorized Discharge of Recycled Water or other noncompliance with Applicable Laws to the Utility and to the Regulatory Agencies, within 24 hours from the time the Site Supervisor becomes aware of these circumstances. The Site Supervisor shall also make a written report to the Utility, with a copy to the Regulatory Agencies, within five days of the time the Site Supervisor becomes aware of the Unauthorized Discharge or other noncompliance, which shall contain (a) a description of the noncompliance and its cause; (b) the period of noncompliance, including exact dates and times; (c) discussion of whether the noncompliance has been corrected or the anticipated time it is expected to be corrected; and (d) steps taken or planned to reduce, eliminate and prevent recurrence of the noncompliance.
- k. To verbally report any Cross-Connection incident to the Utility and to the Regulatory Agencies within 24 hours from the time the Site Supervisor becomes aware of the incident. The Site Supervisor shall also assist the Utility in preparing and submitting a written report of the Cross-Connection incident to Regulatory Agencies describing the nature and severity of the backflow, the actions taken by the Site Supervisor and Utility in response to the incident, and the action plan intended to prevent such incident in the future.
- l. The Site Supervisor is required to provide the Utility with an address and phone number(s) where he or she can be contacted at all times. The Site Supervisor is responsible for updating and maintaining his current contact information with the Utility at all times.

Monitoring and Inspection

The Utility and Regulatory Agencies shall have authority to monitor and inspect the entire On-Site Recycled Water System. The Utility shall conduct monitoring programs as it deems

necessary to ensure that On-Site Recycled Water Systems are being operated in accordance with Applicable Laws, including the requirements that (a) Runoff be controlled and limited and (b) Cross-Connections between Potable Water facilities and the On-Site Recycled Water Systems remain non-existent. The Utility and the Regulatory Agencies shall have the right to enter any customer's premises during reasonable hours upon presentation of proper credentials for the purposes set forth herein.

5 RECYCLED WATER USE FOR LANDSCAPE IRRIGATION

General

Any use of Recycled Water shall comply with the following:

- a. Any irrigation Runoff shall be confined to the Approved Use Area, unless the Runoff does not pose a public health threat and is authorized by a Regulatory Agency.
- b. Spray, mist, or Runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities.
- c. Drinking water fountains shall be protected against contact with Recycled Water spray, mist, or Runoff.

Drawings and Specifications

The irrigation system shall be designed to prevent discharge onto certain areas outside of the Approved Use Area. Part-circle sprinklers shall be used adjacent to roadways and boundary lines to comply with the foregoing requirement.

The system design shall avoid spray patterns that include obstructions that tend to concentrate Recycled Water to produce ponding and/or Runoff, such as spraying against bridge abutments and outlet structures.

The system shall include automatic system control devices that can be programmed to prevent the ponding and/or Runoff of Recycled Water. These devices shall include automatic controllers, valves and associated equipment.

The devices shall be designed so that, if the current application program is producing any Runoff, they can be readily programmed on site to prevent such occurrences.

Complete landscape irrigation plans shall be submitted to the Utility and the Regulatory Agencies for review and approval. The drawings and specifications shall provide sufficient detail to determine compliance with the requirements of this section and the California Plumbing Code.

Installation

The Recycled Water piping system shall not include any hose bibbs. Only quick couplers that differ from those used on the Potable Water system shall be used on the Recycled Water piping system.

The On-Site Recycled Water System and the Potable Water system shall be provided with the required appurtenances (valves, air/vacuum relief valves, etc.) to allow for Cross-Connection testing as required by this Section.

Recycled Water pipes laid in the same trench or crossing sewer or drainage piping shall be installed in compliance with Sections 609.0 and 720.0 of the California Plumbing Code. Recycled Water pipes shall be protected similar to Potable Water pipes.

System Identification

- a. Each location of a Recycled Water outlet must be identified and marked with a conspicuous warning label. The label or sign shall be a size no less than 4 inches by 8 inches and shall include the following wording: "RECYCLED WATER - DO NOT DRINK". Signage shall be in Spanish, as well as in English, and shall include the universal symbol for "DO NOT DRINK". The signs shall have a purple background with white lettering unless otherwise approved by the City.
- b. All pipes, valves, and other appurtenances installed above the ground, that are designed to carry Recycled Water, shall be painted and maintained a purple color, Pantone color #512.
- c. All pipes, valves, and other appurtenances installed below the ground, that are designed to carry Recycled Water, shall be colored purple. PVC pipe manufactured with an integral purple color shall be marked on opposite sides to read "CAUTION: RECYCLED WATER - DO NOT DRINK" in intervals not to exceed three feet.

Inspection Procedures

Coverage Inspection

Initial Test – The User is responsible for controlling overspray and Runoff from new landscape irrigation systems or systems requesting conversion. To ensure that any overspray and Runoff complies with Applicable Laws, an inspection of the On-Site System by the Utility is required. When the Recycled Water irrigation system is completed and the planting installed, the User shall contact the Utility at (714) 765-5196 and arrange for a coverage test walk-through. The Utility's Cross-Connection Control Specialist shall be involved in the coverage test and inspection. The User or the User's authorized representatives must attend the test and have persons capable of making system adjustments. If modifications to the Recycled Water irrigation system are required, other than minor adjustments, the Utility will notify the User in writing of the required changes. To avoid termination of Service, the modifications must be made in a timely manner as directed by the Utility. All modifications to the Recycled Water irrigation system are the responsibility of the User or Owner and said User or Owner shall pay all costs associated with such modifications.

Follow-Up Tests - A coverage inspection is made annually to determine the adequacy of the Recycled Water irrigation system in meeting the Applicable Laws. The Utility's Cross-Connection Control Specialist shall be involved in the coverage test and inspection.

Cross-Connection Inspection

For irrigation systems at a minimum, the following inspection procedures shall be followed:

- a. A site walk-through and record check will be performed annually to verify the lack of discoverable Cross-Connections.

- b. An initial and subsequent Cross-Connection verification test shall be performed at least every four years using one of the procedures as follows:
- (1) Methods for conducting a Cross-Connection verification test:
 - (i) Shut down test with pressure recorders on both the Potable Water Service connection and the Recycled Water Service connection.
 - (ii) Shut down test by observing each outlet on both the Potable Water Service connection and the Recycled Water Service connection.
 - (iii) Dye testing for sites where it is inconvenient to conduct a shutdown test.
 - (2) In the event that a Cross-Connection is discovered, the following procedure, in the presence of the Cross-Connection Control Specialist, shall be instituted immediately:
 - (i) Recycled Water piping to the property shall be shut down at the Meter, and the Recycled Water piping shall be drained as directed by the Cross-Connection Control Specialist.
 - (ii) Potable Water piping to the property shall be shut down at the Meter.
 - (iii) Signs shall be posted to notify the public and employees to not drink or use the potable water.
 - (iv) All Cross-Connections shall be uncovered and disconnected.
 - (v) The City shall notify the Regulatory Agencies and send a written report within 24 hours.
 - (vi) The systems shall be retested by re-pressurizing the systems and following procedures in b.(1) above.
 - (vii) The Potable Water system shall be chlorinated with fifty (50) ppm chlorine for twenty-four (24) hours.
 - (viii) The Potable Water system shall be flushed and after twenty-four (24) hours, a standard bacteriological test shall be performed by a certified water testing lab. If test results are acceptable, the Potable Water system may be reactivated.

The OCHCA Health Officer or his designated appointee may substitute for the Cross-Connection Control Specialist in the above-mentioned inspections and tests.

Record Drawings

The User shall prepare or cause to be prepared record drawings which shall show all changes in the work constituting departures from the approved original as-built drawings for the On-Site Recycled Water Systems. All changes to the On-Site Recycled Water Systems shall be approved by the Utility before implementation. Failure to receive prior approval may result in termination of Service.

Upon completion of work, all required information and dimensions shall be transferred to the record drawings. Facilities and items to be located and verified on the record drawings shall include, but are not necessarily limited to the following:

- a. Point of connection;
- b. Routing of sprinkler pressure lines;

- c. Gate valves;
- d. Sprinkler control valves;
- e. Quick-coupling valves;
- f. Routing of control wires; and
- g. Other related equipment as specified by the Utility's Inspector.

Changes and dimensions shall be recorded on the plans in a legible and workmanlike manner. Record construction drawings shall be maintained at the job site during construction. A set of record drawings shall be given to the Site Supervisor.

The User shall provide a complete set of record drawings in electronic format (PDF file) to the Utility upon completion of construction. Failure to provide record drawings will result in termination of Service

Ongoing Operation and Maintenance

The Recycled Water irrigation system shall be operated and maintained in such a manner as to prevent direct human contact of Recycled Water and to control and limit Runoff. The User shall comply with Utility operation and control measures including but not be limited to the following:

Runoff Conditions - Conditions that directly or indirectly cause a Runoff outside of the Approved Use Area are strictly prohibited, whether by design, construction practice, or system operation. Sprinkler head alignment shall not allow spray to be directed outside the boundaries of the Approved Use Area.

Windblown Spray Conditions - Conditions that directly or indirectly permit windblown spray to pass outside of the Approved Use Area are strictly prohibited, whether by design, construction practice, or system operations.

Unapproved Uses - Use of Recycled Water for any purposes other than those explicitly approved in a User Permit without the prior approval of the Utility or the Regulatory Agencies is strictly prohibited.

Cross-Connections - Cross-Connections are strictly prohibited, whether by design, construction practice, or system operation. A detected Cross-Connection will result in an immediate termination of both the Potable Water Service and the Recycled Water Service until the Cross-Connection is located and eliminated to the satisfaction of the Utility's Cross-Connection Control Specialist.

Hose Bibbs - Use or installation of hose bibbs on any Recycled Water irrigation system is strictly prohibited.

Source of Domestic Water - Irrigation with disinfected tertiary Recycled Water shall not take place within 50 ft of any domestic water supply well or any uncovered reservoir or stream currently used as a source of domestic water.

Impoundment Near Wells - Impoundment of disinfected tertiary Recycled Water shall not occur within 100 ft of any domestic water supply well.

Fertilizer - Nitrogen fertilizer shall only be applied to the site if levels of nitrogen in the Recycled Water are not sufficient for plant growth.

Unprotected Public Facilities - Facilities within an Approved Use Area that may be used by the general public including, but not limited to, eating surfaces and playground equipment, shall not be subject to pooling or standing Recycled Water. Lack of such protection, whether by design, construction practice, or system operation, is strictly prohibited.

Unprotected Drinking Fountains - Any and all drinking water facilities located on property with an Approved Use Area shall be protected from direct or windblown Recycled Water spray.

Fire Hydrants - Fire hydrants shall not use Recycled Water and shall be protected from the On-Site Recycled Water Systems.

Pooling and Ponding - Irrigation with Recycled Water shall be controlled to prevent pooling, ponding and Runoff. The application rate shall not exceed the infiltration rate of the soil. Timers must be adjusted so as to be compatible with the lowest soil infiltration rate present. This procedure may be facilitated by the efficient scheduling of the automatic control clocks, (e.g., employing the repeat function to break up the total irrigation time into cycles to promote maximum soil absorption). Ponding and Runoff is strictly prohibited, unless otherwise approved by the Utility.

Hours- Irrigate between the hours of 9:00 p.m. and 6:00 a.m., unless alternate hours are approved by the City and Health Agencies. Also, if approved by the City, areas with drip lines or bubblers may be irrigated outside of normal hours. Irrigation may also be run during daytime hours if attended by the City or landscape personnel to prevent public contact with the recycled water. No Recycled Water irrigation system shall at any time be left unattended during use outside the approved schedule. In addition to the foregoing restrictions, irrigation shall be restricted to times when the area has the least potential for human contact.

Monitor and Maintain - Monitor and maintain the system to minimize equipment and material failure. Broken sprinkler heads, leaks, unreliable valves, and other equipment of the Recycled Water irrigation system shall be repaired as soon as the Site Supervisor becomes aware of the problem.

Obtain Prior Approval - Obtain approval for all proposed changes and modifications to any on-site facilities. Such changes must be submitted to and approved by the Utility and designed in accordance with Applicable Laws prior to making any changes or modifications.

6 RECYCLED WATER USE FOR CONSTRUCTION GRADING AND OTHER INTERIM USE

The following regulations shall apply for the specific use of Recycled Water for construction grading, dust control, compaction and temporary reservoirs.

- (1) All construction connections shall be tagged with warning tags, as follows:

"WARNING - RECYCLED WATER - DO NOT DRINK"

"AVISO - AGUA IMPURA – NO TOMAR"

Use tags as manufactured by T. Christy Enterprises or Utility-approved "or equal" tags. Tags shall be affixed to stationary tanks, water trucks, and all Service points or any other inlet or outlet using Recycled Water.
- (2) Water trucks, water tanks, or any other receptacle, including but not limited to pipes or hoses used for storage or conveyance of Recycled Water, shall be dedicated solely to that use. Any use other than Recycled Water must be approved by the Utility and the Regulatory Agencies.
- (3) No fittings, hoses, pipes, or any other appurtenance using Recycled Water shall connect to a Potable Water source.
- (4) All PVC pipe extending from the point of connection shall be purple, and read: "CAUTION RECYCLED WATER." The PVC piping shall conform to all material specifications as set forth by the Utility.
- (5) Any water truck, water tank, or other storage receptacle to be converted from Recycled Water to Potable Water shall be thoroughly cleaned and disinfected to the satisfaction of the Utility and the Regulatory Agencies.
- (6) Contact the Utility prior to connection at (714) 765-5196 and arrange for an inspection to ensure compliance with Applicable Law.
- (7) Failure to comply the foregoing shall constitute a Violation which will result in termination of Service until the appropriate corrective steps have been taken to the satisfaction of the Utility.
- (8) Vehicles used for distributing Recycled Water for soil compaction and dust control or other uses shall have an adequate tank and plumbing system to ensure that leaks and ruptures will not occur in the course of normal use.

7 RECYCLED WATER USE IN DUAL PLUMBED BUILDINGS

General

This section describes the planning, design, construction, operation, and maintenance of On-Site Recycled Water Systems in Dual Plumbed buildings. In Dual Plumbed buildings, Recycled Water can only be used for cooling, toilet and urinal flushing, floor drain trap priming, and other uses approved by the City and Regulatory Agencies. All other water demands in these buildings will be served from the Potable Water system.

The planning of Dual Plumbed buildings is a combined effort of the Utility, City's Building Division, the Regulatory Agencies, developers, and engineers.

The On-Site Recycled Water System shall not have any connections to the Potable Water system except via an air gap approved by the Regulatory Agencies or via a temporary connection to the Potable Water system for initial testing of the On-Site Recycled Water System piping.

The applicant shall submit dual plumbing plans to the Utility, the City's Building Division, and the Regulatory Agencies for their review and approval. These plans shall not be approved unless they contain the information required by the Utility, the City's Building Division, and the Regulatory Agencies.

The indoor use of Recycled Water is allowed in commercial, retail and office buildings, theaters, auditoriums, condominium projects, schools, hotels, apartments, barracks, dormitories, jails, prisons, reformatories, and other buildings or structures as authorized by the Regulatory Agencies.

No changes or connections shall be made to either the On-Site Recycled Water System or the Potable Water system without approval by the Utility, the City's Building Division, and the Regulatory Agencies.

Before the building is occupied, the installer shall perform an initial Cross-Connection test in the presence of the representatives of the Utility, the City's Building Division and the Regulatory Agencies. No authorization to occupy a building shall be granted until the Cross-Connection test is deemed successful by all of the foregoing representatives.

The On-Site Recycled Water System shall be designed by a person registered or licensed to perform plumbing design work.

Design

All Dual Plumbed systems shall be designed in accordance with the California Plumbing Code and Applicable Law. The On-Site Recycled Water Systems shall be separate and independent of any Potable Water system. Cross-Connections between any Potable Water system and the On-Site Recycled Water Systems are strictly forbidden. The On-Site Recycled Water System construction plans shall be reviewed and subject to the approval of the Utility, the City's Building Division, and the Regulatory Agencies prior to construction.

Drawings and Specifications

Drawings and specifications for the On-Site Recycled Water Systems shall be in accordance with the requirements identified in Chapter 1, General Code Provisions, of the California Plumbing Code, as may be amended from time to time.

The drawings and specifications shall provide sufficient detail to determine compliance with the requirements of this section and the California Plumbing Code.

Pipe Materials – Recycled Water pipe, valves and fittings shall conform to the requirements of Sections 604.0, 605.0 and 606.0 of the California Plumbing Code, or other pipe material as approved by the City.

Color and Information – Recycled Water systems shall have a purple background with black uppercase lettering with the words "CAUTION: RECYCLED WATER, DO NOT DRINK."

Sizing – Recycled Water piping shall be sized as outlined in the California Plumbing Code for sizing Potable Water piping.

All Recycled Water pipe shall be permanently marked to identify that it contains Recycled Water. This may be accomplished by labeling the pipe with purple-colored (Pantone color #512) adhesive Mylar PVC tape along the entire length of the pipe or using non-metallic purple-colored pipe. In either case, pipes shall be labeled so that the wording "CAUTION: RECYCLED WATER, DO NOT DRINK" is clearly visible.

Construction

Before plumbing construction begins, the User shall arrange a pre-construction conference at which will be present the User's contractor job superintendent, the plumbing contractor, and the City's Building Division Inspector. The purpose of this meeting will be to explain the City's Building Division inspection process, review the City's construction specifications, and discuss the construction schedule and any known circumstances that might affect the installation of the Dual Plumbed system.

Installation

(A) The On-Site Recycled Water System shall not include any hose bibbs. Only quick couplers that differ from those used on the Potable Water system shall be used on the Recycled Water piping system.

(B) The On-Site Recycled Water System and the Potable Water system within the building shall be provided with Utility required appurtenances (e.g., valves, air/vacuum relief valves, etc.) to allow for Cross-Connection testing as required herein.

(C) Recycled Water pipes laid in the same trench or crossing building sewer or drainage piping shall be installed in compliance with Sections 609.0 and 720.0 of the California Plumbing Code. Recycled Water pipes shall be protected in a manner similar to Potable

Water pipes.

Signs

(A) Restrooms Signs. All restrooms using Recycled Water for toilets, urinals, and trap primers will be identified with signs in accordance with the requirements of Utility and the City's Building Division. At a minimum, the signs will contain 1/2-inch high letters of a highly visible color on a contrasting background. At least one sign shall be installed in each bathroom location. The location will be such that the sign is visible to all users, and the location will be approved by Utility and the City's Building Division. The signs will have the following text:

**TO CONSERVE WATER, THE RESTROOMS IN THIS BUILDING USE RECYCLED
WATER FOR FLUSHING TOILETS AND/OR URINALS**

(B) Equipment Room Signs. Each room containing Recycled Water equipment shall have a sign posted with the following wording in one (1) inch (25.4 mm) letters on a purple background:

**CAUTION
RECYCLED WATER,
DO NOT DRINK
DO NOT CONNECT TO DRINKING WATER SYSTEM**

**NOTICE
CONTACT BUILDING MANAGEMENT
BEFORE
PERFORMING ANY WORK ON
THIS WATER SYSTEM**

This sign shall be posted in a location that is visible to anyone working on or near Recycled Water equipment.

(C) Where tank-type toilets (water closets) are flushed with Recycled Water, a permanent sign (such as plastic or stainless steel) shall be installed inside the tank to warn that the water within the tank is not a suitable emergency water supply. The sign shall be labeled:

RECYCLED WATER – DO NOT DRINK

(D) Valve Access Door Signs. Each Recycled Water valve within a wall shall have its access door equipped with a warning sign approximately six (6) inches by six (6) inches (152 mm x 152 mm) with wording in one-half (1/2) inch (12.7 mm) letters on a purple background. The size, shape, and format of the sign shall be substantially the same as that specified in subsection (B) above. The signs shall be attached inside the access door frame

and shall hang in the center of the access door frame. This signage requirement shall be applicable to any and all access doors and hatches leading to Recycled Water piping and appurtenances.

(E) Valve Seals. Any master Recycled Water shut-off valve, Recycled Water Meter curb cock, or each valve within a wall shall be sealed after the On-Site Recycled Water System has been approved and placed into operation. These seals shall be either a crimped lead wire or a plastic break-away seal which, if broken after system approval, shall be deemed conclusive evidence that the On-Site Recycled Water System has been accessed for repair and maintenance. The seals shall be numbered. The Site Supervisor shall keep accurate records of any repair and maintenance work. A Cross-Connection test may be required if such records are not available or there is an indication that Cross-Connection has occurred.

Inspections

The Dual Plumbed system shall be subject to inspection by the City and shall be left open and uncovered until approved by the City's Building Division and Utility Inspectors. If any part of an On-Site Recycled Water System is to be installed and concealed within walls, ceilings, floors, or below grade prior to plan check approval and/or inspection, that part must be exposed for inspection approval by the City's Building Division and Utility before closure. If any portion is completed without the City's Building Division and Utility inspection and approval, that portion not inspected shall be re-exposed at the sole cost of the User. The City's Building Division and Utility inspection approval must be secured before final approval of the Dual Plumbed system by the City's Building Division and Utility and the issuance of a certificate of occupancy or other final use approval.

Construction Specifications

Construction specifications for all Dual Plumbed systems shall be as set forth in Appendix D.

Cross-Connection Test

Initial Phase

The On-Site Recycled Water System in a Dual Plumbed building shall initially be filled, pressure tested, and operated with Potable Water.

The following Cross-Connection testing procedures shall be used prior to the initial operation of an On-Site Recycled Water System within a Dual Plumbed building. If a Dual Plumbed building is already occupied and a substantial amount of time has elapsed between building occupation and the installation of an On-Site Recycled Water System, the Cross-Connection test set forth below shall be performed prior to the operation of the Dual Plumbed system.

1. Shut off the Recycled Water to the building at the Recycled Water Meter. Verify that the Potable Water system is pressurized by randomly testing fixtures. Drain the Recycled Water riser, and leave the On-Site Recycled Water System de-activated for a period of up to 24 hours.

2. At the end of the de-activation period, test all Recycled Water and Potable Water fixtures for Cross-Connection, floor-by-floor, by operating each fixture and checking for flow or no flow in all restrooms, and where there are Recycled Water and Potable Water supplied fixtures.
3. If there is no flow detected in any of the Recycled Water fixtures (indicating no Cross-Connection), reactivate the Recycled Water riser.
4. The Potable Water to the building shall be shut off at the backflow assembly. The Potable Water riser shall be drained, and the Potable Water system shall remain de-activated for a period of up to 24 hours.
5. At the end of the de-activation period, test all Potable Water and Recycled Water fixtures for Cross-Connection, floor-by-floor, by operating each fixture and checking for flow or no flow in all restrooms, and where there are Potable Water and Recycled Water supplied fixtures.
6. If there is no flow detected in any of the Potable Water fixtures (indicating no Cross-Connection), reactivate the Potable Water riser.
7. For new installations only, disconnect the Recycled Water riser from the Potable Water pipeline, remove the reduced pressure principle backflow prevention device at the Potable Water connection, and connect the Recycled Water riser to the Recycled Water supply.

The Utility will provide written verification of successful Cross-Connection test results to the Regulatory Agencies and the City's Building Division. The Cross-Connection test shall be conducted under the supervision of an AWWA-certified Cross-Connection Control Program Specialist from the Utility. The test shall be performed in the presence of representatives of the Regulatory Agencies, the City's Building Division, and the building Owner. The Utility will coordinate scheduling the test.

Response to Confirmed Cross-Connection

In the event that a Cross-Connection is discovered other than during routine Cross-Connection testing, the User shall immediately implement an appropriate response as directed by Utility staff and Regulatory Agency representatives. Utility staff will collect water quality samples and perform chlorine residual tests. Moreover, bacteriological testing shall be performed by a state-certified laboratory. The following procedures describe the minimum appropriate response:

1. If a Cross-Connection is found by building personnel, the Site Supervisor shall immediately notify building management of the Cross-Connection. Building management shall immediately notify building tenants not to drink or otherwise use the Potable Water, post "Warning: Do Not Drink" signs at all Potable Water fixtures and equipment, and notify the Utility of the Cross-Connection.
2. Immediately after notifying building management of the Cross-Connection, the Site Supervisor shall shut off the On-Site Recycled Water System at the Meter and begin draining the Recycled Water riser.
3. Immediately after the Recycled Water begins to drain from the building, the Site

Supervisor shall shut off the Potable Water at the Meter and drain the Potable Water riser.

4. The Utility will immediately notify the Regulatory Agencies by telephone and thereafter send a written notice to them within 24 hours. Upon their review of the Cross-Connection problem, the Utility and the Regulatory Agencies may recommend remedies in addition to or in lieu of those set forth herein.
5. Uncover and disconnect the Cross-Connection(s).
6. Turn on the Potable Water at the Meter, and once the building is re-pressurized with Potable Water, check all Potable Water fixtures for pressure and check all Recycled Water fixtures for no pressure.
7. If no additional Cross-Connections are found, turn on the On-Site Recycled Water System at the Meter and re-pressurize the building, and proceed to step 8. If an additional Cross-Connection is found, turn off the Potable Water at the Meter and drain the Potable Water riser. Uncover and disconnect the Cross-Connection(s). After the Cross-Connection is disconnected, begin again with steps 6 through 16.
8. Turn off the Potable Water at the Meter, depressurize the Potable Water system at the riser and check all Potable Water fixtures for no pressure and verify water pressure at all of the Recycled Water fixtures.
9. If no additional Cross-Connections are found, the Site Supervisor shall re-pressurize the Potable Water system, and proceed to step 10.

If an additional Cross-Connection is found, turn off the On-Site Recycled Water System at the Meter and drain the Recycled Water riser. Uncover and disconnect the Cross-Connection(s). After the Cross-Connection is disconnected, begin again with steps 6 through 16.

10. The Site Supervisor shall remove water filter cartridges, etc., from filters on the Potable Water system.
11. Flush the Potable Water system before shock chlorination.
12. Shock the Potable Water system until at least 50 ppm of chlorine residual is available at each outlet. If at least 25 ppm of chlorine residual is not available at each outlet after 24 hours, repeat steps 11 and 12, otherwise proceed to step 13.
13. Flush the Potable Water system after 24 hours until a normal chlorine residual is detected, and perform standard bacteriological testing.
14. After acceptable bacteriological results are obtained, retest the building following procedures listed in the Initial Phase above.
15. Prior to using Potable Water, obtain final approval from the Utility, the City's Building Division, and the Regulatory Agencies.
16. After the conclusion of the Cross-Connection incident, the Utility will prepare a "Cross-Connection Incident Report," which includes an explanation of the nature of the Cross-

Connection and appropriate plans to minimize reoccurrence of a similar Cross-Connection. Copies of this report will be sent to the Regulatory Agencies.

If a Cross-Connection is discovered during routine Cross-Connection testing, the following procedures shall be followed:

1. If the Cross-Connection is found during a pressure test, the On-Site Recycled Water System shall immediately be depressurized.
2. The Site Supervisor will immediately shut off the Potable Water at the Meter and begin draining the Potable Water riser. At the same time, the Site Supervisor will ensure that tenants are notified not to drink or otherwise use the Potable Water, and ensure that "Warning: Do Not Drink" signs are posted at all Potable Water fixtures and equipment.
3. Uncover and disconnect the Cross-Connection(s).
4. Continue the procedures in steps 6 through 16 above.

Final Approval and Activation of Recycled Water Service

When all requirements listed below have been met, the Recycled Water Meter shall be installed and the On-Site Recycled Water System shall be placed into operation under the supervision of the Utility.

1. Both the Potable Water system and the On-Site Recycled Water System must have received plan approval by City's Building Division. The On-Site Recycled Water System must have been constructed and passed inspection in accordance with the requirements of this Guide.
2. Both the Potable Water system and the On-Site Recycled Water System must have passed the initial Cross-Connection test in the manner set forth in this Guide
3. Final approval to use the On-Site Recycled Water System must be received from the Regulatory Agencies.
4. After approval by the Regulatory Agencies, the User shall post all signs in restrooms, equipment rooms, and plumber's closets and seal and/or tag all Recycled Water control valves and appurtenances in accordance with the requirements set forth herein. Signs, seals, and tags shall be installed under the supervision of the Utility.
5. Before the On-Site Recycled Water System is put into Service, the Utility's staff shall meet with the Site Supervisor to discuss operating procedures and responsibilities.

Ongoing Operation and Maintenance

Ongoing operation and maintenance of On-Site Recycled Water Systems in Dual Plumbed buildings shall include both Cross-Connection inspection and testing. Cross-Connection inspections shall occur annually in accordance with the procedures set forth below. Cross-

Connection testing shall occur as often as annually, but not less often than once every four years in accordance with the procedures also described below.

Determination of Cross-Connection testing frequency will be based on a combination of factors, including, but not limited to, particular facility construction and Recycled Water use features, inspection and testing performance history, User/Site Supervisor cooperation, and ongoing performance evaluation by the Utility staff and the Regulatory Agencies. The initial testing frequency will not be less than annual. Future frequencies shall be adjusted higher or lower based on the factors set forth above. Future frequencies will be confirmed by the Utility in writing.

The duration of de-activation during Cross-Connection testing will generally be one hour unless a longer period is required by the Utility and/or the Regulatory Agencies.

All testing will be conducted under the supervision of a Cross-Connection Control Specialist. This test will be performed in the presence of the Site Supervisor and representatives of the Regulatory Agencies. The Utility will coordinate the scheduling of the test.

Cross-Connection Testing

Prior to commencing the Cross-Connection test, the building shall be inspected by the Utility in the presence of the Site Supervisor and representatives of the Regulatory Agencies, as follows:

1. Check Meter location of the On-Site Recycled Water System and the Potable Water system; verify that no modifications have been made, or Cross-Connections are visible.
2. Check the Potable Water reduced pressure principle backflow prevention device.
3. Check all pumps and equipment, equipment room signage, and exposed piping in the equipment room.
4. Check all Recycled Water control valves to make sure that seals are still in place and intact. Check all valve control door signs to verify that none has been removed.
5. Check all restroom entrance signs to make sure they are in place and visible.
6. Check all plumber's closets and verify that all signs are in place.

The following testing sequence shall be used after the initial operation of an On-Site Recycled Water System in a Dual Plumbed building:

1. The On-Site Recycled Water System to the building shall be shut off at the Recycled Water Meter. The Recycled Water riser shall be drained, and the On-Site Recycled Water System shall remain de-activated for a period of at least 1 hour.
2. At the end of the above shutdown period, test all Recycled Water and Potable Water fixtures for Cross-Connection, floor-by-floor, by operating each fixture and checking for flow or no flow in all restrooms, and where there are Recycled Water and Potable Water supplied fixtures.
3. If there is no flow detected in any of the Recycled Water fixtures (indicating no Cross-Connection), reactivate the Recycled Water riser.

4. The Potable Water to the building shall be shut off at the backflow prevention assembly. The Potable Water riser shall be drained, and the Potable Water system shall remain deactivated for a period of at least 1 hour.
5. At the end of the above shutdown period, test all Potable Water and Recycled Water fixtures for Cross-Connection, floor-by-floor, by operating each fixture and checking for flow or no flow in all restrooms, and where there are Potable Water and Recycled Water supplied fixtures.
6. If there is no flow detected in any of the Potable Water fixtures (indicating no Cross-Connection), reactivate the Potable Water riser.

The Utility will provide written verification of successful Cross-Connection test results to the Regulatory Agencies and the City's Building Division. This verification shall also contain a notification of subsequent testing frequency. The test frequency shall be as frequent as is agreeable to both the Utility and the Regulatory Agencies.

Emergency Response to Confirmed Cross-Connection

In the event that a Cross-Connection is discovered, the procedures described in the above-titled subsection, "Response to Confirmed Cross-Connection," shall be immediately followed.

In addition to the annual inspection described above, the following specific inspections shall be conducted:

1. Run random water sample tests (laboratory samples) on Recycled Water and Potable Water.
2. Check walls for visible repairs that might indicate that plumbing changes may have occurred.
3. Check plumber's closets to see if valve seals have been broken.
4. Check with the Site Supervisor to ask whether any routine operations or maintenance work has been performed on the plumbing systems.

The Utility will keep a record of all inspections, which will become a part of the Utility's project file for Dual Plumbed buildings.

Site Supervisor Responsibilities

The Utility will provide the name of the Site Supervisor to the Regulatory Agencies. The Site Supervisor is responsible for the following:

- a. Maintaining strict control over the building's Potable Water system and On-Site Recycled Water System.
- b. Controlling Cross-Connections.

- c. Immediately informing the Utility's Cross-Connection Control Specialist at the Utility's 24-hour emergency number, (714) 765-4560, of any water system failures or emergency shutdowns.
- d. Inform the Utility's Cross-Connection Control Specialist in advance of scheduled shutdowns for the maintenance of the On-Site Recycled Water System.
- e. Inform and provide the Utility's Cross-Connection Control Specialist with plans for proposed changes to the Potable Water system and On-Site Recycled Water System.

Records

The Utility will maintain a database and written records of all Dual Plumbed buildings using Recycled Water in the Service Area in order to document, track, and schedule all tests. The Utility will provide reports about these facilities to the Regulatory Agencies and the City's Building Division on an annual basis.

APPENDIX A

DESIGN STANDARDS - ON-SITE RECYCLED WATER SYSTEM PLANS

Minimum Depth to Top of On-Site Recycled Water System Piping

For On-Site Recycled Water System piping, the minimum depth from finished grade to top of a pipe (minimum cover) shall be as follows:

- (A) Constant pressure lines 3 inches and 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 considered below sub grade.

Data Required on Plans

- (A) Meter Data - The following information shall be supplied for each Recycled Water Meter desired; information is to be provided and shown at each Meter location:
 - a. The Meter location and size (inches); Meter address and civil station number.
 - b. The peak flow through the Meter (gpm).
 - c. The (static) design pressure at the Meter (psi).
 - d. The total area served through the irrigation Meter (square feet or acres).
 - e. An estimate of the yearly water requirement through the Meter (acre-feet).
- (B) Drinking Fountains - Exterior drinking fountains must be shown and called out on the On-Site Recycled Water System plans. If no exterior drinking fountains are present in the design area, it must be specifically stated on the plans that none exist. The Potable Water line supplying the drinking fountain must have a warning tape installed, which shall be a blue tape identifying it as a Potable Water line and stating "CAUTION: WATER LINE BURIED BELOW". The Potable Water line shall be so stated on the plans. Drinking fountains must be protected from the direct spray and mist of Recycled Water either by proper placement of the drinking fountain within the design area or the use of a covered fountain approved for this purpose.
- (C) Irrigation Equipment Legend - For irrigation systems, a legend showing the pertinent data for the materials used in the system shall be recorded on the plans. The legend shall include a pipe schedule listing pipe sizes and materials of construction, a listing of valve types including quick-coupling valves, and the following information for each type of sprinkler head:
 - 1. Manufacturer and model number.
 - 2. Sprinkler radius (feet).
 - 3. Operating pressure (psi).
 - 4. Flow (gpm).

APPENDIX A

DESIGN STANDARDS - ON-SITE RECYCLED WATER SYSTEM PLANS

5. Sprinkler pattern.
- (D) Site Use Information – The information requested below must be provided. In addition, all Recycled Water irrigation plans must have the following items shown:

Regional Water Quality Control Board Required Information on Recycled Water Irrigation Plans

1. The average number of people at this use site on a daily basis.

2. Boundaries to the proposed use site, footprint of any facilities on the premises, drinking water fountains, and any Recycled Water or Potable Water impoundment to be used.

3. The Site Supervisor, who is responsible for the operation of the On-Site Recycled Water System at each use area.

4. The specific use to be made of the Recycled Water at each use area.

5. The methods to be used to ensure that the installation and operation of the On-Site Recycled Water System will not result in Cross-Connections between the Recycled Water and the Potable Water piping systems. Describe the pressure test done before the installation of the Meter.

6. Pipe locations of both the On-Site Recycled Water System and the Potable Water system, or brief explanation for the exclusion of the system not shown.

Pipe Identification

All buried piping in the On-Site Recycled Water System shall be purple-colored PVC pipe with stenciling identifying it as Recycled Water in accordance with the AWWA Guidelines for the Distribution of Non-Potable Water. All On-Site Recycled Water System main line piping under paved areas shall be installed in a Pressure Class 305 purple-colored PVC sleeve.

Standard PVC pipe completely wrapped with purple warning tape, as specified below, may be accepted as an alternative to stenciled purple-colored PVC pipe only on a

APPENDIX A

DESIGN STANDARDS - ON-SITE RECYCLED WATER SYSTEM PLANS

project-by-project basis with prior written approval from the Utility. The color of the tape must be in accordance with the AWWA Guidelines for the Distribution of Non-Potable Water.

A. Purple Pipe

On-Site Recycled Water System piping shall be purple-colored PVC. The pipe shall be identified as Recycled Water pipe by continuous marking. The markings shall include the following:

"CAUTION: RECYCLED WATER - DO NOT DRINK," nominal pipe size, PVC-1120, pressure rating in pounds per square inch at 73 degrees, and ASTM designations such as 1785, 2241, 2672, 3139. Printing shall be placed continuous on two sides of the pipe.

B. Warning Tape

The plastic warning tape shall be prepared with black printing on a purple field having the words, "CAUTION: RECYCLED WATER - DO NOT DRINK." The overall width shall be a minimum of 3 inches.

Warning (caution) tape shall be as manufactured by Thor Enterprises, Inc., P.O. Box 450, Sun Prairie, WI 53590 (1-800-USA-THOR or 1-602-837-7197) or Utility-approved "or equal".

Warning tapes shall be installed directly on the top of the pipe longitudinally and shall be centered. The warning tape shall be installed continuously for the entire length of the pipe and shall be fastened to each pipe length by plastic tape banded around the pipe with fasteners no more than 5 feet apart. Taping attached to the sections of pipe before laying in the trench shall have flaps sufficient for continuous coverage. All risers between the main line and control valves shall be installed with warning tape. In some cases as determined by the City the pipe must be continuously wrapped with purple recycled water warning tape.

Quick-coupling Valves

A. Recycled Water

Quick-coupling valves used in Recycled Water systems shall conform to the following:

- (1) Quick-coupling valves shall be constructed of brass with a purple rubber or vinyl cover, and shall have a 3/4 or 1-inch inlet.
- (2) The cover shall have a warning with the following information:
 - (a) "RECYCLED WATER."
 - (b) "DO NOT DRINK" in English and Spanish.

APPENDIX A

DESIGN STANDARDS - ON-SITE RECYCLED WATER SYSTEM PLANS

- (c) The international "Do Not Drink" symbol, such as a glass of water with a slash through it.
- (3) The warning shall be permanently stamped or molded into the cover.
- (4) Locking covers may be required.
- (5) All Recycled Water quick-coupling valves shall be installed below grade in a round box designed for irrigation use. The box must be purple unless otherwise approved by the City.

B. Potable Water

- (1) Quick-coupling valves used in Potable Water systems shall have a cover made of brass, metal, or yellow rubber or vinyl.
- (2) Quick-coupling valves intended for Recycled Water use are not to be used on Potable Water systems.

Sprinklers

All On-Site Recycled Water Systems shall have restricted public access so that the general public cannot draw water from the system.

Facilities, such as wash down hydrants (typically found at tennis courts), blow-off hydrants, blowouts on strainers, and other such facilities, shall be restricted from public access. These facilities, both above and below grade, shall be housed in an approved lockable container and identified as housing On-Site Recycled Water System facilities. A sign reading "CAUTION: RECYCLED WATER - DO NOT DRINK" shall be installed, and its size shall be subject to the approval of the Utility.

An alternative acceptable means of restricting public access is the use of valves that operate by means of a recessed key slot or by means of hexagonal heads (such as those typically found on fire hydrants). Other means of restricting public access may be approved by the Utility. The above conditions may also apply to On-Site Recycled Water Systems for natural treatment system irrigation, as determined by the Utility.

Warning Labels

The Utility may require warning labels be installed on designated appurtenances such as controller panels, blow-off hydrants on water trucks, and temporary construction Services. These labels shall state that the system contains Recycled Water that is unsafe to drink.

Valve Boxes and Warning Tags

A. Boxes

- (1) All gate valves, manual control valves, quick coupling valves, electrical control valves, pressure reducing valves, and strainers for On-Site

APPENDIX A

DESIGN STANDARDS - ON-SITE RECYCLED WATER SYSTEM PLANS

Recycled Water Systems shall be installed below grade in a valve box. All appurtenances shall be tagged as described below, B. Valve Tags. The valve boxes must be purple unless otherwise approved by the City.

- (2) Electrical and manual control valve boxes shall have a warning label permanently molded into or affixed onto the lid with rivets, bolts, etc. Warning labels shall be constructed of weatherproof material with the warning permanently stamped or molded into the label. The warning shall contain the following information:
 - (a) "RECYCLED WATER."
 - (b) "DO NOT DRINK" in English and Spanish.
 - (c) The international "Do Not Drink" symbol, such as a glass of water with a slash through it.

B. Valve Tags

All Recycled Water sprinkler control valves, strainers, pressure regulators, quick couplers, isolation valves shall be tagged with identification tags.

- (1) Tags shall be weatherproof plastic, 3-inch x 4-inch, purple in color with the words "WARNING - RECYCLED WATER - DO NOT DRINK" imprinted on one side, and "AVISA - AGUA IMPURA - NO TOMAR" on the other side. Imprinting shall be permanent and black in color. Use tags as manufactured by T. Christy Enterprises or Utility-approved "or equal".
- (2) One tag shall be attached to each appurtenance as follows:
 - (a) Attach to valve stem directly or with plastic tie wrap;
 - (b) Attach to solenoid wire directly or with plastic tie wrap;
 - (c) Attach to valve cover with existing valve cover bolt; or
 - (d) Attach to the body of the relative appurtenance with a plastic tie-wrap.

Quick Couplers, Strainers, and Pressure Reducing Valves

A. Quick Couplers

Recycled Water quick couplers must be purple and installed below grade in a purple valve box.

B. Strainers

Sprinkler irrigation systems shall have a Y or basket strainer located downstream of the Meter. The strainer shall have a 30-mesh or finer screen. Strainers that

APPENDIX A

DESIGN STANDARDS - ON-SITE RECYCLED WATER SYSTEM PLANS

have automatic backwash features will not normally be allowed unless it can be demonstrated to the Utility that the backwash water will not cause Runoff and is disposed of in a manner approved by the Utility. The strainer drain valve shall operate with a recessed key slot.

C. Pressure-Reducing Valves

A pressure-reducing valve must be installed down-stream of the strainer for each system using Recycled Water, unless otherwise directed by the Utility.

D. Strainer and P.R.V. Boxes

All strainers and pressure-reducing valves shall be installed below grade in a rectangular box of sufficient size to easily allow repair or replacement of the unit(s).

E. Point of Connection (POC) Assembly

Install the POC assembly as follows, quick coupler immediately after the Meter, strainer, pressure regulator, master valve (optional) and quick coupler. This POC assembly shall be installed below-grade and as near as possible to the Meter or as directed by the Utility's Inspector.

Potable Water Piping

All PVC Potable Water piping installed within the same project limits as the On-Site Recycled Water System piping shall be installed in accordance with the California Plumbing Code and all other Applicable Laws. The pipe shall be continuously and permanently marked with the manufacturer's name or trademark, nominal size, and schedule or class indicating the pressure rating. In addition, all PVC Potable Water piping shall have blue tape identifying it as a Potable Water line and stating "CAUTION: WATER LINE BURIED BELOW."

APPENDIX B

STANDARD NOTES - ON-SITE RECYCLED WATER SYSTEM PLANS

The following special On-Site Recycled Water System notes shall be shown on all On-Site Recycled Water System construction plans:

- A. The installation of the irrigation water system shall conform to the regulations for the construction of irrigation water systems within the Service Area and the accompanying plans and specifications.
- B. All On-Site Recycled Water System piping and Potable Water piping installed on this project shall be identified in accordance with the City of Anaheim Water Rates, Rules and Regulations, Recycled Water Users' Guide and the project-specific irrigation specifications.
- C. Recycled Water piping shall be purple PVC. Constant pressure main line piping 2" and larger shall be rubber-ring joint, PVC Class 305 or solvent weld joint, PVC Class 315. Constant pressure main line piping 1 ½" and smaller shall be PVC Schedule 40. Intermittent pressure lateral line piping shall be solvent weld joint, PVC Class 200, Schedule 40.
- D. Marking on the purple PVC pipe shall include the following:
 - "CAUTION: RECYCLED WATER - DO NOT DRINK," nominal pipe size, PVC-1120, pressure rating in pounds per square inch at 73 degrees, and ASTM designations such as 1785, 2241, 2672, 3139. Printing shall be placed continuously on two sides of the pipe.
- E. All Recycled Water sprinkler control valves, isolation valves, quick couplers, and all appurtenances shall be tagged with identification tags.
 - (1) Tags shall be weatherproof plastic, 3-inch x 4-inch, purple in color with the words "WARNING - RECYCLED WATER - DO NOT DRINK" imprinted on one side, and "AVISO - AGUA IMPURA - NO TOMAR" on the other side. Imprinting shall be permanent and black in color. Use tags as manufactured by T. Christy Enterprises or Utility approved "or equal".
 - (2) One tag shall be attached to each appurtenance as follows:
 - (a) Attach to valve stem directly or with plastic tie-wrap;
 - (b) Attach to solenoid wire directly or with plastic tie-wrap;
 - (c) Attach to valve cover with existing valve cover bolt; or
 - (d) Attach to the body of the appurtenance with a plastic tie-wrap.
- F. Warning tape shall be used on all constant pressure main line piping carrying Potable Water.
- G. Warning tape shall be a minimum of 3 inches wide and shall run continuously for the entire length of all constant pressure main line piping. The tape shall be attached to

APPENDIX B

STANDARD NOTES - ON-SITE RECYCLED WATER SYSTEM PLANS

the top of the pipe with plastic tape banded around the warning tape and the pipe every five feet on center.

- H. Warning tape for the constant pressure Potable Water piping shall be blue in color with the words "CAUTION: BURIED WATER LINE BELOW" imprinted in minimum 1-inch high letters, black in color. Imprinting shall be continuous and permanent.
- I. The Utility shall be notified two days prior to the start of irrigation construction at (714) 765-5196 and each workday thereafter until completion of project.
- J. All pressure main line piping from the On-Site Recycled Water System shall be installed to maintain 5 feet minimum horizontal separation from all Potable Water piping. Where recycled and Potable Water pressure main line piping cross, the Recycled Water piping shall be installed below the Potable Water piping in a Class 305 purple-colored PVC sleeve which extends a minimum of 5 feet on either side of the Potable Water piping. Provide a minimum vertical clearance of 12 inches. Conventional (white) PVC pipe may be used for sleeving material if it is taped with 3-inch wide purple warning tape which reads "CAUTION: RECYCLED WATER - DO NOT DRINK."
- K. The irrigation system must be designed to operate between the hours of 9:00 p.m. and 6:00 a.m. unless otherwise directed by the Utility.
- L. All new common areas where Recycled Water is used and that are accessible to the general public shall be posted with permanent conspicuous signs that include the following wording in a sign no less than 4 inches high by 8 inches wide: "RECYCLED WATER – DO NOT DRINK". Each sign shall also display an international symbol conveying the same warning. Unless otherwise approved by the City, the sign must have a purple background with white lettering.
- M. Adjust spray heads to eliminate overspray onto areas not under the control of the User, for example, pool decks, private patios, streets and sidewalks.
- N. Contact the Utility two days prior to the irrigation system coverage test at (714) 765-5196 and arrange a walkthrough of the system.
- O. Failure to comply with any or all of the above guidelines puts your system in Violation of the Utility's Water Rates, Rules and Regulations or Applicable Laws, and may result in termination of Service.
- P. Warning tape on Recycled Water constant pressure main line piping, in place of purple PVC pipe, is only allowed on a project-by-project approval basis from the Utility. If approved, it must follow these installation specifications.
 - (1) Warning tape shall be used on all constant pressure mains.
 - (2) Warning tape shall be a minimum of 3 inches wide and shall run continuously for the entire length of all constant pressure main line piping.

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STANDARD NOTES - ON-SITE RECYCLED WATER SYSTEM PLANS

The tape shall be attached to the top of the pipe with plastic tape banded around the warning tape and the pipe every 5 feet on center. The City may require the pipe to be continuously wrapped with purple tape.

- (3) Warning tape for the constant pressure Recycled Water piping shall be purple in color with the words "RECYCLED WATER - DO NOT DRINK" imprinted in minimum 1-inch high, black letters. Imprinting shall be continuous and permanent.

For single-family residences receiving Recycled Water, the following additional notes shall appear on the plans:

- Q. All Potable Water piping outside of the structure shall be copper pipe, which shall have warning tape installed in accordance with items F, G and H above.
- R. All Recycled Water piping shall be purple colored PVC pipe, which shall be marked in accordance with item D above.
- S. An approved backflow prevention assembly conforming to the Utility's Water Rates, Rules and Regulations shall be installed on the downstream side of the Potable Water Meter.
- T. All quick couplers must be installed within 5 feet of the Recycled Water Meter.

APPENDIX C

STANDARD NOTES - OFF-SITE RECYCLED WATER SYSTEM PLANS

The following notes must appear on all plans for construction of off-site Recycled Water systems and be identified as "Recycled Water Notes." In addition, the Standard Water Notes shown in the Utility's Administrative and Design Guidelines must appear on the plan as well.

- (1) All off-site Recycled Water systems shall be constructed in accordance with the requirements of the Potable Water systems.
- (2) Recycled Water pipe shall be purple PVC AWWA C-900 or C905 pipe, Pressure Class 305, marked as required by Utility standards to identify it as Recycled Water. DIP may be used with the approval of the Utility but it must be marked with purple marking tape.
- (3) All 1-inch and 2-inch copper Services shall be wrapped continuously with purple marking tape from end to end.

APPENDIX D

SPECIAL NOTES – ON-SITE RECYCLED WATER SYSTEM DUAL PLUMBED BUILDING PLANS

The following notes are to be shown on all On-Site Recycled Water System Dual Plumbed building plans:

SPECIAL ON-SITE RECYCLED WATER SYSTEM NOTES FOR DUAL PLUMBED BUILDINGS

- A. The installation of the On-Site Recycled Water System within a Dual Plumbed building shall conform to the regulations for the construction of such systems within the City, these accompanying plans and specifications, and all Applicable Laws.
- B. All On-Site Recycled Water System piping and Potable Water piping installed on this project shall be identified in accordance with the City of Anaheim Water Rates, Rules and Regulations, the Recycled Water Users' Guide, and the California Plumbing Code.
- C. Before plumbing construction begins, the User shall arrange a pre-construction meeting with Utility's Inspector and the plumbing contractor. The Utility's Inspector shall be contacted at (714) 765-5196.
- D. The On-Site Recycled Water System and the Potable Water system shall be subject to inspection by the Utility and shall be exposed until approved by the Utility's Inspector.
- E. At the Owner's expense, an in-line 5 to 7.5 micron filter is required downstream of the Recycled Water Meter and inside the building or a secured covered structure. The filter's size, type and manufacturer's name shall be shown on these plans.
- F. All Piping to be used for the Recycled Water within buildings shall be Type L copper pipe or other pipe material as approved by the City and Regulatory Agencies, and shall be continuously wrapped with purple colored Mylar tape.
 - 1. The internal Recycled Water identification wrapping tape shall be a nominal 0.005-inch thick, with a minimum width of two inches. The tape shall be fabricated of polyvinyl chloride with a synthetic rubber adhesive, and a clear polypropylene protective coating. The tape shall be purple (Pantone Color No. 249C), and shall be imprinted in nominal 1/2-inch high, black, upper case letters, with the words, "CAUTION: RECYCLED WATER, DO NOT DRINK." The lettering shall be imprinted in two parallel lines, such that after wrapping the pipe with a one-half width overlap, one full line of text is visible.
 - 2. All below grade Recycled Water piping shall be identified with warning tape. The warning tape shall be an inert plastic film with a minimum thickness of 4 mils. The tape shall be purple (Pantone Color No. 249C), and shall be permanently imprinted in black, upper case letters, with the words, "CAUTION: RECYCLED WATER, DO NOT DRINK." The overall width of the tape and the height of the letters shall correspond to the size of the pipe as follows:
 - a. 6-inch and smaller pipe shall have 6-inch wide tape with minimum 1 7/8-inch high letters.

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SPECIAL NOTES – ON-SITE RECYCLED WATER SYSTEM DUAL PLUMBED BUILDING PLANS

- b. 8-inch and larger pipe shall have 12-inch wide tape with minimum 3 1/2-inch high letters.
- G. The below grade warning tape shall be:
1. Installed directly on the top of the pipe longitudinally.
 2. Installed continuously for the entire length of the pipe.
 3. Fastened to the pipe by plastic adhesive tape banded around the warning tape and pipe at no more than five-foot intervals.
- H. All Recycled Water control valves within buildings shall be lever handle ball valves equipped with a locking feature and shall be located at 48-inches above finished floor. All mechanical equipment that is appurtenant to the On-Site Recycled Water System shall also be painted to match the Mylar wrapping tape.
- I. Both the Potable Water system and the On-Site Recycled Water System risers within the buildings shall be equipped with a manual drain, and an air/vacuum relief valve which will allow the entire riser to be drained. Both sources shall drain to the sewer.
- J. No Cross-Connections between Recycled Water and Potable Water of any kind shall be made with or without mechanical backflow prevention.
- K. All Recycled Water risers within the building, including appurtenances such as air/vacuum relief valves, pressure reducing assemblies, etc., shall be installed in the opposite end of the bathroom from the Potable Water risers, or opposite walls as applicable, and where feasible.
- L. Recycled Water piping shall not enter any facility that produces or processes food or beverages as defined in Title 22 California Code of Regulations.
- M. No stub-outs beyond the plumbing core are permitted from the On-Site Recycled Water System.
- N. Recycled Water lines running parallel to Potable Water lines shall be installed at least five feet horizontally from Potable Water lines. Where Potable Water and Recycled Water lines cross, the Recycled Water lines should cross a minimum of one foot below Potable Water lines. Where separations cannot be maintained, an effective separator, which may consist of, but is not necessarily restricted to, a single sheet of standard drywall, or aluminum sheeting, shall be installed within the wall between the Recycled Water and Potable Water piping headers. The effective separator shall extend the full width of the wall section, and be a minimum of three feet in length centered on the piping headers.
- O. No changes or connections shall be made to either piping system without approval by the City's Building Division's Inspector.
- P. Before the issuance of a certificate of occupancy or other use permit, the On-Site Recycled Water System must successfully pass an initial test. To schedule the test, the User shall contact the Utility's Cross-Connection Control Specialist at (714) 765-5196.

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SPECIAL NOTES – ON-SITE RECYCLED WATER SYSTEM DUAL PLUMBED BUILDING PLANS

- Q. All restrooms using Recycled Water for toilets, urinals, and trap primers will be identified with signs in accordance with the requirements of Utility and the City's Building Division. At a minimum, the signs will contain 1/2-inch high letters of a highly visible color on a contrasting background. At least one sign shall be installed in each bathroom location. The location will be such that the sign is visible to all users, and the location will be approved by Utility and the City's Building Division. The signs will have the following text:

"TO CONSERVE WATER, THE RESTROOMS IN THIS BUILDING USE RECYCLED WATER FOR FLUSHING TOILETS AND/OR URINALS."

- R. Each equipment room containing Recycled Water equipment shall have a sign posted in both English and Spanish with the following wording in one-inch high white letters on a purple background:

"CAUTION
RECYCLED WATER
DO NOT DRINK

NOTICE
CONTACT BUILDING MANAGEMENT BEFORE PERFORMING ANY WORK ON THIS
WATER SYSTEM"

This sign shall be installed in a location that is visible to anyone working on or near Recycled Water equipment.

- S. Each Recycled Water control valve within a wall shall have its access door into the wall equipped with a warning sign approximately six inches square with wording in 1/2-inch white letters on a purple background. The size, shape, and format of this sign shall be substantially the same as the equipment room signs. The signs shall be attached in the access doorframe by means of two short lengths of bands, and shall hang in the center of the access doorframe. A Spanish language version of the sign shall be installed on the inside of the access door. This sign requirement will be applicable to any and all access doors, hatches, or any other means of access.
- T. Each lever handle ball control valve, or appurtenance, shall be sealed in a manner approved by the Utility after the On-Site Recycled Water System has been approved and placed into operation. The type of seal shall be, as applicable, either a plastic and wire snap-off padlock seal, or a plastic pull-tie seal and tag, which, if broken after system approval, shall be deemed conclusive evidence that the On-Site Recycled Water System has been accessed. The seals shall have serial numbers. The seals will be supplied by the Utility or by other arrangements acceptable to the Utility.
- U. The Dual Plumbed building plumbing plans and Tenant Improvement Plans shall have the following Tenant Improvement Water Note placed on the Title Page of each plan:

Tenant Improvement Water Note: For proper Cross-Connection testing of this Dual Plumbed building, all angle-stop valves serving refrigerator ice-makers, stand-alone ice-makers, domestic type dishwashers, coffee makers and all other appliances, devices or apparatus not regularly classed as plumbing fixtures, served by Potable Water, must be readily accessible and shall have an extra port (Test Port) with a threaded cap. An

APPENDIX D

SPECIAL NOTES – ON-SITE RECYCLED WATER SYSTEM DUAL PLUMBED BUILDING PLANS

exposed manifold serving multiple angle-stop valves will require only one test port. All flexible lines shall not be concealed and must be visible. If the flexible lines for these appliances exceed ten feet, copper pipe must be used. The Test Port shall be used for Cross-Connection testing only and shall be so tagged or labeled to prevent its use for any other purpose. See Section 7 of the City of Anaheim Public Utilities Department Recycled Water Users' Guide for details on Dual Plumbed building Cross-Connection testing procedures. **Tenant Improvements to On-Site Recycled Water Systems are prohibited unless approved in writing by the City of Anaheim Public Utilities Department.**

- V. Tenant Improvement water stub-outs are only allowed on the domestic Potable Water system and must have a valve, threaded cap and be identified as domestic Potable Water.

- W. Recycled Water for cooling will serve only the make-up water to the cooling towers. The cooling system shall comply with the following:
 - 1. A drift eliminator shall be used whenever the cooling system is in operation.

 - 2. A biocide shall be used to treat the cooling system recirculating water.

APPENDIX E
APPLICATION FOR RECYCLED WATER USER PERMIT

City of Anaheim Public Utilities Department
Application for Recycled Water User Permit

The following information shall be completed by the applicant:

Applicant Name: _____

Relationship to Property: _____

Mailing Address: _____

Telephone Number(s): _____

Project or Site Name: _____

Project or Site Address: _____

Property Owner(s): _____

Mailing Address: _____

Telephone Number(s): _____

Designated Recycled Water Site Supervisor

Name: _____

Title: _____

Address: _____

Qualification: _____

24 Hour Telephone
Contact Number(s): _____

Legal Description of Property:

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APPLICATION FOR RECYCLED WATER USER PERMIT

1. Type of use:

<input type="checkbox"/>	Landscape Irrigation	<input type="checkbox"/>	Construction Use
<input type="checkbox"/>	Commercial Use	<input type="checkbox"/>	Wildlife Habitat
<input type="checkbox"/>	Industrial Use	<input type="checkbox"/>	Landscape Impoundment
<input type="checkbox"/>	Agricultural Use	<input type="checkbox"/>	
<input type="checkbox"/>	Other	<input type="checkbox"/>	

2. Brief description of use(s):

3. Landscape irrigation: Total irrigated area: _____ acres

4. Estimated demand: Total quantity: _____ 1 unit= 100cu.ft./yr.

Max. Flow at Point of Connection: _____ gallons/minute

Minimum Pressure: _____ pounds per square inch (psi)

Hours/Day: _____ Days/Week: _____

Monthly average peak: _____

5. Number of Recycled Water Service Connections: _____

Number of Meters Requested: _____

Size of Meters: _____

6. Will this site be Dual Plumbed with both Recycled Water and Potable Water? yes/no

If yes, please list type and size of **Potable Water Services**:

Size:___	<input type="checkbox"/>	Domestic	<input type="checkbox"/>	Landscape	<input type="checkbox"/>	Fire Service	<input type="checkbox"/>	Make-up
Size:___	<input type="checkbox"/>	Domestic	<input type="checkbox"/>	Landscape	<input type="checkbox"/>	Fire Service	<input type="checkbox"/>	Make-up
Size:___	<input type="checkbox"/>	Domestic	<input type="checkbox"/>	Landscape	<input type="checkbox"/>	Fire Service	<input type="checkbox"/>	Make-up
Size:___	<input type="checkbox"/>	Domestic	<input type="checkbox"/>	Landscape	<input type="checkbox"/>	Fire Service	<input type="checkbox"/>	Make-up

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APPLICATION FOR RECYCLED WATER USER PERMIT

7. Is this a new or converted system (i.e. Potable Water to Recycled Water or Non-Potable Water to Recycled Water)?

_____New construction _____Converted system

8. For new construction, type of identification for Recycled Water pipes:

_____Tape wrap _____Color-coded purple with identification

9. Requested Service Start Date: _____

Application Requirements

Items to be submitted with the initial application:

1. Project Report as described in Section 3 of the City of Anaheim Public Utilities Department Recycled Water Users' Guide.

Although the City of Anaheim may approve the application, the permit shall not be granted prior to the approval of the California Department of Public Health.

Items to be submitted subsequent to the approval of the application:

1. Two sets of as-built drawings of the project area along with an updated project report as described in Section 3 of the City of Anaheim Public Utilities Department Recycled Water Users' Guide.

I, the applicant, have read and understand the City of Anaheim Public Utilities Department Water Rates, Rules and Regulations and Recycled Water Users' Guide and agree to use, operate, and maintain the On-Site Recycled Water Systems in accordance with the foregoing. Further, I agree to restrict Recycled Water use for the purposes described in this application. I agree to use Recycled Water in accordance with the City of Anaheim Public Utilities Department Water Rates, Rules and Regulations and Recycled Water Users' Guide and all other Applicable Laws.

I understand that the City of Anaheim Public Utilities Department reserves the right to take any action with respect to the operation of the Recycled Water system and at such time as it deems proper to safeguard public health.

APPENDIX E
APPLICATION FOR RECYCLED WATER USER PERMIT

The City of Anaheim Public Utilities Department assumes no responsibility for the maintenance and operation of any On-Site Recycled Water Systems. Applicant agrees to indemnify, defend and hold harmless the City of Anaheim, its officials, agents, employees, representatives and designated volunteers from and against any and all claims, demands, defense costs or liability arising out of or in connection with applicant's participation in the City of Anaheim Recycled Water program including but not limited to matters involving quantities, quality, time or occasion of delivery, or any other phase of the maintenance, operation and Service of the Owner's On-Site Recycled Water Systems.

Applicant Signature

Date

Print Name & Title