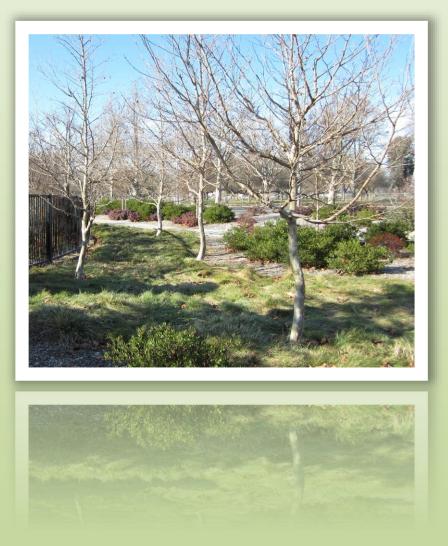
Recycled Water Use Guidelines

City of Pleasanton Recycled Water Program



www.PleasantonRecycledWater.com - (925) 931-5515



Recycled Water Program P.O. Box 520 Pleasanton, CA 94566

General Program Contact & Information: 925-931-5515 Report Problems: (925) 931-5500 Afterhours Emergency: (925) 931-5100

December 2015

Acknowledgment

The City of Pleasanton acknowledges the assistance of Dublin San Ramon District Services, the City of Livermore in the preparation of this document.

Table of Contents

1	1 INTRODUCTION			1
	1.1	Purpose1		
	1.2	Aut	hority and Sources	1
	1.3	Saf	ety and Approved/Permitted Uses of Recycled Water	2
2	Pla	nnin	ng for Recycled Water Use	3
	2.1	Det	ermination to Use Recycled Water	3
	2.1	1	Notice of Appeal	3
	2.2	Pro	tection of Public Health and Water Resources	3
	2.3	Pro	cedures for Obtaining a Recycled Water Use Permit	4
3	La	ndsc	ape Irrigation - Part 1: Design, Installation and Inspection	7
	3.1	Pro	tection of Water Resources	7
	3.1	1	Groundwater Protection	7
	3.1	2	Recycled Water System Protection	7
	3.2	Dis	tinction between City and Customer Facilities	8
	3.3	Тес	hnical Requirements for New & Retrofit Customer-Owned Facilities	8
	3.3.1		Inspections during Construction Phase	8
	3.3.2		Recycled Water Irrigation System Requirements	10
	3.3	8.3	Protection of Drinking Fountains and Outdoor Eating Areas	14
	3.3	8.4	Potable Water System Requirements	14
	3.3.5		Recycled Water Signage Guidelines	14
	3.4	Cus	tomer Site Supervisor	15
	3.5	Pos	t Construction Inspections and Final Approval	17
	3.5.1		Irrigation System and Coverage Inspection	17
	3.5	5.2	Cross-Connection Test	17
	3.5.3		Final Approval	19
	3.6	Nev	v Construction - Record Drawings	19
4	La	ndsc	ape Irrigation - Part 2: Monitoring, Operation and Maintenance	20
	4.1	Mo	nitoring	20
	4.1	1	Self-Monitoring Reports	20
	4.1	2	Notification of Repairs or Modifications	21
	4.2	Ope	eration and Maintenance	21

	4.2.1		Interruption of Service	21
	4.2.2		Regular Preventive Maintenance	21
5	En	Emergency Procedures		
	5.1	Un	authorized Discharge	25
	5.1	1	Any Discharge into Waters of the State	25
	5.1.2		Quantity: Less than 50,000 Gallons	25
	5.1	.3	Quantity: 50,000 Gallons or More	25
	5.2	Dis	asters and Damage	
	5.3	Cro	oss-Connections	
6	Du	st Co	ontrol, Construction Water, Surface Washing, and Hydrant Meters	
	6.1	Pro	ocedures for Fill Station Customers (DSRSD)	
	6.2	Pro	ocedures for Recycled Water Hydrant Customers	
	6.2	2.1	Obtaining a Hydrant Meter Permit	29
	6.2	2.2	Hydrant Meter Readings/Closing a Hydrant Meter Account	
	6.3	Tai	nk Truck Guidelines for Transporting Recycled Water	
	6.4	Pro	ocedures for Surface Washing Customers	
	6.4	.1	Surface Washing Requirements	
7	Permit t		to Use Recycled Water Terms and Conditions	
	7.1	Per	mit and Fees	
	7.2	City	y of Pleasanton Authority	
	7.2	2.1	Amendments	
	7.3	Enf	forcement	
	7.3.1		Suspension of Service and Assessing of Fees	
	7.3.2		Right to Terminate Service	
	7.4	Sev	verability	

List of Appendices

Suitable Uses of Recycled Water
Application for a Recycled Water Use Permit
City Monitoring Report
Customer Self-Monitoring Report
Recycled Water Discharge Report

1 INTRODUCTION

1.1 Purpose

This document contains the City of Pleasanton (referred to as City or Pleasanton) regulations and guidelines for on-site recycled water facilities for irrigation and water features, and the transport and use of recycled water for dust control. It covers requirements for retrofitting existing sites and new developments; and works in conjunction with the City's Recycled Water Standard Specification to provide the information necessary for recycled water customers to meet all applicable regulations in the design, installation, operation, and maintenance of on-site recycled water facilities.

1.2 Authority and Sources

These *Recycled Water Use Guidelines* (Guidelines) are prepared by the City and may be updated as regulations and procedures change over time. These Guidelines were developed in compliance with key regulatory references governing the use of recycled water:

- 1. California Code of Regulations, Title 22, Division 4 and Title 17, Sections 7583-7586 & 7601-7605
- 2. California Health and Safety Code, Division 104, Part 12
- 3. California Water Code, Division 7, Chapter 7
- 4. *Guidelines for the Distribution of Non-Potable Water*, developed by the California-Nevada Section of the American Water Works Association (AWWA)
- 5. *Guidelines for the On-Site Retrofit of Facilities Using Disinfected Tertiary Recycled Water*, developed by the California-Nevada Section of the AWWA
- 6. The 2012 International Association of Plumbing and Mechanical Officials (IAPMO) Uniform Plumbing Code (UPC) as adopted by reference in Pleasanton Municipal Code Chapter 20.12

These Guidelines were developed for customers of the City of Pleasanton service area, and takes precedence over general guidelines (including AWWA guidance documents) where differences are noted. The City will attempt to update this Guide as codes, laws, and regulations change; however the City does not assume any liability for errors in this document from such changes, as these changes can occur without City approval or knowledge.

Within the City's service area, customers or individual facilities may have additional sitespecific requirements not covered in these Guidelines. In such instances, those requirements will be specified in the customer's Recycled Water Use Permit.

1.3 Safety and Approved/Permitted Uses of Recycled Water

Recycled water (also called reclaimed water) as used in this document refers to municipal wastewater that has been highly filtered and subsequently disinfected. The California Department of Drinking Water (DDW) (formerly California Department of Public Health) has approved recycled water for a variety of uses (see Appendix A). *Pleasanton's Recycled Water Program supplies disinfected tertiary-treated recycled water, produced from either the Dublin San Ramon Services District treatment facility or the City of Livermore's Water Reclamation Plant, which is the highest level of treatment approved.*

The below list of recycled water uses are currently permissible within the City of Pleasanton upon approval by permit. The City will not allow other recycled water uses, including dual plumbing, without prior approval of the Regional Water Quality Control Board (RWQCB) and DDW:

- Landscape irrigation to designated irrigation meters
- Construction water, dust control, and surface washing (*Note: a special site specific permit is required for surface washing*)
- Impoundments (fountains and other decorative water features)

Recycled water is very safe for the uses for which it is intended. To ensure a consistent level of safety, recycled water is continually monitored and tested for compliance with regulations. *Though disinfected tertiary treated recycled water is approved for human contact, it is not intended for human consumption.* Personnel working with recycled water shall exercise good hygiene, such as washing hands before eating or drinking. For more information on the safety of recycled water, visit www.athirstyplanet.com.

Recycled water shall only be used in the manner(s) approved by the City and DDW, and specified on the Recycled Water User Permit issued upon application approval. The State regulates the use of recycled water, as directed under Title 22. The City, in its discretion, may require or specify where and how recycled water can be utilized within its service area, as long as it complies with State requirements.

These Guidelines discuss how to obtain a permit from the City and the requirements involved to maintain a Recycled Water Use Permit.

2 Planning for Recycled Water Use

2.1 Determination to Use Recycled Water

All new irrigation systems for landscape areas that are serviced by a designated irrigationonly meter located within the City's recycled water service area may be required to use recycled water. Existing connections to the potable water system serving either irrigation systems or other approved uses, may be required to convert to recycled water when it becomes available. All recycled water systems must be metered separately from the potable water supply system and must have no cross-connections to the potable water supply system.

The City Engineer, or his or her designee, may grant an exception to the required use of recycled water if he or she determines that at least one of the following criteria applies:

- The project is a residential development where the landscape areas requiring a designated irrigation meter(s) are not owned in common.
- The project is a residential development where no homeowners' association, or similar entity, will be responsible for the irrigation system operation and maintenance.
- The use of recycled water presents an economic hardship for the development because of its distance from the available recycled water source.
- Recycled water demand is minor relative to the development's overall water demand.
- The supply of recycled water is inadequate to meet the development's demand.
- The site's soil profile is of such quality that recycled water application to the landscape could pose a threat to groundwater quality.

2.1.1 Notice of Appeal

If the water customer applicant disagrees with the determination made by the City Engineer regarding the mandatory use of recycled water, the applicant may file an appeal with the City Manager. The written appeal shall be filed within ten (10) business days of the City Engineer's issuance of the determination notice. The written appeal shall specify the grounds for an appeal and provide all supporting documentation. The City Manager, or his or her designee, shall review the written appeal and issue a written decision within thirty (30) days. The decision of the City Manager shall be final.

2.2 Protection of Public Health and Water Resources

The City of Pleasanton and DDW reserve the right to take any action necessary, with respect to the operation of the recycled water customer's recycled water system, to safeguard public health. If real or potential hazards are evidenced any time during construction or operation of the customer's recycled water system, the City reserves the

right and has the authority to terminate recycled water service immediately, without notice. These hazards include, but are not limited to:

- cross-connection with the potable system or any other water system,
- improper tagging, signing, or marking,
- unapproved/prohibited uses, including irrigation practices that result in runoff from use areas.

2.3 Procedures for Obtaining a Recycled Water Use Permit

Prospective recycled water customers must submit an application package to the City. <u>*City*</u> <u>approval is required before any new recycled water system is constructed, or any</u> <u>existing system is modified</u>. Approval will be contingent upon recycled water design and operation meeting the City's *Recycled Water Use Guidelines* and City of Pleasanton's *Recycled Water Standard Specification* requirements.

The submitted permit application package shall include:

- 1. The *Application for Recycled Water Use Permit* (form can be found in Appendix B and online at <u>www.PleasantonRecycledWater.com</u>)
- 2. Plan check and/or recycled water use permit fee
- 3. For new construction design plans, shall include the following (provide 2 copies one submitted with the Community Development Department and the other submitted to Water Conservation Division), with a minimum drawing size of 24" x 36". Plan and profile drawing scale shall be at least 1 inch equals 40 feet): NOTE: For retrofit sites, if existing construction drawings are not available, the following information should be provided to the fullest extent reasonable in an 11" x 17" inch format.
 - a. Overall plan view of the entire proposed potable water, recycled water, sewer line system, and all buildings on the site; shown on one sheet with a drawing key for subsequent plan and profile sheets.
 - b. Show all mains in plan and profile, with services and laterals in plan. Show all storm and sanitary sewers in the vicinity of any proposed water and/or recycled water facilities.
 - c. Show location, size, and type of materials for potable and recycled water piping.
 - d. Show recycled water use areas, including a distinction between areas of public access and restricted access (i.e. public is not allowed to enter). Clearly specify the location of outdoor-eating areas, outdoor drinking fountains, hose bibs, quick couplers, points of ready access to recycled or potable water systems, strainers, pressure regulating valves, master valves, and other miscellaneous appurtenances for water systems (existing and proposed). (Include the type of material.)

- e. Specifically distinguish commercial fire hydrants.
- f. Location of all service connections, meters, and backflow devices (existing and proposed) relative to buildings, property lines, or intersections.
- g. Show all required easements.
- h. Locations of recycled water signage (refer to Section 3.2.4 of this Guideline for recommended locations and sign requirements).
- i. Show landscape plan/map
- j. Location of irrigation controller(s) and irrigation schedule, if applicable.
- k. Direction of drainage from irrigated areas, if applicable.
- l. Locations of wells, ponds, storage tanks or other water impoundments located on the site or within 100 feet of the site, and indicate the type of water source.
- m. Include a location map showing the area to be served relative to established public roads. Specifically identify utility poles, fences, street lights and trees.
- n. Plans must show all proposed utilities and improvements. "Water Only" or "Sewer Only" plans will not be approved by the City Engineer.
- o. Indicate that the separation between potable and recycled water lines meet minimum requirements. Where separation is not adequate, show sleeving where recycled water pipelines cross over potable water pipelines.

Generally, the site's construction drawings can be used to meet the above drawing(s) requirements, although it may be necessary to annotate the drawings to clearly show all the information listed. *For retrofit sites, if construction drawings are not available, a site drawing with the above information shall be prepared.*

The *Application for Recycled Water Use Permit* shall be filed with the Recycled Water Program, concurrently with the application for a building permit. The contact information for the Recycled Water Program is as follows:

Location	: Operation Services Center	Mailing Address: City of Pleasanton	
	3333 Busch Rd	Recycled Water Program	
	Pleasanton, CA 94566	P.O. Box 520	
Phone:	925-931-5515	Pleasanton, CA 94566	
Email:	jcordes@cityofpleasantonca.gov	<u>/</u>	

Upon receipt of the permit application, the City will conduct a plan check to verify that all design conditions to use recycled water are met. If not, the City will require submission of the missing information and/or drawings.

For site retrofits, the City will conduct a site inspection to confirm information provided and may require a preliminary coverage test. On sites with food preparation and/or living quarters, the City may require a preliminary "zero pressure" irrigation system cross connection test. The City will notify the customer of any repairs and/or site modifications required including verification of location of tagging and signage before recycled water service can be provided. The City will provide the required tags and signage in accordance with Section 3 of these Guidelines to be installed by customer.

Upon completion of any required repairs and/or site modifications including installation of tags and signs, the City will conduct a final inspection for requirement verification. Upon verification of the required repairs and/or site modification and final inspection (including coverage test and cross connection test); approval will proceed in accordance with Section 3.5 of these Guidelines. Upon successful completion of testing City will connect the onsite irrigation system to the City recycled water system, abandon the existing irrigation system connection to the City potable water system and issue a *Recycled Water Use Permit* in accordance with these Guidelines.

3 Landscape Irrigation - Part 1: Design, Installation and Inspection

The purpose of this section is to provide designers of on-site recycled water systems rules and guidelines for the design, installation and inspection of both:

- a) new irrigation systems, and
- b) existing irrigation systems that are converting (retrofits) to recycled water systems.

3.1 Protection of Water Resources

On premises using both recycled water and potable water, the potable water supply must be protected against any accidental cross connections by the use of a reduced pressure principle backflow prevention assembly (RP). All backflow devices shall be on the current Department of Drinking Water published list of "Approved Backflow Prevention Assemblies," and shall be tested and certified prior to final approval. Testing requirements for backflow devices will be specified by the City, depending upon the degree of hazard at a particular site.

Some recycled water customer sites may have separate dedicated fire protection systems that use potable water. Those systems shall also be protected with RP assemblies at their point of connection. A double-check detector assembly (DCDA) is required on all fire service lines where recycled water is used.

3.1.1 Groundwater Protection

Recycled water irrigation is prohibited within 50 feet of any domestic (potable) water reservoir or well. No impoundment of recycled water shall occur within 100 feet of any domestic water supply well.

If required by the City, one or more recycled water sampling station(s) shall be installed.

3.1.2 Recycled Water System Protection

In most cases, backflow prevention devices will not be required on recycled water service meters. However, at the discretion of the City Engineer, where there is a particular threat to the quality of the recycled water, such as direct connection to an industrial process or an impoundment of water, the City Engineer may require a backflow prevention device.

Backflow device testing equipment used in the recycled water system **shall not** be used in the potable water system.

3.2 Distinction between City and Customer Facilities

Design criteria for recycled water facilities are divided into two categories: (1) City facilities; or (2) customer facilities. City facilities are owned, operated, and maintained by the City, typically. These facilities are usually on the upstream side of the water meter (including the meter) and are within public streets, public rights-of-way, or easements. Customer recycled water facilities are typically owned, operated, and maintained by the customer, and are downstream of the water meter.

3.3 Technical Requirements for New & Retrofit Customer-Owned Facilities

Plans for recycled and potable water service shall be properly coordinated to ensure separation of the two systems.

- With the exception of pipe identification and pipe separation, facilities where the existing buried piping is converted from potable to recycled water must meet the same requirements as new facilities.
- Any new buried piping added to existing piping at a retrofitted site must meet the identification and separation requirements for new systems.
- Any existing piping that is currently above ground, and piping uncovered for any reason during construction, must be marked according to pipe identification requirements of this section.

Design and construction of both City-owned and customer-owned recycled water facilities shall conform to City's Recycled Water System Standards. *The technical requirements provided in this Guideline are meant to work in conjunction with these Standards, and not to be relied upon solely.* Generally, items requiring approval under new construction projects shall be determined by the City Engineer or his or her designee, and items requiring approval for existing customers seeking to retrofit from potable to recycled water service, shall be determined by the Operation Services Director.

3.3.1 Inspections during Construction Phase

Once the City approves the design, the applicant obtains the required permits and begins construction. The Regional Water Quality Control Board requires that the City conduct onsite inspections during the construction phase to ensure that the materials, installation, and procedures are in accordance with the approved plans, specifications, and all applicable regulations. *City staff, agents of the City, as well as those of the city or county with jurisdiction, shall have unrestricted access at reasonable hours to conduct site inspections during all phases of construction to all constructed facilities.*

3.3.1.1 New Construction - Temporary Connection to Potable Water Service

In order to prevent cross-connections, an irrigation system is usually not allowed to receive recycled water until the site has passed the required cross-connection test. Therefore, a temporary connection to the potable water system shall be supplied during construction, as well as during the cross-connection test. Figure 1 below shows an acceptable temporary connection to a potable fire hydrant.



Figure 1. Acceptable temporary connection to potable fire hydrant

After passing this test, the temporary connection shall be removed and the system connected to a recycled water meter. In specific cases, irrigation systems may not be connected to a temporary potable water source if potable water is not available at the site; such as at some streetscapes and medians.

3.3.1.2 Pipeline Separation/Depth Guidelines

The separation of potable and recycled water pipelines shall be maintained to the greatest extent possible in both new and retrofit construction, in accordance with DDW. The separation standards are as follows:

Point of Connection: All recycled water service laterals and meters must have at least ten feet of horizontal separation from the nearest potable water facility, including pipelines, meters, and hydrants. Designers should check to see that laterals and meters that serve their site meet this requirement.

Parallel Construction: The horizontal distance between pressurized potable water and recycled water lines shall be separated at a minimum of 12-inches, as long as both pipe materials are approved for use within a building. Where piping materials do not meet this requirement the minimum horizontal separation shall be increased to 60-inches. There must be no physical contact between the potable and recycled water pipes or appurtenances.

Perpendicular Construction (vertical/crossing): Recycled water pipes must be installed at least 12-inches below potable water pipes. Where recycled water and sanitary sewer

water main cross, the recycled water pipe must be at least one foot 12-inches above the sanitary sewer main.

<u>Pipe Vertical Depth and Trenching</u>: The minimum depth from finished grade to top of pipe (minimum cover) shall be as follows:

- Constant pressure lines three (3) inches or larger: 24-inches
- Constant pressure lines two and one-half (2-1/2) inches and smaller: 24-inches
- Intermittent pressure lines: 18-inches

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

3.3.2 Recycled Water Irrigation System Requirements

Irrigation systems must be designed to minimize overspray and ponding and prohibit runoff. New landscape sites may be subject to the City's Water Efficient Landscape Ordinance and Bay Friendly Basics requirements.

The following guidelines for irrigation systems servicing recycled water to landscaping shall be followed:

- Irrigation System Configuration: Irrigation systems shall be configured such that windblown spray remains within the approved use area. Designers shall specify appropriate irrigation devices to minimize overspray. If noticeable overspray, runoff, and/or ponding are observed during the coverage test, equipment shall be adjusted or removed and relocated as needed. This requirement does not apply to landscape impoundments such as fountains, ponds, or lakes.
- **Isolation Valves**: On new construction, isolation valves shall be installed after the recycled water meter. On retrofit systems, replace the backflow device that is no longer in operation with an isolation valve. In the event the recycled water system needs to be shut down (such as a suspected cross connection), the customer can shut down the system at this valve. Isolation valves are to be in a marked valve box with a recycled water identification tag on the valve operator or, if the valve operator is too deep to reach, at the top of the valve box extension.
- **Pressure Regulating and/or Sustaining Valves:** Unless otherwise directed by the City, all recycled water services shall be equipped with a pressure regulating and/or sustaining valve installed immediately downstream of the strainer. These devices shall be installed in appropriately labeled underground box(es) as indicated in Section 3.2.2.1 of this Guideline. Prior to determining available pressure, designers should take into account the pressure losses incurred by these appurtenances.

- **Appurtenances:** On-site irrigation systems such as above-ground equipment, pumps, quick coupler valves, control valves, valve boxes, and sprinklers shall comply with this Guide and the City Standard Specifications for Recycled Water.
- **Drip Irrigation Filters:** Filters shall be installed on all new drip irrigation systems that allow the passage of particulates no larger than 100 microns (refer to 2012 Uniform Plumbing Code, Chapter 16, Section 1604.10.5).
- Watering Schedule: Irrigation systems shall be designed for watering during periods of minimal traffic and landscape use, when public exposure is limited. In most circumstances, watering time may occur between the hours of 9 p.m. and 7 a.m. In addition, the design should usually allow for maximum dry-out time so the area can be used by the public. However, if specific soil conditions exist at customer site that require special watering protocol, the Operation Services Director shall review these requirements and if approved, will specify on the customer's recycled water permit these special circumstances; granted the special watering protocol will not affect public exposure to recycled water. Spray and rotor irrigation is prohibited between the hours of 7 a.m. to 9 p.m. *unless the irrigation is being supervised by qualified personnel or the area is fenced off and signs are posted to inform the public that recycled water is being used.*
- **Irrigation Controllers:** All newly installed irrigation controllers shall be capable of utilizing either evapotranspiration or soil moisture sensor data, as well as dual or multiple programming for multiple cycle start times and a flexible calendar.
- **Rain Sensors:** Rain sensors that suspend or alter irrigation operation during rain shall be required on all irrigation systems. Wind sensor capability is recommended as well since irrigation should be avoided during windy weather.
- **Evapotranspiration (ET) Adjustment Factor:** Landscapes using recycled water are considered special landscape areas according to the City's Water Efficient Landscape Ordinance. The ET adjustment factor for special landscape areas shall not exceed 1.0 (i.e. 100% of ET).

3.3.2.1 System Identification Guidelines

• Buried Recycled Water Lines:

New Construction – The use of purple colored pipe with continuous wording "RECYCLED WATER – DO NOT DRINK" printed on opposite sides of the pipe is the preferred method for identification of new buried recycled water piping (constant-pressure mainlines/intermittent-pressure irrigation laterals). Pipe must be laid with wording facing upwards. An acceptable alternative is all new buried recycled water lines must be identified by continuous lettering on 3-inch minimum width, purple marking (Pantone color #512) adhesive Mylar PVC tape, with 1-inch black or white contrasting lettering bearing the continuous wording "RECYCLED WATER – DO NOT DRINK." This tape must run along the entire length of the pipe and be installed so the wording is clearly visible. Marking tape must extend to all valve boxes and/or vaults and exposed piping.

- Existing Buried Piping Existing buried piping which will be converted to recycled water use need not be marked unless the piping becomes exposed, such as during installation of new pipeline or maintenance of existing pipe. The exposed section must be marked as indicated above for new piping. Cross connection testing (see Section 3.5.2) is required prior to turning on recycled water service to verify cross connections are not present.
- Above Grade Recycled Water Lines: All above grade recycled water pipelines, whether new or existing, must be labeled with the words "RECYCLED WATER DO NOT DRINK" and color coded purple to differentiate recycled water pipelines from potable and other water pipelines. If purple (Pantone color #512) identification tape is used to label the pipe and/or color code the pipe, the tape must be adhesive, permanent, and resistant to environmental conditions (Mylar PVC tape). Purple PVC pipe is not an acceptable alternative for color-coding because the purple color will fade when exposed to sunlight.
- Identification Tags and Stickers: Identification tags and stickers shall be installed in all valve boxes, quick couplers, pressure reducing valves, and isolation valves, for both new construction and retrofit sites. Identification tags and stickers shall be weatherproof and durable, such as Maxi ID Tags or equivalent. Recycled water identification tags and stickers shall have a purple background with permanent black lettering stating:

"RECYCLED WATER – DO NOT DRINK" and "AVISO, AGUA IMPURA – NO TOMAR."



Figure 2. Identification Tags

• Irrigation System Valve Boxes: All remote control valves, isolation valves, pressure reducing valves, and strainers for on-site recycled water systems shall be installed

below grade in a valve box. Purple valve boxes and lids are required on new construction. For retrofitted recycled water systems tags are required.

- *(Newly installed)* 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 a purple weatherproof material with the warning "RECYCLED WATER" permanently attached, stamped or molded into the label (T. Christy 3800 or equivalent).
- Hose Bibs & Quick Coupling Valves: Hose bibs shall not be included on a recycled water system. Quick coupling valves shall be made specifically for recycled water use (different from that used on the potable system), and have a permanently attached and locking cover made of purple rubber or vinyl and imprinted with the words "RECYCLED WATER."

Quick coupling valves shall be installed in a purple valve box on new construction, and a recycled water identification tag shall be permanently attached to the valve or to the inside of the box so that the tag is clearly visible when the box lid is removed. On potable water systems being retrofitted to recycled water, the hose bibs and/or quick coupling valves shall be modified to meet standards for recycled water.

- Attachments: Any wands, hoses, sprinkler heads, fittings, or other attachments used in conjunction with quick coupling valves shall be labeled with the words, "RECYCLED WATER DO NOT DRINK and "AVISO, AGUA IMPURA NO TOMAR." Attachments used in a recycled water system shall not be used on a potable water system and shall be removed when not in use to prevent unauthorized use and accidental consumption of recycled water.
- **Sprinkler Heads:** Sprinkler heads should be ordered with purple markings or fabricated with purple components. **On retrofit projects**, the replacement of sprinkler heads and nozzles is not required to receive recycled water. However, as equipment ages and requires replacement, they shall be replaced with purple marking or with equipment fabricated with purple components

• Other Valves and Devices:

- <u>Remote Control Valves</u>: On new and retrofitted systems, install control valves in a marked valve box with a recycled water identification tag on the valve.
- <u>Pressure Reducing Valves, Pressure Sustaining Valves, and Strainers:</u> On new and retrofitted systems, install pressure reducing valves, pressure sustaining valves, and strainers in a marked valve box with a recycled water identification tag on the valves and strainers.

- <u>Pumps, Pump Control Valves, Air/Vacuum Relief Valves:</u> If applicable, these devices shall be tagged with recycled water identification tags.
- <u>Recycled Water Backflow Prevention Devices:</u> If a backflow prevention device is deemed necessary on recycled water service lines, it shall be tagged with a recycled water identification tag.

3.3.3 Protection of Drinking Fountains and Outdoor Eating Areas

Drinking fountains, outdoor eating areas, and other similar facilities (e.g. snack bars) located within the Recycled Water Use Area, must be protected from overspray or contact with recycled water. Protection may be accomplished by relocating the irrigation system or relocating or modifying the protected facilities.

3.3.4 Potable Water System Requirements

In addition to the previously mentioned reduced pressure backflow prevention device required on all potable water service connections, the following requirements shall be met:

- **Potable Water System Hose Bibs:** Potable water hose bib connections installed near recycled water use areas shall have hose bib vacuum breakers installed.
- **Quick Coupling Valves:** Quick coupling valves on a potable water system in the vicinity of a recycled water irrigation system shall be of a different type to prevent accidental cross-connection or contamination by interconnecting or interchanging attachments. Keys and attachments shall not be interchangeable.

3.3.5 Recycled Water Signage Guidelines

All sites using recycled water shall post clearly visible signs, and they shall be installed in accordance with City Standards or mounted in a location and manner that is acceptable by the City Engineer or his or her designee. On retrofit projects, signs will be initially provided by the City at no cost. Subsequent signs replacements may be purchased from the City's Sign Shop. Signs shall measure no less than 4 inches high by 8 inches wide, which include the following wording: "RECYCLED WATER – DO NOT DRINK and "AVISO, AGUA IMPURA – NO TOMAR" in white type against a purple background. Additionally, each sign shall display an international symbol similar to Figure 3.



Figure 3. International symbol for "DO NOT DRINK"

Figure 4 is an example of signage provided by the City.



Figure 4. Pleasanton's 18-inch by 12-inch sign

The installation of signs shall follow the requirements below, as indicated on the approved plans:

- **Restricted Access Facilities**: Customers with fenced facilities shall install advisory signs at all entrances. The City may require additional signs if needed.
- Non-Restricted Access Facilities: Advisory signs shall be placed where they can be easily seen. Post signs at the property line near crosswalks, at driveway entrances, at outdoor eating areas, or as otherwise determined by the City. For streetscapes place signs at street corners as appropriate. Signs shall be placed no further than 1,000 feet apart. For medians, a sign is usually placed at the beginning and end of every median. For longer medians, add another sign approximately equidistant from the ends of the median.
- **Decorative Fountains, Ponds, and Other Water Features:** Customers shall purchase and install permanent signs in visible places around water features. The City shall be consulted for final approval as to the number and placement of signs.

3.4 Customer Site Supervisor

As indicated on the *Recycled Water Use Permit*, a site supervisor must be designated by the customer and approved by the City for every site where recycled water is used. The City's approval will be based on the individual's familiarity with the recycled water system, authority, and reliability. This person, or their temporary designee, must be available to the

City at all times and has the authority to carry out any City requirements. The site supervisor must attend the next available Site Supervisor Training workshop, conducted by either City of Pleasanton or Dublin San Ramon Services District (DSRSD). This training will help the site supervisor understand and carry out their responsibilities as recycled water site supervisors. These responsibilities include:

- **Control over On-Site Uses of Recycled Water:** The site supervisor is required to be familiar with the entire on-site recycled water system, and with all applicable conditions governing recycled water use at the site, including Title 17 and Title 22 relating to the safe use of recycled water. The site supervisor shall ensure that recycled water use complies with those conditions. The site supervisor shall also be responsible for proper operation and maintenance of the recycled water system and of all backflow prevention devices.
- **Training:** The site supervisor will take part in training provided by either the City of Pleasanton or DSRSD. This training will cover the *Recycled Water Use Guidelines*. The site supervisor is responsible for training site personnel on the proper uses of recycled water. During its annual inspection of the facility, City staff will discuss the customer's method of informing employees about recycled water use on site. Additionally, the site supervisor is responsible for training all personnel involved with recycled water with the information in this document. If a third party landscape contractor is hired to perform irrigation system repairs and landscape maintenance, the site supervisor shall ensure the hired personnel receive recycled water use training as well.
- **Contact Information and Notification of Changes:** The site supervisor shall provide the City with an address and phone number(s) where he or she, or temporary designee, can be contacted at all times, 24 hours a day. The site supervisor shall notify the City of any change in the individual designated to be site supervisor, any change in contact information, and any planned modifications or planned additions to the recycled water system. Approval from the City shall be obtained before any modifications are made.
- **Failures and Violations:** The site supervisor is responsible for notifying the City of any failure of the on-site recycled water system, any cross-connection between the recycled and potable water systems, or any inappropriate uses that occurs. For any condition which has the potential to endanger public health, such as a cross connection, the site supervisor shall notify the Operations Customer Service Center immediately at (925) 931-5500.
- **Monitoring:** The site supervisor shall be responsible for any monitoring specified on the customer's *Recycled Water Use Permit*, such as conducting routine inspections of the site and submitting self-monitoring reports to the City. The site supervisor shall be present at all cross-connection tests.

Additionally, the site supervisor shall manage the amount of nitrogen from commercial fertilizers applied to the recycled water use area, taking into account the higher nitrogen content of the recycled water compared to potable water, in order to ensure sufficient nitrogen uptake by vegetation to prevent leaching of excess nitrates and nitrogen compounds.

• **Record Keeping:** The site supervisor is responsible for maintaining a record of system maintenance and personnel education conducted. This record may be reviewed by City staff during each subsequent inspection, or upon City staff request.

If the property is transferred to a new owner or tenant, or a new site supervisor, or a landscape company becomes responsible for the system maintenance, then the customer must notify the City immediately. After a change in ownership, the new customer shall submit for a Recycled Water Permit Transfer, and the new site supervisor shall attend the next available Site Supervisor Training workshop.

3.5 Post Construction Inspections and Final Approval

The following tests and inspections are required before the irrigation system is connected to recycled water:

3.5.1 Irrigation System and Coverage Inspection

Customers are responsible for minimizing overspray, runoff, and ponding from their recycled water irrigation systems. To ensure compliance, City staff shall inspect the on-site system and conduct a coverage test prior to connection to the City's recycled system. The site supervisor shall be in attendance, and have persons in attendance capable of making system adjustments. If modifications to the system (other than minor adjustments) are required, the customer will be notified in writing. Any required modifications to the system shall be made prior to connection to the City's recycled water system. All modifications to the system are the responsibility of the customer, and the customer shall pay all costs associated with such modifications, as well as provide as-built plans upon final inspection approval.

A final inspection will be performed by City staff to check that proper equipment was used and that all required tags, labels, and signs are in place. City staff will use this information to complete the *Recycled Water Customer Connection Site Inspection Report* form, which will be placed in the customer's file and submitted to City Engineer.

3.5.2 Cross-Connection Test

At sites where both recycled water and potable water systems are present, a crossconnection test will be performed before final approval. This test is to ensure there is absolute separation between the two systems. If a cross-connection is found, the customer shall locate and eliminate it prior to scheduling a follow-up cross-connection test with the City. City staff will generally conduct the test; however the customer may hire an AWWA or NCBPA Certified Cross-Connection Specialist to perform the test, provided that the City approves and a City representative is present during testing. The site supervisor shall be present at the test.

Prior to commencing the cross-connection testing, a visual, dual system inspection shall be conducted by the Inspector.

- 1. Meter locations of the recycled water and potable water lines shall be checked to verify that no modifications were made, nor cross-connections visible.
- 2. All pumps and equipment, equipment room signs, and exposed piping in equipment room shall be checked visually for cross-connections.

The following procedure shall be performed by the Inspector to determine if a crossconnection exists.

- 1. For purposes of this test, the on-site recycled water system shall be tested using potable water wherever possible to minimize any subsequent disinfection requirements in the event that a cross connection is identified.
- 2. The potable water system shall be activated and pressurized. The recycled water system shall be shut down and completely drained. All line valves for both the potable and irrigation system shall be checked to verify they are in full open position.
- 3. The potable water system shall remain pressurized for a minimum period of time specified by the Inspector while the recycled water system is empty. The minimum period the recycled water system is to remain depressurized shall be determined on a case-by-case basis taking into account the size and complexity of the potable and recycled water distribution systems, but in no case shall that period be less than one hour.
- 4. All fixtures (faucets, hose bibs, drinking fountains, toilets and urinals, supply lines to decorative fountains, etc), potable and recycled, shall be tested and inspected for flow. Flow from any recycled water system outlet shall indicate a cross-connection. No flow from a potable water outlet would indicate that it may be connected to the recycled water system.
- 5. The drain on the recycled water system shall be checked for flow during the test and at the end of the period.
- 6. If no cross-connections are discovered, then the potable water system shall then be shut down at its point of connection and depressurized.
- 7. The recycled water system shall then be activated and pressurized.
- 8. The recycled water system shall remain pressurized for a minimum period of time specified by the Inspector while the potable water system is depressurized. The minimum period the potable water system is to remain depressurized shall be determined on a case-by-case basis, but in no case shall that period be less than one hour.
- 9. All fixtures, potable and recycled, shall be tested and inspected for flow. Flow from any potable water system outlet shall indicate a cross-connection. No flow from a

recycled water outlet would indicate that it may be connected to the potable water system.

- 10. The drain on the potable water system shall be checked for flow during the test and at the end of the period.
- 11. If there is no flow detected in any of the potable fixtures (flow would indicate a crossconnection), then the potable water system shall be re-pressurized.

3.5.3 Final Approval

Once all of the following requirements have been met the City will grant final approval for recycled water service:

- ✓ Construction has been completed with plans and specifications meeting approval
- ✓ Cross-connection tests performed and passed
- ✓ Coverage inspection performed and all necessary modifications made/approved
- ✓ Final inspection requirements found to be in place
- ✓ Acceptable test report forms for all on-site backflow prevention devices submitted
- ✓ All fees have been paid
- ✓ Application package for a *Recycled Water Use Permit* has been approved.

The City will authorize the installation of the recycled water meter. The City will forward to DDW a copy of all tests, inspections, and backflow test reports, as well as notification that recycled water service has started. During the lifetime of the recycled water system, the City will periodically inspect the recycled water system to ensure compliance with all applicable regulations (see Section 4).

3.6 New Construction - Record Drawings

The customer or customer's contractor shall prepare record drawings to show the recycled water irrigation system as constructed. These drawings shall include all changes from the original contract drawings, including those involving both constant-pressure and intermittent-pressure lines and appurtenances. All conceptual or major design changes shall have been approved by the City Engineer before implementing the changes in the construction contract. The as-built recycled water irrigation system record drawings shall be submitted to the City within 90 days of the site receiving recycled water.

Record drawings shall be submitted in TIF or PDF format. Drawing units shall be decimal with a precision of 0.00. Angles shall be in decimal degrees with a precision of 0.00. All objects and entities in layers shall be colored. All layers shall be named in English; appreciations are acceptable. All submitted map drawings shall use the Global Coordinate System (GCS) of USA, California; NAD 83 California State Plans, Zone III; and U.S. foot.

4 Landscape Irrigation - Part 2: Monitoring, Operation and Maintenance

As a user of recycled water for irrigation or water features, the customer agrees to comply with the required site monitoring and general recommendations for system operation and maintenance. This topic is covered in this Section.

4.1 Monitoring

After activation of the service connection to the City's recycled water system, City staff will inspect each customer's recycled water system annually, or on a more frequent basis if warranted by the size and complexity of the site or other considerations. These inspections are in compliance with the City's General Water Reuse Permit, issued by the Regional Water Quality Control Board. City staff will inspect the site for the items listed in the *Recycled Water City Monitoring Report* form, found in Appendix C.

The inspections will include, at a minimum:

- ✓ Visual inspection of all backflow prevention assemblies, exposed piping, valves, pressure reducing valves, sprinklers, controllers, signs, labels, tags, and all points of connection.
- ✓ A coverage inspection to check for continued proper use, which includes minimization of: runoff, overspray, ponding, and windblown spray outside of approved use area.
- ✓ Review of site supervisor's records to inspect system maintenance and personnel education conducted since last inspection.
- ✓ Check for customer copy of their *Recycled Water Use Permit* which needs to be available for inspection by the RWQCB and DDW at all times.

The City inspector will complete the *Recycled Water City Monitoring Report* form, and communicate in writing any deficiencies observed to the site supervisor for correction.

The customer's on-site recycled water and potable water systems are subject to crossconnection tests as deemed necessary by the City to ensure there are no cross-connections present.

4.1.1 Self-Monitoring Reports

Recycled water customers shall routinely monitor their sites and submit Recycled Water Use Self-Monitoring Reports to the City in the frequency noted on their Permit. City staff may change the required frequency of monitoring and reporting and amend the Permit if needed. The site supervisor must keep records of all incidents, repairs, system upgrades, and modifications done during the reporting period in order to complete the reports. The site supervisor, or a designated representative, must sign the report and submit it to the City by email, drop off at the Operations Services Center (3333 Busch Rd, Pleasanton), or post mail (City of Pleasanton, Attention: Recycled Water Program, P.O. Box 520, Pleasanton, CA 94566). The frequency of submission will be specified on the *Recycled Water Use Permit*. The *Customer Self-Monitoring Report* is available online at www.PleasantonRecycledWater.com, and can be found in Appendix D of this document.

4.1.2 Notification of Repairs or Modifications

The City authorizes the use of recycled water only in the specific areas so designated on approved customer connection drawings. Customers shall not expand or change the area of recycled water use without the City's prior written approval. This includes converting any piping used for recycled water back to potable water. In addition, if potable water service is located anywhere on the same site or parcel as the designated recycled water use areas, no changes in the potable water system may be made without the City's prior approval.

Customers shall submit to the Water Conservation Manager in writing any significant proposed repairs or modifications to the on-site recycled water system. Submittals shall include a sketch or drawing clearly delineating all changes. Approval shall be obtained from the City **prior to implementation** of the proposed repairs or modifications. Customers shall record all changes on the site's record drawings and submit copies to the Water Conservation Manager.

4.2 Operation and Maintenance

4.2.1 Interruption of Service

Unforeseen conditions that are beyond the City's control could cause temporary or permanent interruption to recycled water service to protect the City facilities or public health and safety. In such an event, the City will act as promptly as possible to notify all on-site supervisors.

4.2.2 Regular Preventive Maintenance

The site supervisor is responsible for performing preventive maintenance to ensure that the recycled water system remains in compliance with the requirements of the customer's Permit. As part of a preventative maintenance program, the site supervisor should:

• Regularly inspect the entire recycled water system, including sprinkler heads to ensure proper operation, drip irrigation system emitters, spray patterns, piping and valves, pumps, storage facilities, controllers, etc. Immediately repair all broken sprinkler heads, faulty spray patterns, leaking pipes or valves, or any other condition that violates recycled water use requirements.

- Check all recycled water identification signs, tags, stickers, and above-grade pipe markings for proper placement and legibility. Replace damaged, unreadable, faded, or missing signs, tags, stickers, and pipe markings.
- Check spray patterns to minimize ponding, runoff and wind-blown spray. If ponding or runoff is found, adjust sprinkler heads accordingly and note the affected areas in the self-monitoring report form.
- Establish and maintain an accurate record keeping system of all inspections, modifications and repair work.

4.2.2.1 Watering Times

The site supervisor must schedule watering periods to minimize human contact with recycled water, and maximize efficient production and distribution by the recycled water treatment facility. Watering between the hours of 9 p.m. and 7 a.m. is generally required to meet these objectives, unless otherwise requested by the customer and approved by the Operation Services Director. Requests for operation during other times will be determined on a case-by-case basis, with consideration given to allowing a drying out period before the public uses the area.

Spray and rotor irrigation is prohibited between the hours of 7 a.m. to 9 p.m. *unless the irrigation is being supervised by qualified personnel, or the area is fenced off and signs are posted to inform the public that recycled water is being used.* Drip or bubbler irrigation may occur anytime throughout the day providing there are no breaks in the system and there is no runoff to nearby storm drains.

Refrain from application of recycled water during precipitation events. As noted in Section 3.3.2, rain sensor technology is necessary on irrigation controllers.

4.2.2.2 Application Rate

To minimize runoff, apply recycled water at a rate that does not exceed the infiltration rate of the soil. Per the Water-Efficient Landscape Ordinance, the evapotranspiration (ET) adjustment factor for recycled water use areas shall not exceed 1.0. However, regular monitoring through system checks or visual indicators of runoff are necessary for the site supervisor to confirm the application rate does not exceed soil infiltration rate.

4.2.2.3 Maintaining Impoundments

Recycled water can be used for a variety of impoundments, including golf course ponds and decorative fountains. The main consideration when managing water features, whether potable or recycled, is minimizing the potential for algae growth. The customer should develop a maintenance program that includes adequate aeration, circulation, and chlorine application to prevent algae growth.

4.2.2.4 Best Management Practices (BMPs)

The following list of Best Management Practices (BMPs) as identified by the State Water Resources Control Board, highlight some practices for the management of recycled water use that, in addition to the legal requirements, will help ensure safe and efficient use of recycled water.

- 1. All sprinkler heads are uniform in brand, model and nozzle size. Where different arcs are needed at the same station, match precipitation rates by changing nozzles.
- 2. Where lower precipitation rates are required, such as on slopes, reduce nozzle size and spray angle per manufacture's recommendations.
- 3. Install pressure reducers to decrease pressure where needed.
- 4. Install automatic flow control devices that shut down a system if a break or other similar high flow/low pressure situation develops during irrigation.
- 5. Routinely adjust sprinkler heads so they achieve close to head to head coverage throughout their intended arc.
- 6. The frequency of irrigation cycles should be adjusted as often as necessary to meet the water requirements of the landscape. This is determined by measuring the amount of moisture remaining in the root zone reservoir between irrigation cycles. Moisture levels in the root zone is measured and optimized by the use of tensiometers, gypsum blocks, soil probes, an on-site weather station, or the California Irrigation Management Information System (CIMIS) to estimate soil moisture levels. These methods are reviewed, inspected, and maintained regularly to ensure accuracy and reliability.
- 7. Aerate the soil to improve infiltration of air and water into the soil, as needed.
- 8. Perform good horticultural practices: mowing, de-thatching, aeration, and pest control, as necessary to create the best growing environment for landscape vegetation.
- 9. Employ water budgeting using evapotranspiration data from CIMIS or an on-site weather station and crop coefficients from Water Use Classification of the Landscape Species (WUCOLS).
- 10. Workers are provided with the appropriate safety equipment and clothing during prolonged contact with recycled water.
- 11. Potable drinking water is provided for workers.
- 12. A first aid kit is available on site, to prevent the contact of cuts and other injuries with recycled water.

4.2.2.5 Notification of Operational Problems

In the event of a break in the system, low pressure, low flow, or poor water quality, the customer shall notify the City immediately. City staff may help identify the problem and assist the customer in developing and implementing a solution. See Section 5 for a complete description of the Emergency Response protocol.

4.2.2.6 On Hand Emergency Response

A copy of the Emergency Procedures in Section 5 shall be present on-site at all times and staff shall receive training on these procedures. Immediately implement the appropriate Emergency Response Plan after an unauthorized discharge, disaster, or cross-connection incident.

5 Emergency Procedures

5.1 Unauthorized Discharge

Customers shall make every effort to contain any unauthorized discharge of recycled water so that the water does not reach a storm drain or waterway.

5.1.1 Any Discharge into Waters of the State

Customers who discover a leak or discharge of water need to work immediately to isolate and eliminate the leak or discharge. If any spill from a leak is released directly or indirectly to waters of the State (i.e. arroyos), the customer shall immediately notify the City by phone at (925-931-5500). The City will assess the situation and provide information on any required action to follow.

5.1.2 Quantity: Less than 50,000 Gallons

In the event that a customer becomes aware of a discharge of recycled water, the customer shall isolate that section or unit of the recycled water system immediately in order to secure the discharge. The customer shall estimate the amount discharged and if it is less than 50,000 gallons the customer shall document the incident and <u>submit it to the City within five days of the discharge</u>. The customer must complete the "Recycled Water Discharge Report" form found at www.PleasantonRecycledWater.com and submit to jcordes@cityofpleasantonca.gov. If unable to electronically send the discharge report form, it can be dropped off in person at 3333 Busch Road, Pleasanton, Attention: Recycled Water Program.

5.1.3 Quantity: 50,000 Gallons or More

If a discharge of 50,000 gallons or more of recycled water discharges to the storm drain, immediate notification is required and the following steps shall be followed (per California Water Code Section 13529.2):

IMMEDIATE ACTIONS:

- Site supervisor shall turn off the recycled water system at the isolation valve on the customer side of the recycled water meter.
- Report the discharge to the City's Operation Services Department: (925) 931-5500 After business hours call the stand by operator: (925) 931-5100

Follow Up Action:

- Submit a written report to the City of Pleasanton within three business days. The written report must include:
 - ✓ Location of discharge
 - ✓ Date and time of incident

- ✓ Volume of discharge
- ✓ Actions taken to stop the discharge
- ✓ Corrective actions taken to repair the cause of the discharge.

5.2 Disasters and Damage

In case of earthquake, flood, fire, major freeze, construction accident, or other incident that could cause damage to the recycled or potable water systems, the site supervisor must inspect the potable and recycled water systems for damage as soon as it is safe to do so. Use the following guidelines:

- If either system appears damaged, shut off both the potable and recycled water systems. Potable water system shall be shut off at the backflow device, and the recycled water system will be shut down at the isolation valve after the recycled water meter.
- If the site supervisor cannot inspect the site and damage is expected, then shut off both the potable and recycled water systems as noted above.
- The site supervisor must immediately contact the City for further instructions.

To prevent contamination, damage, or a public health hazard, the customer may make emergency modifications or repairs without the City's prior approval. As soon as possible after the modification, the customer must notify the City of the emergency modifications and file a written report.

5.3 Cross-Connections

The site supervisor must immediately notify the City of any failure or cross-connection between the recycled water and potable water systems. The site supervisor must also notify the City of any incident that might occur because of any action customer personnel might take while operating the recycled water or potable water systems. If there is any doubt whether an incident has occurred, the site supervisor must report each occurrence to the City so its staff can decide if further action is needed.

If contamination of the potable water system is suspected or known due to crossconnection, backflow, or other incident on the customer's premises, the customer, at his/her/their sole expense, must immediately invoke the Emergency Cross-Connection Response Plan provided below:

Emergency Cross-Connection Response Plan

- 1. Immediately shut down the recycled water supply to the facility.
- 2. Immediately notify the following agencies:

a.	City of Pleasanton Operation Services Center:	(925) 931-5500
	City of Pleasanton Afterhours:	(925) 931-5100
b.	State Water Resources Control Board, Division of	
	Drinking Water:	(510) 620-3454

A written notice to the City Operations Services Division must follow the verbal notification within 24 hours. The written notice must explain the nature of the cross-connection, the date and time it was discovered, and the steps taken to mitigate the cross-connection(s).

- Email: jcordes@cityofpleasantonca.gov
- Fax: 925- 931-5595
- In person delivery: 3333 Busch Rd, Pleasanton
- 3. Keep the potable system pressurized and post "Do Not Drink" signs at all potable water fixtures and outlets.
- 4. Provide bottled water for building occupants until the potable water system is deemed safe to drink.
- 5. Identify the cause and location of backflow and eliminate the cross-connection(s).
- 6. Samples will be collected from the potable water system and a 24-hour bacteriological analysis will be performed on the samples. Water samples will be collected and analyzed by the City. The customer will bear the costs of sample collection and analysis.
- 7. Before potable water service can be resumed, the site shall be inspected and a crossconnection test will be performed by the City to verify all cross-connections were eliminated.
- 8. If the bacteriological analysis conducted in Step 6 is positive, chlorinate the potable water system. Maintain a chlorine residual of at least 50 mg/L for 24 hours. Otherwise, proceed to Step 11.
- 9. Flush the potable water system after 24 hours and perform standard bacteriological analysis.
- 10. If the results from Step 9 are acceptable, proceed to Step 11. Otherwise repeat Steps 8-9.
- 11. Obtain final approval from the City, but do not yet remove the "Do Not Drink" signs.
- 12. After final approval has been obtained from the City, the City will bring the recycled water system back into service and the customer will remove the "Do Not Drink" signs from all potable water fixtures and outlets.

6 Dust Control, Construction Water, Surface Washing, and Hydrant Meters

If available, recycled water shall be used for dust control, soil compaction, and surface washing. *(Note: A special site specific permit is required for surface washing)* Recycled Water hydrant meter permits for drawing recycled water from recycled water hydrants within the City of Pleasanton can be requested from the City of Pleasanton's Customer Service Center at 3333 Busch Rd, Pleasanton 94566.

Separate permits are required from either Dublin San Ramon Services District and City of Livermore to draw recycled water from recycled water hydrants within those jurisdictions. Tank trucks with overhead water filling access may obtain a permit from Dublin San Ramon Services District (DSRSD) and fill trucks at the Regional Wastewater Treatment Plant.

The following Recycled Water Guidelines for all of the above specified uses shall be followed by those issued with Pleasanton recycled water hydrant meters:

- Recycled water shall be used only within the City service area.
- Never allow recycled water to spray onto drinking fountains.
- Never apply recycled water where it could contact or enter passing vehicles, buildings, areas where food is handled or eaten, or storm drains.
- Take adequate measures to prevent overspray, ponding, or runoff from the authorized recycled water use area. Do not irrigate with recycled water or impound it within 50 feet of a domestic (drinking water) well.
- Install warning signs at adequate intervals where recycled water is used in areas accessible to the public, as required by Section 3.3.5 of this Guideline.
- Do not put recycled water into any permanent piping system and never connect the tank truck to any part of the potable water system.
- Do not put recycled water into a storage facility without specific written authorization from the City.

Additionally, the following Recycled Water Use Safety Guidelines shall be followed for all the uses that fall into this Section:

• Do not drink recycled water or use it for food preparation. Also, the truck driver shall notify workers and/or the public when recycled water is being used at a site and inform them not to drink recycled water or use it for food preparation.

- Apply hand sanitizer or wash hands with soap and potable water after working with recycled water, especially before handling food or smoking.
- Take precautions to avoid contact between food and recycled water while the use site is still wet.
- Equip truck drivers with an adequate first aid kit. Cuts or abrasions should be promptly washed, disinfected, and bandaged.
- Supply safe drinking water for workers.
- The operation shall be conducted in a way that minimizes exposure to workers.
- The operation should be conducted in a manner to minimize misting and spraying, and should be conducted in an area away from the general public.

6.1 **Procedures for Fill Station Customers (DSRSD)**

Refer to DSRSD's requirements at http://www.dsrsd.com/do-business-with-us/recycled-water-use.

6.2 **Procedures for Recycled Water Hydrant Customers**

6.2.1 Obtaining a Hydrant Meter Permit

The types of recycled water meter hydrants available are 5/8" and 3". Interested customers following these steps to obtain a hydrant meter:

- 1. Fill out and submit the *Recycled Water Hydrant Meter Report* (which includes *Worker Guidelines* on the back side of the form), to the Customer Services Center at 3333 Busch Rd, Pleasanton 94566. The application form is available at the Customer Services Counter.
- 2. Provide the Customer Services Center the specified deposit for the meter.
- 3. City staff will direct customer to where they can pick up the meter with utility staff. You will need to show utility staff proof of deposit and application form. Utility staff will note the meter number and meter read on the report form.

6.2.2 Hydrant Meter Readings/Closing a Hydrant Meter Account

Hydrant meter customers will submit by email, phone, or at the counter their meter reads on a bimonthly basis, as specified by Customer Services Center staff.

The following steps are necessary to close a hydrant meter account when the customer no longer requires a hydrant meter:

• Customer shall return meter to City Utility Division, located at 3333 Busch Rd.

- Utility staff will inspect meter, verify last read, and deliver closing Recycled Water Hydrant Meter Report to Customer Services Center.
- If the meter is in proper working condition the deposit provided will be applied to final balance. If there is damage to the meter, the damage is subject to additional charges for repair or replacement of the meter.

6.3 Tank Truck Guidelines for Transporting Recycled Water

- 1. Tank trucks shall be equipped with an air gap; (refer to DSRSD Standards at http://www.dsrsd.com/do-business-with-us/recycled-water-use.).
- 2. All truck owners and/or drivers are required to attend a Site Supervisor Training workshop.
- 3. Vehicles used to transport recycled water shall be clearly labeled in a prominent location with these or similar words, in English: "Recycled Water Do Not Drink."
- 4. The permit issued by DSRSD shall be available for inspection at all times. The recycled water customer or agent shall carry a copy of the permit in the truck.
- 5. Vehicles used to transport and distribute recycled water shall have water-tight valves and fittings, shall not leak, and tanks shall be cleaned of contaminants prior to use. A truck or tank that has contained material from a septic tank or cesspool shall not be used for recycled water.
- 6. Tank trucks used to transport recycled water should not be used to carry potable water unless the truck has first been thoroughly cleaned and disinfected.

6.4 **Procedures for Surface Washing Customers**

For any customers (including third-party customers) who wish to connect to an onsite recycled water irrigation system through a quick coupler connection and use recycled water for surface washing purposes, the customer shall obtain a *Recycled Water Surface Washing Permit* from the City. Application form is located at www.PleasantonRecycledWater.com. In order to obtain a permit the customer will need to provide the following information to the City and abide by the surface washing guidelines:

- 1. Customers shall show where surface washing is going to occur and a map of where the washing equipment will connect to the recycled water irrigation system.
- 2. Customer shall provide proof of authorization from the site supervisor of the recycled water use site, granting permission to connect to the irrigation system to perform onsite surface washing with recycled water.

6.4.1 Surface Washing Requirements

- \checkmark Wash water shall be contained within the wash area
- \checkmark Recycled water shall not be discharged to storm drains or waters of the state

- ✓ Recycled water shall not be heated prior to use
- ✓ Recycled water shall not come into contact with potable water hose bibs
- ✓ Shut off nozzles shall be used on all water hoses connected to the recycled water pressure washer system
- ✓ Workers performing the washing, whether it is site personnel or a third party contractor, shall be trained prior to beginning the operation in the safe and proper use of recycled water. The City is available to provide this training.

All equipment (including hoses and where applicable, deionization tank, brushes which connect to the recycled water hose and shut off nozzles) that comes into contact with recycled water shall be dedicated and properly labeled for use on recycled waters system only. The equipment shall not be re-connected to potable water systems.

7 Permit to Use Recycled Water Terms and Conditions

7.1 Permit and Fees

The *Recycled Water Use Permit* constitutes permission for the customer to use recycled water in conformance with all the City Codes, policies, and the *Recycled Water Use Guidelines* requirements, including any site-specific requirements that may be identified.

Recycled water customers are responsible for payment of all application fees, capacity reserve fees, and bimonthly user and commodity charges in accordance with the applicable City Code, Rate and Fee Schedule.

7.2 City of Pleasanton Authority

The City is the entity responsible for enforcing the rules and regulations for the end uses of recycled water within the City. Customers may also need to submit plans for a recycled water project to county departments or other agencies that have the authority to issue permits and enforce other requirements, such as plumbing, permits, building requirements, and planning criteria.

The recycled water rules and regulations enforced by the City are established by the RWQCB and DDW. Most of these regulations are set forth in the California Code of Regulations and by Alameda County. All facilities using recycled water shall be designed and operated to meet the standards of the governing codes, rules, and regulations. The resolutions, policies, and codes of the City shall govern in the event of any conflicts with information included in the *Recycled Water Use Guidelines*. Violations of these requirements are subject to fines and prosecution allowed by law.

DSRSD and the City of Livermore maintain and operate the recycled water treatment facilities, and the City of Pleasanton maintains and operates the recycled water distribution system. The recycled water supplier(s) and the City reserve the right to limit the volume, pressure, and flow rate of water delivered to customers.

7.2.1 Amendments

Periodically there may be amendments to existing regulations. These amendments will be enforced upon their effective date.

7.3 Enforcement

Compliance with the *Recycled Water Use Permit* and these Guidelines (including, but not limited to: self-monitoring and satisfactory City inspections) are conditions for receiving recycled water service.

If a customer is routinely out of compliance, the City may increase the frequency of inspections and/or self-monitoring reports or require mandatory attendance at the City's next available recycled water use training workshop. Depending on the frequency and degree of non-compliance and on the potential danger to public health as determined by the City, service to the site may be terminated until corrections are made by the customer and site supervisor.

7.3.1 Suspension of Service and Assessing of Fees

The City has the right to suspend recycled water service if any of the conditions set forth in this Guideline are not being adhered. The City may impose fees to reimburse the City for extra staff time required to correct violations of these conditions.

7.3.2 Right to Terminate Service

In the interest of protecting public health, the City reserves the right and has the authority to immediately terminate, without notice, recycled water service to any customer if at any time during construction or operation of the recycled water system there is evidence of real or potential hazards such as cross-connections with the potable water system, improper tagging, signage, or markings; or unapproved or prohibited uses.

7.4 Severability

If any section, subsection, clause, or phrase of this Guideline is determined to be invalid, the remaining portions of these regulations shall remain in effect.

Appendix A

California Code of Regulations Title 22 List of Suitable Uses of Recycled Water* (Currently acceptable uses in the City of Pleasanton are shaded in gray)

Use of Recycled Water	Treatment Level				
	Tertiary Secondary- Secondary-				
Irrigation of:	Recycled Water**	2.2 Recycled Water	Recycled Water		
Food crops-contact with edible portion of crop	Allowed	Not Allowed	Not Allowed		
Parks and playgrounds	Allowed	Not Allowed	Not Allowed		
School yards	Allowed	Not Allowed	Not Allowed		
Residential landscaping	Allowed	Not Allowed	Not Allowed		
Unrestricted access golf courses	Allowed	Not Allowed	Not Allowed		
Any other irrigation uses not prohib. by other CCR	Allowed	Not Allowed	Not Allowed		
Food crops-edible portion above gd/not in contact	Allowed	Allowed	Not Allowed		
Cemeteries	Allowed	Allowed	Allowed		
Freeway landscaping	Allowed	Allowed	Allowed		
Restricted access golf courses	Allowed	Allowed	Allowed		
Ornamental nursery stock and sod farms	Allowed	Allowed	Allowed		
Pasture for milk animals	Allowed	Allowed	Allowed		
Any non-edible vegetation with access control to prevent use as if it were a park, playground or school yard	Allowed	Allowed	Allowed		
Orchards w/no rw contact w/edible portion	Allowed	Allowed	Allowed		
Vineyards w/no rw contact w/edible portion	Allowed	Allowed	Allowed		
Non food-bearing trees not irrigated <14 days of harvest	Allowed	Allowed	Allowed		
Fodder crops and fiber crops	Allowed	Allowed	Allowed		
Seed crops not eaten by humans	Allowed	Allowed	Allowed		
Food crops that undergo commercial pathogen- destroying processing before human consumption	Allowed	Allowed	Allowed		
Supply for impoundments:					
Non-restricted rec. impoundment w/monitoring	Allowed***	Not Allowed	Not Allowed		
Restricted rec. impoundments and fish hatcheries	Allowed	Allowed	Not Allowed		
Landscape impound. w/o decorative fountains	Allowed	Allowed	Allowed		
Supply for cooling or air conditioning: Industrial/commercial cooling/air cond. w/cooling tower, evaporation condenser that create misting	Allowed****	Not Allowed	Not Allowed		
Same as above, but do not create mist	Allowed	Allowed	Allowed		
Other uses:					
Flushing toilets and urinals	Allowed	Not Allowed	Not Allowed		
Priming drain traps	Allowed	Not Allowed	Not Allowed		
Industrial process water may contact workers	Allowed	Not Allowed	Not Allowed		
Structural fire fighting	Allowed	Not Allowed	Not Allowed		
Decorative fountains	Allowed	Not Allowed	Not Allowed		
Commercial laundries	Allowed	Not Allowed	Not Allowed		
Consolidation of material around potable pipe	Allowed	Not Allowed	Not Allowed		
Artificial snow making for commercial outdoor use	Allowed	Not Allowed	Not Allowed		

Industrial boiler feed	Allowed	Allowed	Allowed
Nonstructural fire fighting	Allowed	Allowed	Allowed
Backfill consolidation around non-potable pipes	Allowed	Allowed	Allowed
Soil compaction	Allowed	Allowed	Allowed
Mixing concrete	Allowed	Allowed	Allowed
Dust control on roads and streets	Allowed	Allowed	Allowed
Cleaning roads, sidewalks and outdoor work	Allowed	Allowed	Allowed
areas	Allowed	Allowed	Allowed
Flushing sanitary sewers	Allowed	Allowed	Allowed

* Refer to the full text of the latest version of Title 22

** City of Pleasanton recycled water program supplies only tertiary treated recycled water With "conventional tertiary treatment" additional monitoring may be necessary

**** Drift eliminators and/or biocides are required if public or employees can be exposed to mist

Appendix B

Application for Recycled Water Use Permit

CITY OF PLEASANTON RECYCLED WATER PROGRAM APPLICATION FOR RECYCLED WATER USE PERMIT						
Site Wher	e Use is Propo	sed	(Internal Use Only)			
Name or Description:	Name or Description:		Data	· · · · ·		
			Date	Received / /		
				e of Determination / /		
Address or Location:				Accepted Returned		
			Customer Number:			
			Note			
		Applicant Info	rmati	on		
Applicant is Ow	ner [Lessee		Other (describe):		
Applicant's Name:				Title:		
Address:				Phone:		
City:	State:	Zip:		Email:		
Property Owner's Nam	ie:					
Property Owner's Add	ress:			Phone:		
City:	State:	Zip:		Email:		
Contact Person:			Phone:			
Contact's Address:				Mobile Phone:		
City:	State:	Zip:		Email:		
Customer's Designated Recycled Water Supervisor (See Note 1)						
Relationship to Applica	ant: Same	Partner	Er	nployee Other:		
Name:				Title:		
Business Address:						
City:	ity: State: Zip: Email:		Email:			
The Recycled Water Supervisor must be reachable at all time in case of an emergency. (All numbers are for City use only.)						
Phone number during	regular busines:	s hours:				
Emergency Numbers:	Evening:			Cellular:		
	Pager:			Message:		
	Project Information/Recycled Water Use					
Property Type: Commercial Industrial Institutional HOA Multi- Family/Condo: # Units:				titutional 🗌 HOA 🗌 Multi-		

Proposed Recycled Water Uses:	Landscape	Approx.	Area (sq. ft.):
	Water Feature (fountain or other decorative water feature)		
	Construction (du	ust control or	surface cleaning)
Priofly describe the pr	appaad roovalad wate		aked Include types of plants to be irrigated
industrial process serv			cked. Include types of plants to be irrigated, needed.)
Recycled V	Nater Demand Estin	nates	Fire Suppression Service Line Size in inches:
Estimated Annual Use	::	F Gallo	
Peak Use in Gallons/N	/linute (GPM):		
Hours of Use:			
Days of Use:			
Dry Season Use O	nly 🗌 Year-roi	und Use	
		litional Info	mation
(For Irrigation Use) La	ndscaper:		Phone:
Is potable water used onsite? If so, provide information a			
ATTACHMENTS			
Site Drawings (required on all projects)			
Impoundments O & M Plan (if servicing a reservoir or pond)			
Other:			
Customer's Recyc	led Water Superviso		Applicant Signs I designate the named person as the Recycled Water Site
Recycled Water Use (,		Supervisor in accordance with the City of Pleasanton
recycled water system	in compliance with a	II	Recycled Water Use Guidelines. I am a principal owner o this site or a duly authorized representative, and certify
conditions of the Recy	cled Water Use Perm	nit.	that the information contained in this application is true and correct to the best of my knowledge.
			and concorto the best of my NIOWEuge.

	I certify under penalty of law that this document and all
	attachments were prepared under my direction or
	supervision in accordance with a system designed to
	assure that qualified personnel properly gathered and
	evaluated the information submitted. I am aware that
	there are penalties for submitting false information,
	including the possibility of fines and/or disconnection of
	recycled water service.
	By signing the application below, I agree to conform to
	City of Pleasanton requirements for recycled water use at
	the proposed site.
Print	Print
Name:	Name:
Nume	Name
Signature:	Signature:
Date:	Date:

Note 1: Customer's Recycled Water Supervisor: It is the responsibility of the Customer to provide surveillance and supervision of the recycled water system in a way that assures compliance at all times with current regulations. In order to accomplish this, the Customer shall designate, with the approval of the City, a Recycled Water Site Supervisor to provide liaison with the City. This person may represent the owner, tenant, or property manager as appropriate; however, he/she must be responsible for the recycled water system at the site and available at all times, with authority out carry out any requirements of the Recycled Water Program.

Refer to the "*City of Pleasanton Recycled Water Use Guidelines*" Section 3.4 for a comprehensive description of the responsibilities of the recycled water site supervisor.

For questions regarding the City of Pleasanton Recycled Water Program, please call 925-931-5515.

Appendix C

City Monitoring Report



CITY OF PLEASANTON RECYCLED WATER PROGRAM CITY MONITORING REPORT

Name/L	ocation of Site: Permit No.:		
Date of	Inspection: Name of Inspector:		
Schedul	ed Unannounced Customer representative present:		
	GENERAL PERMIT COMPLIANCE		
1.	Is recycled water used for any purposes not listed on the permit?	Yes*_	No
2.	Are use rates consistence with those listed on the permit?	Yes	_ No*
3.	Is irrigation limited to areas shown in the original permit application?	Yes	_ No*
4.	Have any alterations been made to the recycled water system since the permit was issued?	Yes*_	No
5.	Is the on-site recycled water supervisor the same person specified on the permit?	Yes	_ No*
6.	Has the on-site staff been trained in the use of recycled water and measures taken to protect personal and public health?	Yes	No*
7.	Has the customer been conducting self-monitoring and filing report in accordance with their permit?	Yes	No*
	PROHIBITIONS		
8.	Is recycled water escaping the use area through surface runoff or airborne spray? (If yes, note affected area and estimate volume)	Yes* _	No
9.	Are any odors associated with use of the recycled water? (Note source, characterization and travel distance below)	Yes* _	No
10.	Is there prolonged ponding of recycled water due to over-irrigation or evidence of mosquito breeding as a result of ponding?	Yes* _	No
11.	Are any notification signs and markings identifying recycled water missing, not legible or obstructed?	Yes*	No
12.	Are there leaks or breaks in the irrigation system piping or evidence of plugged, broken or otherwise faulty irrigation system components?	Yes* _	_ No
13.	Is recycled water being sprayed directly on people, dwellings, food handling facilities or drinking fountains?	Yes*	No
	BACKFLOW/CROSS-CONNECTION TESTING		
14	Have backflow preventers been tested in the last 12 months? Date:	Yes	No*
		105	
15.	The most recent cross-connection test conducted: Part I Pretest and Visual Test Date:	Pass	Fail*
	Part II Cross-Connect Control Test Date:	Pass	
16.	Is the site due for cross-connection testing?	Yes*	No

IMPOUNDMENTS, IF APPLICABLE				
17. Is there evidence of overflows, leaks, erosion of dikes, etc. o	f storage ponds or impoundments? Y	es*	No	
REQUIRE	D ACTION			
None				
By the City:	Compliance Date:			
By the Customer:	Compliance Date:			
	IENTS			
All responses with an asterisk () require an explanation. Identify co	omments by item number.			
SIGNATURE/DATE				
SIGNATU				

Appendix D

Customer Self-Monitoring Report



CITY OF PLEASANTON RECYCLED WATER PROGRAM CUSTOMER SELF-MONITORING REPORT

Name/Location of Site:

Monitoring Cu frequency specified de in permit: W Su

Customer's designated Recycled Water Site Supervisor:

MONITORING DATA

Observer's initials and date monitored \rightarrow					
Is recycled water escaping the use area through surface run off, airborne spray, or overflow of impoundments such as fountains? (If yes, note affected area and estimated volume in area provided below.)	Yes No	Yes No	Yes No	Yes No	Yes No
Any observation of odor of wastewater origin on the site irrigated with RW?	Yes	Yes	Yes	Yes	Yes
(Note source, characterization and direction of travel below.)	No	No	No	No	No
Is there prolonged ponding of recycled water or evidence of mosquitoes breeding within the irrigation area as a result of ponded water?	Yes	Yes	Yes	Yes	Yes
	No	No	No	No	No
Are all warning signs, labels and markings identifying recycled water in place, legible and visible?	Yes	Yes	Yes	Yes	Yes
	No	No	No	No	No
Are there leaks or breaks in the irrigation system piping or evidence of plugged, broken or otherwise faulty irrigation system components?	Yes	Yes	Yes	Yes	Yes
	No	No	No	No	No
Is recycled water being sprayed directly on people, dwellings, food handling facilities or drinking fountains?	Yes	Yes	Yes	Yes	Yes
	No	No	No	No	No

Explain any "yes" answers. Note date of comment and specific locations within the site. Attach additional sheets if necessary.

NOTES

Appendix E

Recycled Water Discharge Report



RECYCLED WATER DISCHARGE REPORT

Unauthorized Discharges Less than 50,000 Gallons (Submit within 5 days of incident)

Date of	Submission Date:	
Incidence:	(internal use only)	
Customer Name:		
Property Address:	Recycled Water Use Permit #:	
Topeny Address.		
Description of unauthorized discharge incide	ent (include length of time between	
discovery and repair):		
Estimated quantity of recycled water	Did the discharge enter into a waterway or	
discharged:	storm drain?	
	□ Yes □ No	
Location of discharge incident:		
Actions taken (include repairs made, any bro	oken/replaced equipment, and personal	
performing repairs):		
Are any further actions necessary to comple	ete repairs? \Box No \Box Yes If yes, describe:	

Date of last inspection by City staff:	Date of last Self-Monitoring Report		
	submission:		
Site Super	visor Signature		
I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. I am aware that there are penalties for submitting false information, including the possibilities of fines and/or disconnection of recycled water service.			
	Date:		
Print Name	Phone #:		
Submit this form to the Recycled Water Div			
Drop off: 3333 Busch Rd, Pleasanton			
Electronically: jcordes@cityofpleasantonca.gov			
Fax: 925-931-5595			

If you have any questions, call 925-931-5515

(For internal use only)