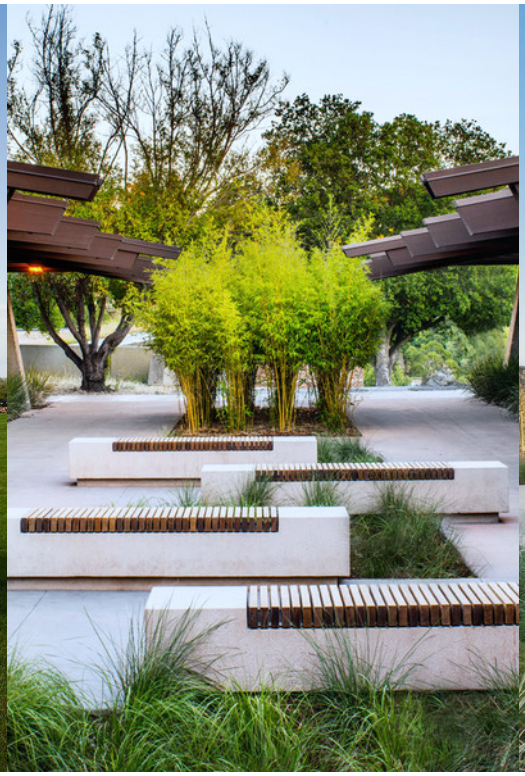
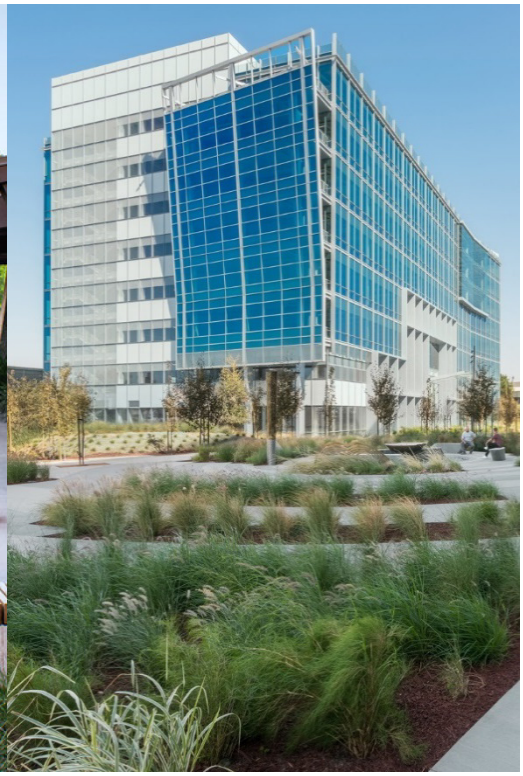

Sunnyvale

Rules and Regulations

Environmental Services Department
Recycled Water Program

November 2, 2018

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Contents

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INTRODUCTION

PURPOSE

This document contains the City of Sunnyvale's (City) rules and regulations for the design, installation, and operation and maintenance of recycled water systems used primarily for irrigation and water features and in dual-plumbed buildings and industrial facilities. It covers requirements for existing sites and new development and should provide sufficient information for recycled water customers to meet all applicable regulations.

AUTHORITY AND SOURCES

This document draws on a number of references, including the California Code of Regulations (CCR), Title 22 and Title 17; the California Health and Safety Code; the California Water Code, Guidelines for the Distribution of Non-potable Water and Guidelines for the On-Site Retrofit of Facilities Using Disinfected Tertiary Recycled Water, both developed by the California-Nevada Section of the American Water Works Association (AWWA); and the 2012 International Association of Plumbing and Mechanical Officials (IAPMO) Uniform Plumbing Code (UPC). It also draws on regulations contained in the San Francisco Bay Regional Water Quality Control Board (RWQCB) Permit (No. 96-069), which governs use of recycled water in the City's service area. This document was developed specifically for Sunnyvale customers and it takes precedence over general guidelines (including AWWA guidance documents) where differences are noted. Since codes, laws, and regulations can change without the City's prior approval or knowledge, the City does not assume any liability for errors in this document.

SERVABILITY

If any section, subsection, sentence, clause or phrase of these Rules and Regulations is found to be invalid or unconstitutional, the remaining portions of these Rules and Regulations shall remain unaffected. The City Council declares that it would have approved these Rules and Regulations by section, subsection, sentence, clause, or phrase irrespective of the fact that any one or more of the sections, subsections, sentences, clauses or phrases be declared invalid or unconstitutional.

PLANNING FOR RECYCLED WATER USE

Why recycle water? The residents and businesses of Sunnyvale depend on imported water for domestic uses, landscaping, industry and commerce. The water supply is limited, and during periods of drought, water use may be subject to severe restrictions. In response to the State's ongoing water supply challenges, Sunnyvale and other communities throughout California are finding ways to both conserve water and to replace potable supplies with recycled water where possible. Water recycling is consistent with State laws which declare that the use of potable water for non-potable uses constitutes a waste or unreasonable use of water if recycled water of appropriate quality and reasonable cost is available. The State's recycled water policy includes a goal to increase the use of recycled water over 2002 levels by at least one million acre-feet per year (afy) by 2020 and by at least two million afy by 2030. Sunnyvale is committed to helping the State achieve this goal by continuing to produce high-quality recycled water and enhancing its recycled water system where possible.

RECYCLED WATER PROGRAM GOALS

It is the City's intent that recycled water be used within its jurisdiction whenever feasible, in a manner that is consistent with legal requirements and the preservation of public health and the environment. To that end, the City's Recycled Water Program has set forth a list of goals.

Conservation

Achieve conservation of potable water supplies by using recycled water to meet current and future demands, which may include:

- landscape and agricultural irrigation
- landscape or recreational fountains, ponds and impoundments
- commercial uses (including flushing toilets and urinals)
- construction use
- use in industrial processes
- riparian enhancement and wildlife habitat
- other approved uses

Pollution Prevention

Prevent pollution focuses on the reduction of pollutants to the San Francisco Bay and the recycled water system by:

- Reducing the discharge of metals and other pollutants to South San Francisco Bay
- Maintaining recycled water quality through a pre-treatment program for commercial and industrial wastes discharged to the treatment plant, and to the extent feasible by controlling brine discharges from water softeners, evaporative coolers, and other sources

Public Health and Compliance

Prevent direct human consumption of recycled water and ensure regulatory compliance through:

- Posting of warning signs at use areas
- Maintaining a cross-connection/backflow prevention program
- Adhering to all applicable rules and regulations
- Providing continuous monitoring of recycled water quality
- Ensuring compliance through a system of User permitting and site monitoring

RECYCLED WATER AVAILABILITY

Unless required under a City-adopted area specific plan, the use of recycled water in Sunnyvale is voluntary. Recognizing the benefits of recycled water, many potential customers have actively sought recycled water service for irrigation or indoor use, particularly in cases of new construction. The City's Community Development staff can advise prospective customers if recycled water is available in a particular area. The City is not obligated to provide recycled water service, and may deny a prospective customer's request based on cost or other considerations.

AUTHORIZED USES OF RECYCLED WATER

The City provides high-quality recycled water to its customers by subjecting wastewater entering to the Sunnyvale Water Pollution Control Plant to multiple treatment processes that meet or exceed the rigorous standards for tertiary disinfected recycled water contained in to CCR Title 22. The State Water Resource Control Board's (SWRCB) Division of Drinking Water (DDW) lists tertiary disinfected recycled water as having the most available approved uses out of all the recycled water options available.

The City reserves the right to review each proposed use at each location for approval on a case-by-case basis. The City may decline to approve any specific use for reasons of safety, public health, public acceptability, technical feasibility or other concerns, for which the City's judgment shall be final. At the City's discretion, the Permit to Use Recycled Water may set forth site-specific requirements as conditions for the permitted use. The City may also, at its option, require specific prior approval from the RWQCB or DDW for a particular use. Authorized uses for recycled water are listed in **Appendix A**.

PERMITTING AND AMDINISTRATIVE REQUIREMENTS

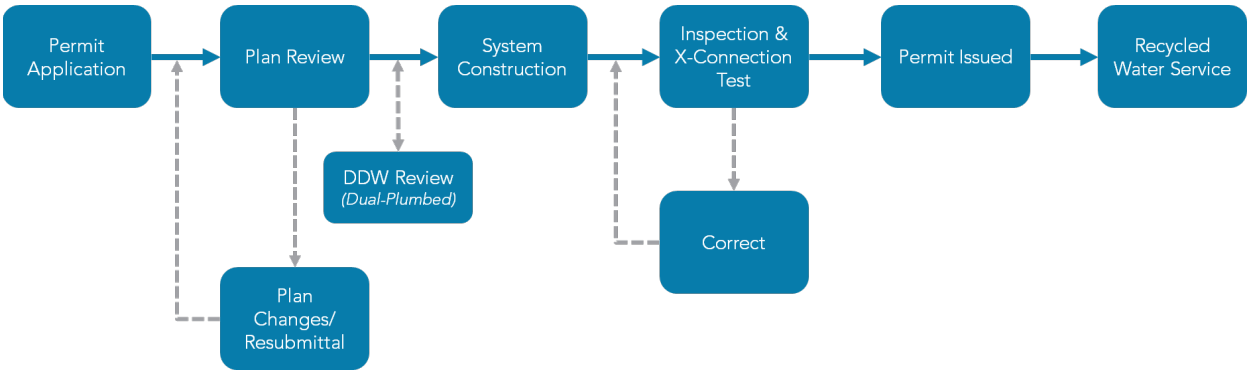
The City will provide recycled water service only after a Permit to Use Recycled Water is issued. Permit conditions are described in this and subsequent sections. Additional site-specific conditions may be attached to the customers Permit to Use Recycled Water.

A completed application for a Permit to Use Recycled Water must be submitted to the City by the owner or authorized representative of the property which is intended to be served with recycled water. Approval for service shall be indicated by the City successfully completing a site inspection and cross-connection test, issuing a Permit to Use Recycled Water, and activating recycled water service. The Permit to Use

Recycled Water shall be in addition to any permits and conditions required by other City Departments or agencies. The permit shall be the binding agreement between the City and the user.

Permitting Process

The permitting process involves several steps before a site can be approved for recycled water service. In general, these include gathering the necessary information to complete and submit a permit application, a review process and possible request for additional information, site visit and cross-connection test, and approval and issuance of the Permit to Use Recycled Water.



The total time from submittal of the application to initiation of service can vary widely depending on the nature of the application and the size and complexity of the system. For example, more time is required for large or complex sites, and for cases where the City must install a new service line. In some cases of new construction where recycled water has never been introduced into the recycled water system, the City may allow the recycled water system to be operated on potable water using a City installed or approved connection. Additionally, approval for dual-plumbed sites will always take longer because of the additional levels of review by the DDW. For these reasons, applicants should plan ahead and initiate the process well in advance of the expected occupancy date.

Once the application packet is submitted, the City will review the application and respond within 30 calendar days of receipt of the application packet. The City may require the applicant to submit any additional information that it deems necessary.

Note: For applications that involve a dual-plumbed facility, the City requires submittal of a *Dual Plumbing Engineering Report* with the application packet. The review period for dual-plumbed applications may take longer than the typical 30-day period due to their requirement to be reviewed by the RWQCB and DDW in addition to the City.

Upon approval of the complete application, the City will schedule a cross-connection test, which requires coordination with the designated Site Supervisor or authorized representative. Upon successful

completion of the cross-connection test, the City will issue a Permit to Use Recycled Water and initiate service. The flowchart in **Appendix B** illustrates the general case for new construction.

Permit Application Required Information

The application package shall consist of the completed application form (**Appendix B**) with site drawings. The following is a list of all the required information to be included in an application packet to help guide the applicant in preparing their application:

Site Information

- Site address, assessor's block and lot numbers, or property metes and bounds

Applicant Information

- Applicant's name and address, owners name and address (if different), applicant's relationship to the subject property as legal owner, tenant, or lessee

Site Supervisor Information

- Designation Recycled Water Supervisor, including address, email, and 24-hr contact number(s)

Planned Use of Recycled Water

- Description of planned recycled water use on the property
- Estimated annual flow and peak flow at point of connection
- Total irrigated area, expressed in appropriate units (square feet, acres)
- Impoundment O&M Plan (if serving a reservoir or pond)
- Other items that could be of concern when using recycled water

Authorization

- Signature of designated Site Supervisor, certifying that he/she will comply with permit conditions
- Signature of owner or duly authorized representative, certifying that information contained in the permit application is true and correct, and that the applicant agrees to comply with these Rules and Regulations and any and all other applicable governing documents

Site Drawings

- All buildings on the site
- Location of all service connections, meters, and backflow devices relative to buildings, property lines, or intersections.
- Size of service connection
- Location of outdoor drinking fountains, hose bibs, quick couplers and other points of ready access to recycled or potable water systems
- Location of outdoor eating areas
- Locations of irrigation controller(s)
- Wells, ponds, storage tanks or other impoundments

If a single sheet is not sufficient to show the required information, then additional sheets may be used. The relationship among multiple sheets shall be clearly indicated through the use of match lines, detail sheets, or other means.

Note: The use of site construction plans is acceptable provided they are annotated (or supplemented) to clearly show the information listed above. Applicants are strongly encouraged to highlight all potable water lines in blue and recycled water lines in purple. On irrigation plans, highlighting up to the control valves is sufficient. For sites involving only outside irrigation, it is normally sufficient to include the cover sheet, utility sheets, and irrigation sheets, with appropriate legend and detail sheets. For a dual-plumbed facility, additional sheets showing internal piping (potable and recycled) and locations of food preparation or consumption areas must to be included.

Permit Contents and Conditions

The Permit to Use Recycled Water contains the following:

- Name and address of owner and user
- Effective date and expiration date of permit
- A statement that changes to the premises or operation that significantly change the volume or uses of recycled water, or changes in ownership of the facilities will be reported to the City
- Self-monitoring requirements and initial permit conditions (if any)
- A completed and approved permit application
- The permit incorporates by reference information provided in the user's permit application
- The application is attached to the permit

Permits to Use Recycled Water are subject to the following conditions:

- The recycled water permit is conditional on adherence to specific requirements of these Rules and Regulations and other regulations listed below. The City's Water System Regulations (Sunnyvale Municipal Code Chapters 12.20–12.24) and Procedures for Processing Delinquent Utilities Accounts (Chapter 12.50) shall apply equally and fully to the recycled water distribution system and recycled water users
- If deemed essential to protect public health and safety and insure regulatory compliance, the City may impose additional permit conditions at any time
- The City reserves the right to immediately revoke the permit of any user found to be violating any permit condition and to shut off the recycled water without further notice
- The Permit to Use Recycled Water shall be effective only after successful completion of a cross-connection test by the City. (Normally, the Permit is only issued after such testing is completed).
- A copy of the current permit must be available for review at all times at the use site and on file at the user's office

Other Applicable Codes and Regulations

In addition to those listed above, other applicable guidelines, rules and regulations, ordinances, and specifications govern the use of recycled water within the City. The Permit to Use Recycled Water is conditional on compliance with the following codes, rules, regulations and policies of the City of Sunnyvale:

ITEM	CURRENT REGULATION
Submittal of Drawings	As required by Building Officials
Backflow prevention	Municipal Code 12.28
Billing and payments	Municipal Code 12.24
Deposits	Municipal Code 12.24
Enforcement	Municipal Code 12.24
Establishment of rates, fees, charges	Municipal Code 12.24
Fines/Penalties	Municipal Code 12.50
Materials	Standard Specifications and Details
Metering	Municipal Code 12.24
Meter Reading	Municipal Code 12.24
Meter Testing	Municipal Code 12.24
Notices	Municipal Code 12.50
Turn-ons/offs	Municipal Code 12.24

AGENCY/ORGANIZATION	DOCUMENT TITLE
State Water Resources Control Board, Division of Drinking Water	California Code of Regulations, Title 22 Division 4 Wastewater Recycling Criteria
State Water Resources Control Board, Division of Drinking Water	California Code of Regulations, Title 17 Regulations Relating to Cross-Connections
California Regional Water Quality Control Board, Region 2	City of Sunnyvale Water Reclamation Permit (Order R2-94-069, with revised monitoring and reporting requirements from the Regional General Water Reuse Order R2-96-011)
California Building Standards Commission	California Code of Regulations, Title 24, Part 5, California Plumbing Code
California-Nevada Section, American Water Works Association	Guidelines for Distribution Of Non-potable Water
California-Nevada Section, American Water Works Association	Guidelines For the On-Site Retrofit of Facilities Using Disinfected Tertiary Recycled Water
Foundation for Cross-Connection Control	Manual of Cross-Connection Control And Hydraulic Research, School of Engineering, University of Southern California

Permit Renewal

Permits to Use Recycled Water are normally renewed by the City every four years, with the customer required to submit an updated application upon renewal. If a new permit is not issued by the City within that time frame, the previous permit shall remain in effect.

Note: For dual-plumbed sites, a complete system shut-down and cross-connection test are performed every four years as well. Permit renewals for dual-plumbed sites are contingent upon successful completion of a cross-connection test.

Conditions for New Permit Requirement

Occasionally, there may be a need for a new permit that is outside the typical four-year window. It is the responsibility of the customer to submit a new permit application under the following circumstances:

- Change in site ownership of the site
- Change or expansion (permanent or temporary) to the site or system operation that would significantly change the volume or methods of recycled water use
- Previous Permit to Use Recycled Water has been revoked

Customers are encouraged to contact the City's Water and Sewer Division with any questions regarding the conditions above to determine if a new permit is needed.

Dual-Plumbed Systems

Dual-plumbed systems occur when both potable water and recycled water are present inside a building. For example, a building where recycled water is used for toilet flushing is a dual-plumbed facility. Another example is a building where recycled water is used for industrial processes. Construction of dual-plumbed systems are subject to more stringent regulatory requirements due to the greater risk of cross-connection with the potable water system. In these instances, a *Dual Plumbing Engineering Report* must be submitted as part of the permit application packet, demonstrating compliance with the applicable CCR Title 22 and California Plumbing Code requirements.

Dual-Plumbing Engineering Reports must be approved by the City and by the DDW before a Permit to Use Recycled Water will be issued by the City. Time requirements for review/approval can be minimized if the *Dual-Plumbing Engineering Report* is thorough and complete, and if the accompanying site drawings are well annotated and clearly show the separation between potable and recycled systems. Requirements for preparing a *Dual Plumbing Engineering Report* is described in **Appendix B**.

Note: The City may require submission of an *Engineering Report*, or its equivalent, for other "in-building" uses of recycled water which do not fall under the Title 22 definition of "dual-plumbed", but which raise similar concerns and necessitate more detailed documentation for City approval. A few examples include, recycled water being used in an industrial process, fire suppression systems, or cooling towers.

Customer Agreements

Distribution of recycled water outside City limits shall be governed by a User Agreement, in addition to the normal Permit to Use Recycled Water. Except as may be noted in individual agreements, all User Agreements for recycled water shall be subject to these Rules and Regulations. The terms and conditions of User Agreements authorized by the City shall be established by the City, at its sole discretion. Each User Agreement must be in writing and be approved by the City to be valid.

Rates, Fees, Charges and Deposits

Rates and fees for a Permit to Use Recycled Water and for recycled water service shall be set by resolution of the City Council. Any changes in fee schedules shall be automatically adopted into these Rules and Regulations. The City reserves the right to change the schedule of recycled water rates, service charges and any other charges, deposits, or fees at any time.

TECHNICAL REQUIREMENTS

The following section describes the technical requirements for the design and installation of recycled water systems. Where appropriate, references are made to other City documents, such as the *Recycled Water Design and Construction Standards* (**Appendix E**).

Installation of Service

The City reserves the right to determine the size and location and/or type of recycled water service lines, service connections, meters, backflow protection devices and other physical appurtenances related to recycled water service. All meters shall be installed by, or under the supervision of, the City Water and Sewer Division. Such meters, wherever practical, shall be placed in suitable meter boxes in the sidewalk. When it is not practical to place meters in the sidewalk, or between the curb and property line, the meters shall be installed in some convenient place approved by the Water and Sewer Division upon the customer's premises, and placed so as to be accessible at all times for inspection, reading and testing.

The City shall, at its own expense, furnish and install service pipe of suitable capacity from its mains to the water meter. All meters and appliances installed by the Water and Sewer Division, whether in a public street or upon the customer's premises, shall continue to be the property of the City, and may be repaired, replaced or removed at any time.

The customer shall exercise reasonable care to prevent the meters and appliances installed upon the premises from being injured or destroyed. The customer shall install, maintain and repair service piping from the meter to the customer’s premises at his/her own expense, except as noted in Section 11 “Site Retrofit Costs". The customer shall install a shut-off valve downstream of the meter.

No person or persons shall open or in any way tamper with or make any addition or alteration whatever to any recycled water street main, service connection, meter, stopcock, valve or air cock connected with the recycled water mains. If any defects are noted, the Water and Sewer Division should be notified. Any

damage occurring to a meter or other appliance or pipes owned by the City, caused by the carelessness or neglect of the customer, including any damage which may result from hot water or steam from any boiler or heater on the consumer's premises, shall be paid for by the customer.

Service Connection Limitations

The City reserves the right to limit the area of land under one ownership or homeowner's association to be supplied by one recycled water service connection and one recycled water meter. A recycled water service connection and its corresponding meter shall not be used to supply adjoining property of a different owner, or to supply property of the same owner across a road, street or other public right-of-way. Additional recycled water mains and/or recycled water service lines will be required for all subdivided areas. Operating pressures in the recycled water distribution system shall be determined by the City. The customer shall design or operate the on-site system using the available pressure.

Note: Irrigation systems in homeowner's associations and other developments where landscaping around homes and in common areas is maintained by jointly-controlled association or entity, may be served with one meter. In such cases, the customer's irrigation piping may cross roads, streets, or other right-of-ways within the association's property.

Facilities Design and Construction

Recycled water systems, both on-site and off-site, shall be separate and independent of any potable water systems. Systems must be designed so as to minimize the possibility of cross-connections.

Applicable Standards

On-site facilities, including new facilities required to retrofit existing systems, shall be designed and constructed according to the requirements, conditions, and standards of the City of Sunnyvale Department of Community Development, these Rules and Regulations, the City's *Recycled Water Design and Construction Standards* and other regulations in effect at the time of construction (**Appendix E**).

The design of off-site recycled water facilities (to be owned and operated by the City), service connections, and required appurtenances at the point of connection shall be as required by the City's Department of Public Works, in accordance with its *Standard Details for Public Works Construction*.

Retrofits

Where it is proposed that an existing non-recycled water system be converted to a recycled water system, the City will review the customer's permit application and determine the measures necessary to bring the system into full compliance with these Rules and Regulations. No existing potable water systems shall be connected to or incorporated into the recycled water system without first obtaining the City's approval.

Signage and Public Notification

Conspicuous signs with appropriate wording that can be clearly read must be placed at site entrances and, if required by the City, at adequate intervals around the authorized use area. Signs shall be a minimum of

9” x 12” and shall include wording such as "Irrigated with Recycled Water" or "Using Recycled Water" and "Do Not Drink". Signs shall display a universal symbol identifying non-potable water. Examples of signage that include the universal symbol are included in **Appendix D**.

Identification of Equipment

Refer to the City’s *Recycled Water Design and Construction Standards* for more information on proper labelling and identification provisions applicable to recycled water systems. Requirements listed under this Section shall apply to both off-site and on-site facilities.

Design Restrictions and required Separation

Refer to the *City’s Recycled Water Design and Construction Standards*.

CONDITIONS OF SERVICE

This section describes other conditions or service in addition to those described elsewhere in this document that must be followed in order to maintain recycled water service. In rare cases where the customer fails to meet the conditions described herein recycled water service may be suspended or terminated.

Financial Conditions

Recycled water customers must maintain current accounts with the City of Sunnyvale and pay for all recycled water used. Rates for recycled water service are set by resolution of the Sunnyvale City Council. Current rates are 90% of the potable water rate for the applicable category of use.

Operational Conditions

All recycled water will be provided to the customer in the conditions and quantity specified in the Permit to Use Recycled Water. Recycled water use may not be subject to the same restrictions as potable water during droughts.

Liability

The City shall not be liable for any damage by water or resulting from defective plumbing, broken or faulty services or recycled water mains, on-site facilities failures, high or low pressure conditions, or interruptions of service.

Recycled water contains higher levels of certain salts and minerals than the City of Sunnyvale's potable water supply. The City makes no express or implied guarantee that its recycled water is suitable for particular uses at any specific site, or that it is compatible with specific soils, crops or landscape flora. The City shall not be liable for damage to user's facilities, including soil, plantings or landscape elements, due to mineral constituents in its recycled water. The City will provide guidance to customers on the successful use of recycled water, such as information on plant selection and irrigation practices.

Suspension of Service

The City reserves the right to temporarily suspend recycled water service at any time if recycled water does not meet the requirements of the City's permit, or for other reasons such as repairs on the distribution system. Because the City has the ability to add potable water to the recycled water system as a backup source at two locations, service will generally continue uninterrupted under most conditions. An exception would be distribution system repairs that require depressurization of lines that provide recycled water to a site.

Termination of Service

If the conditions of service are not satisfied at all times, recycled water service may then be terminated in the manner described for potable water service in Chapter 12 of the Sunnyvale Municipal Code.

OPERATION AND MAINTENANCE

Whereas the City is responsible for the operation and maintenance of the recycled water system upstream of an including the recycled water meter, the customer is responsible for maintaining and operating the on-site recycled water system downstream of the recycled water meter.

GENERAL CUSTOMER RESPONSIBILITIES

The following describe the general customer responsibilities for on-site facilities that are intended to protect potable water supplies against actual, undiscovered, unauthorized, or potential cross-connections to the customer's recycled water system. These provisions are in accordance with Title 17 and 22, the City's Recycled Water Permit, and other applicable laws and regulations.

- Designate a Recycled Water Supervisor (Site Supervisor) to oversee the operation and maintenance of the recycled water system and act as a liaison between the customer and the City for reporting and permitting requirements
- Maintain accurate drawings of the on-site recycled water system and have them readily available for review upon request by the City
- Notify the City of all updates or proposed changes, modifications, or additions to the recycled water system, including switching the recycled water system to a backup potable water source
- Operate and maintain all recycled water facilities in accordance these Rules and Regulations, the customer's Permit to Use Recycled Water, and other regulations governing recycled water systems within the City
- Ensure that the customer's employees are properly trained in the application of recycled water and worker protection
- Report to the City any/all failures in the recycled water system that cause an unauthorized discharge of recycled water
- To operate and control the system in order to prevent direct human consumption of recycled water and to limit runoff

In addition, the customer shall also comply with the RWQCB General Requirements for Water Reuse including:

- The treatment, storage, distribution and use of recycled water shall not create a nuisance as defined in Section 13050(m) of the California Water Code
- No recycled water shall be applied to irrigation areas during periods when soils are saturated
- Recycled water shall not be allowed to escape from the designated use area(s) as surface flow that would either pond and/or enter waters of the state
- Spray or runoff shall not enter a dwelling or food handling facility, and shall not contact any drinking water fountain, unless specifically protected with a shielding device
- Recycled water shall not be used as a domestic or animal water supply

- No recycled water shall be discharged except for the purposes approved in the customer's Permit to Use Recycled Water
- Recycled water shall not be discharged to golf course ponds, storage ponds, ornamental ponds or other impoundments unless an operation and maintenance plan is approved by the City and the use appears as a specific condition of the customer's Permit to Use Recycled Water

Note: Operation and maintenance of all City-owned off-site recycled water systems, including recycled water pipelines, valves, connections, storage facilities, and other related equipment and property up to and including the meter, shall be under the management and control of the City. No other persons except authorized representatives of the City shall have the right to enter upon any of the off-site facilities. Only City personnel and their representatives shall operate, adjust, change, alter, move or relocate any portion of the off-site recycled water system.

Site Supervisor Designation

The customer or property owner shall select a designated Site Supervisor that is responsible for the operation and maintenance of the recycled water system and must attend a Site Supervisor Training workshop held by the City. The site supervisor is the primary liaison with the City and represents the property owner. This person must be available to the City at all times, have the authority to carry out any City requirements, be responsible for installing, operating, and maintaining recycled and potable water systems and preventing potential hazards from the use of recycled water. The Site Supervisor may assign a designee, in which case the designee shall be trained in the use of recycled water as required by the City. The customer or property owner shall keep the City informed in writing of designated Site Supervisor's name and contact information, including address, telephone number, fax number, and email address, at which he or she can be reached 24 hours a day.

Site Supervisor Training

The customer's designated Site Supervisor is responsible for the proper use of recycled water at the site, and for the maintenance of recycled water equipment, as described below. The Site Supervisor is also responsible for ensuring that on-site operations personnel (those who use or maintain the recycled water system) are familiar with the relevant design requirements in the **Technical Requirements** Section of this document and properly trained.

As part of the permitting process, the City will provide training for the recycled water Site Supervisor, and for other personnel at the request of the Site Supervisor. In addition, the City will also provide free of charge to the customer a Recycled Water Site Supervisor Training. This training is mandatory for all Site Supervisors and will be offered at a frequency set by the City. At a minimum, all site Supervisors, new and existing, must attend this training at least once and receive a Certificate of Completion.

Site Supervisor Roles and Responsibilities

The following are the primary roles and responsibilities performed by the Site Supervisor.

Maintenance

The Site Supervisor shall perform preventive maintenance to ensure that the recycled water system remains in compliance with the requirements of the customer's Permit to Use Recycled Water and these Rules and Regulations. As part of a preventative maintenance program, the site supervisor should:

- Regularly inspect the entire recycled water system, including sprinkler heads, 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, 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 to prevent further ponding or runoff and note the affected areas in the Site Inspection Report form.
- Establish and maintain an accurate record keeping system of all inspections, modifications and repair work.

Personnel Training

The Site Supervisor is responsible for training all on-site personnel that work on the recycled water system. The Site Supervisor Training provided by the City gives a good overview of the information that a Site Supervisor can use for their own training purposes. At a minimum, personnel training should stress the following information:

- There is never to be a direct connection between the recycled water and the potable water systems.
- Recycled water, though highly treated, is non-potable and never to be used for human consumption.
- Working with recycled water is safe if both common sense is used and the appropriate regulations are followed.
- Wash hands before eating/drinking after working around recycled water and practice good hygiene.

Annual Self-Monitoring and Site Inspection Report

The City will set individual customer monitoring requirements based on the size, volume used, complexity, etc. of each use area. Recycled water customers shall routinely monitor their sites and submit, at minimum annually, a Site Inspection Report to the City. The City may change the required frequency of monitoring and reporting to ensure that the customer is complying with the Permit to Use Recycled

Water. The Site Supervisor must keep records of all incidents, repairs, system upgrades, and modifications done during the reporting period in order to complete the report. The Site Supervisor, or a designated representative, must sign the report and submit it to the City by email, fax, or postal mail. A copy of the Site Inspection Report form is included in **Appendix A**.

Permit Updates

If the property is transferred to a new owner or tenant, or a new Site Supervisor becomes responsible for system maintenance, the customer must notify the City within 30 days.

Unauthorized Discharge

An unauthorized discharge occurs when recycled water enters a storm drain or waterway. Customers shall make every effort to contain any unauthorized discharge of recycled water. Upon detection of an unauthorized discharge, the Site Supervisor shall immediately contact the City after taking the necessary steps to stop the discharge.

Emergency Procedure and Notification

In the event of an emergency involving the recycled water system, the Site Supervisor shall immediately notify the City at the following numbers:

Monday - Friday, 6:30 am - 4:30 pm	**(408) 730-7510**
After 4:30 pm, and weekends & holidays	**(408) 730-7100**

Emergencies include, but are not limited to, line breaks in the distribution system and cross-connections between the customer's potable and recycled water systems.

In the event of a cross-connection, the Site Supervisor shall immediately stop using potable water at the site, and shall isolate the on-site potable water system from the public supply at the point of connection. Before potable water service can be resumed, the cross-connection must be removed, and the site inspected and approved by the City. See the **Cross-Connection Testing** for additional information.

In the case of a major earthquake, the Site Supervisor should inspect the recycled water and potable water systems, and notify the City if either system has suffered significant damage.

Monitoring and Inspection

The City will set individual customer monitoring requirements based on the size, volume used, and complexity of each use area. Customer self-monitoring shall be conducted at a frequency specified in the customer's permit (minimum annually), and shall take place while recycled water is being used. Customers shall use inspection forms provided by the City, complete all of the necessary observations, and provide supporting narrative where indicated. The signed form shall be submitted to the City by the due date indicated on the Site Inspection Report form. Examples of the City's Site Inspection Report forms are included in **Appendix C**.

At least annually, the City will perform visual inspections of the recycled and potable water systems. These inspections will be performed by a cross-connection specialist. During these inspections, the cross-connection specialist will observe the recycled and potable water meters, and all pumps and equipment, room signs, and exposed piping. Customers shall allow access by personnel from the City or RWQCB to all areas of the site where recycled water is being used.

Note: A cross-connection test may be required if the inspection results suggest that a plumbing modification has been made.

IDENTIFICATION OF RECYCLED WATER FACILITIES

Components of a recycled water system shall be identified with appropriate signage, tags, tape, or other means to differentiate them from the potable system. See **Facilities Design and Construction** Section.

BACKFLOW PREVENTION

Components of the recycled water system must be equipped and maintained with appropriate backflow prevention devices as a means of protecting the potable water system. Refer to the City's *Recycled Water Design and Construction Standards*.

CROSS-CONNECTION TESTING

Prior to activating a recycled water service, the City shall perform an initial cross-connection test to verify the absence of cross-connections between the potable and recycled water systems. Normally, the cross-connection control test is the last element to be completed before the site is converted to recycled water use. This approach minimizes the chance for construction personnel to create a cross-connection after the test is completed and before the system is converted to recycled water.

Tests shall be performed by an AWWA-certified Cross-Connection Control Specialist. The customer or contractor should ensure that someone is onsite during testing who is familiar with the existing plumbing and/or irrigation systems. The Site Supervisor should be also present during the testing.

At least once every four years, a complete cross-connection shutdown test shall be conducted at all dual-plumbed and cooling tower sites to verify the non-existence of cross-connection between the recycled water system and any other piping system. In these instances, the test procedure described in the current edition of the California Plumbing Code shall be followed. The City will notify the customer well in advance of the actual cross-connection control test to allow adequate time for preparations and scheduling.

General Test Procedure

During the cross-connection test, both the potable and recycled water systems are shut-off sequentially at the meter, fully depressurized, and tested sequentially to determine if a cross-connection exists. All fixtures, on both the potable and recycled water systems, are checked during this process. As such, the time it takes to complete a cross-connection test will vary depending on the complexity of the system. If

cross-connections are discovered during the test, the cross-connections must be eliminated before the recycled water distribution system is activated (for new systems) or reactivated (for existing systems).

Note: Any devices that could repressurize the potable or recycled water systems during testing should be deactivated. Examples of these devices are water heaters, pump systems on cooling towers, heating systems, etc.; overhead plumbing that may become air locked during the depressurization and break free during the test; and any water uses during the test such as opening of hose bibs or the use of hand basins that may contribute to pressure changes in the system. There may be water cooled systems that cannot be shut-down during the test. If so, cooling system water must be highlined from another available source, such as a fire hydrant.

In the event of a cross-connection, the Site Supervisor shall immediately stop using potable water at the site, and shall isolate the on-site potable water system from the public supply at the point of connection. Before potable water service can be resumed, the cross-connection must be removed, and the site inspected and approved by the City.

If it is determined that recycled water has entered the customer's potable water system, the system must also be disinfected and tested before service can be resumed. The customer is required to chlorinate the system at 50 ppm chlorine for at least 24-hours, followed immediately by flushing for 24-hours. The customer must also collect bacteriological samples and show that disinfection has been successful before the City will resume service. The City may, at its discretion, perform such disinfection and testing and charge the customer, or may provide instructions to a qualified contractor retained by the customer.

New and Retrofit Site Considerations

Cross-connection control tests and use site inspections are conducted on two types of recycled water use sites. The first type is new construction with complete sets of planning and inspection documents. The second is the retrofit with minimal or no planning and inspection documents. Although the basis for the test is the same for each type, the retrofit can pose additional challenges because of the lack of knowledge of the site and the existing plumbing layout. When dealing with retrofits, the site must be carefully inspected by the City's Cross-Connection Specialist. Minimal plans should be available, either as existing as-builts or as developed by the applicant. The site must be surveyed by the City Cross-Connection Specialist before final submission of the site retrofit plans for review and approval by the City. The shutdown testing will be conducted only after final site plan approval.

Dual-Plumbed Systems

The results of the cross-connection control test for dual-plumbed systems are compiled in a standard engineering report and distributed to all concerned parties. The specific requirements of the engineering report are contained in Section 60314 of proposed Title 22, CCR.

EMERGENCY CONNECTION TO THE POTABLE WATER SYSTEM

Emergency connections to the potable water system are prohibited unless specifically approved and inspected by the City's Water and Sewer Division. If approved, the customer shall install a backflow prevention device on the temporary potable water service. The City has approved the use of either an air gap or reduced pressure principle device for backflow prevention. The city does not currently allow for the use of double check valve assemblies.

The emergency potable water connection shall be removed before any connection is restored to the remainder of the recycled water system or to the recycled water supply. The restored recycled water service connection must be inspected and approved by the Water and Sewer Division prior to resuming delivery of recycled water.

TERMINATION OF POTABLE WATER SERVICE IF REQUIRED

All premises receiving both recycled and potable water are subject to the conditions of the City's backflow prevention ordinance (Sunnyvale Municipal Code sections 12.28), including provisions for termination of potable water service if needed to protect the City's water supply from contamination.

Appendices

Appendix A

Suitable Uses for Recycled Water

Appendix B

Permit Forms and Procedures

Appendix C

Site Inspection Report Forms

Appendix D

Recycled Water Signage Examples

Appendix E

Recycled Water Design and Construction Standards

Appendix F

Regional Water Quality Control Board Order R2-94-069

Appendix A

Suitable Uses for Recycled Water

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Recycled Water Uses* Allowed in California

This summary is prepared by WateReuse Association of California, from the December 2, 2000, Title 22 adopted **Water Recycling Criteria**, and supersedes all earlier versions.

Recycled Water Use	Treatment Level: Disinfected Tertiary Recycled Water	Disinfected Secondary 2.2 Recycled Water	Disinfected Secondary 23 Recycled Water	Undisinfected Secondary Recycled Water
Irrigation for:				
Food crops where recycled water contacts the edible portion of the crop, including all root crops	ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED
Parks and playgrounds	ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED
School grounds	ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED
Residential landscaping	ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED
Unrestricted-access golf courses	ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED
Any other irrigation uses not specifically prohibited by other provisions of the ***California Code of Regulations***	ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED
Food crops, surface-irrigated, above-ground edible portion, not contacted by recycled water	ALLOWED	ALLOWED	NOT ALLOWED	NOT ALLOWED
Cemeteries	ALLOWED	ALLOWED	ALLOWED	NOT ALLOWED
Freeway landscaping	ALLOWED	ALLOWED	ALLOWED	NOT ALLOWED
Restricted-access golf courses	ALLOWED	ALLOWED	ALLOWED	NOT ALLOWED
Ornamental nursery stock and sod farms with unrestricted public access	ALLOWED	ALLOWED	ALLOWED	NOT ALLOWED
Pasture for milk animals for human consumption	ALLOWED	ALLOWED	ALLOWED	NOT ALLOWED
Nonedible vegetation with access control to prevent use as a park, playground or school grounds	ALLOWED	ALLOWED	ALLOWED	NOT ALLOWED
Orchards with no contact between edible portion and recycled water	ALLOWED	ALLOWED	ALLOWED	ALLOWED
Vineyards with no contact between edible portion and recycled water	ALLOWED	ALLOWED	ALLOWED	ALLOWED
Non food-bearing trees, including Christmas trees not irrigated less than 14 days before harvest	ALLOWED	ALLOWED	ALLOWED	ALLOWED
Fodder and fiber crops and pasture for animals not producing milk for human consumption	ALLOWED	ALLOWED	ALLOWED	ALLOWED
Seed crops not eaten by humans	ALLOWED	ALLOWED	ALLOWED	ALLOWED
Food crops undergoing commercial pathogen-destroying processing before consumption by humans	ALLOWED	ALLOWED	ALLOWED	ALLOWED
Ornamental nursery stock, sod farms not irrigated less than 14 days before harvest	ALLOWED	ALLOWED	ALLOWED	ALLOWED
Supply for impoundment:				
Nonrestricted recreational impoundments, with supplemental monitoring for pathogenic organisms	ALLOWED[2]	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED
Restricted recreational impoundments and publicly accessible fish hatcheries	ALLOWED	ALLOWED	NOT ALLOWED	NOT ALLOWED
Landscape impoundments without decorative fountains	ALLOWED	ALLOWED	ALLOWED	NOT ALLOWED
Supply for cooling or air conditioning:				
Industrial or commercial cooling or air conditioning involving cooling tower, evaporative condenser, or spraying that creates a mist	ALLOWED[3]	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED
Industrial or commercial cooling or air conditioning not involving cooling tower, evaporative condenser, or spraying that creates a mist	ALLOWED	ALLOWED	ALLOWED	NOT ALLOWED

Prepared by Bahman Sheikh and edited by EBMUD Office of Water Recycling, who acknowledge this is a summary and not the formal version of the regulations referenced above.

WateReuse Association of California • (916) 442-2746 • www.watereuse.org/h2o

RECYCLED WATER USES* ALLOWED IN CALIFORNIA

This summary is prepared by WateReuse Association of California, from the December 2, 2000, Title 22 adopted **Water Recycling Criteria**, and supersedes all earlier versions.

Recycled Water Use	Treatment Level: Disinfected Tertiary Recycled Water	Disinfected Secondary 2.2 Recycled Water	Disinfected Secondary 23 Recycled Water	Undisinfected Secondary Recycled Water
Other Uses:				
Groundwater Recharge	**ALLOWED** under special case-by-case permits by the **RWQCB**[4]			
Flushing toilets and urinals Priming drain traps Industrial process water that may contact workers Structural fire fighting Decorative fountains Commercial laundries Consolidation of backfill material around potable water pipelines Artificial snow making for commercial outdoor use Commercial car washes, not heating the water, excluding the general public from the washing process	ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED
Industrial process water that will not come into contact with workers Industrial boiler feed Nonstructural fire fighting Backfill consolidation around nonpotable piping Soil compaction Mixing concrete Dust control on roads and streets Cleaning roads, sidewalks and outdoor work areas Flushing sanitary sewers	ALLOWED	ALLOWED	ALLOWED	ALLOWED

*Refer to the full text of the the December 2, 2000 version Title 22: **California Water Recycling Criteria**. This chart is only an informal summary of the uses allowed in this version. Adapted for use in Site Supervisor Training Workshops by **South Bay Water Recycling**, San Jose, California. October 29, 2002. Jerry Brown, Coordinator, Site Supervisor Training The complete and final 12/02/2000 version of the adopted criteria can be downloaded from:

http://dhs.ca.gov/ps/ddwenm/publications/regulations/recycleregs_index.htm

2 With "Conventional tertiary treatment". Additional monitoring for two years or more is necessary with direct filitration.

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

4 Refer to Groundwater Recharge Guidelines, available from the California Department of Health Services.

Appendix B

Permit Forms and Procedures

Applications for Permit to Use Recycled Water

Permit to Use Recycled Water (issued by City)

Requirements for Engineering Reports for Dual-Plumbed Sites

Permitting Flowchart (new construction)

Recycled Water Plan or Field Verification Checklist (new construction)

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Sunnyvale

APPLICATION FOR A PERMIT TO USE RECYCLED WATER

CITY OF SUNNYVALE

Name or Description:

Address:

For City Use Only

Date received:

Permit Issued:

Permit Expires:

☐ **Accepted** ☐ **Returned** ☐ **Rejected**

Account Number:

Notes:

APPLICANT INFORMATION

Applicant is ☐ **Owner** ☐ **Lessee** ☐ **Other:**

Applicant's Name: **Title:**

Address: **Telephone No.:**

City: **State:** **Zip:**

Owner's Name:

Contact Person: **Telephone No.:**

Address:

City: **State:** **Zip:**

USER'S DESIGNATED RECYCLED WATER SUPERVISOR

Relationship to Applicant: ☐ **Same** ☐ **Partner** ☐ **Employee** ☐ **Other:**

Name: **Title:**

Business Address:

City: **State:** **Zip:**

The User's Recycled Water Supervisor must be reachable at all times in case of emergency.
All numbers are for City use only.

Telephone number during regular business hours:

EMERGENCY NUMBERS:

☐ **Evening:** ☐ **E-mail Adr:**

☐ **Pager:** ☐ **Cellular:**

PROPOSED RECYCLED WATER USES

Landscape: ☐ **Approx. Area (sq ft):**

Agriculture: ☐ **Approx. Area (acres):**

Industrial: ☐ **Construction:** ☐

Recreational: ☐ **Ornamental Pond:** ☐

Other: ☐

Briefly describe the proposed use checked above:

Sunnyvale

RECYCLED WATER DEMAND ESTIMATES	ATTACHMENTS
Estimated Annual Use: ☐ CCF ☐ Gallons **Peak Use in Gallons/Minute(GPM):** **Hours of Use:** **Days of Use:** ☐ Dry Season Only ☐ Year 'round	☐ Site Drawing ☐ Impoundment O & M Plan (if serving a reservoir or pond) ☐ Other

Is recycled water to be piped or used within an occupied building? ☐ Yes ☐ No

(If yes, see the Department of Community Development to obtain a building permit.)

USER'S RECYCLED WATER SUPERVISOR SIGNS	APPLICANT SIGNS
I have read and understand the City of Sunnyvale's Rules and Regulations for Recycled Water Users. I will operate the recycled water system in compliance with all conditions of the Permit to Use Recycled Water.	**I designate the named person as the User's Recycled Water Supervisor in accordance with the City of Sunnyvale's Rules and Regulations for Recycled Water Users. I am a principal owner of this site or duly authorized representative and certify that the information contained in this application is true and correct to the best of my knowledge.**
Signature: **Date:**	**Signature:** **Date:**

PERMIT TO USE RECYCLED WATER

Environmental Service Department
Recycled Water Program

P.O. Box 3707, Sunnyvale, CA 94088
P: 408-730-7663 / F: 408-733-1611
E: rorozco@sunnyvale.ca.gov

Sunnyvale

PERMIT NUMBER:

ISSUED TO:

FACILITY ADDRESS:

SITE SUPERVISOR:

EFFECTIVE DATE:

EXPIRATION DATE:

The above named applicant is hereby authorized to use recycled water subject to compliance with a) the City of Sunnyvale's *Rules and Regulations for Recycled Water*, b) applicable state regulations related to the use of recycled water, c) operation in accordance with the current *Application for a Permit to Use Recycled Water* (attached), and d) the attached additional terms and conditions.

The applicant shall report any changes (permanent or temporary) to the premises or operation that significantly change the volume or uses of recycled water, or any change in ownership of the facility.

This permit may be revoked prior to the expiration date if found to have been obtained through submittal of false information or if there is unapproved deviation from the terms and conditions under which it has been granted. This permit is issued solely to the facility named above for the operation and ownership in effect at the time of the application and is not transferable.

_____

Joseph De La Cruz
Water Distribution Supervisor

_____

Raymond Orozco
Cross Connection Control Specialist

Requirements for Engineering Reports for Dual Plumbed Systems

City of Sunnyvale Recycled Water Program

Facilities where both recycled water and potable water are present inside a building are referred to as "dual plumbed systems". Typical examples would include facilities that use recycled water for toilet flushing, or in industrial processes such as makeup water in cooling towers.[1] Title 22 requires that a special report be prepared for facilities with dual plumbed systems. The report shall be submitted in electronic (pdf) format and must include the following information:[2]

FACILITY DESCRIPTION

- The location and type of facility proposing to use a dual plumbed system.
- The average number of persons estimated to be served by the facility on a daily basis.
- The specific boundaries of the facility. This is best delineated using a site map.
- The person(s) responsible for operation of the dual plumbed system. A facility must have a designated recycled water site supervisor, who is familiar with and responsible for the proper use of recycled water. Requirements for proper use are described in the City of Sunnyvale's *Rules and Regulations.* The requirements are reviewed during mandatory site-supervisor training sessions provided by the City.
- The specific use(s)of recycled water at the facility.

PLANS AND SPECIFICATIONS

- Proposed recycled water piping system(s) to be used.
- Pipe locations for both the recycled and potable systems.
- Type and locations of the outlets and plumbing fixtures that will be accessible to the public.
- Methods and devices to be used to prevent backflow of recycled water into the public (potable) system.
- Description and location of signage. Specific signage requirements for dual plumbed systems are described in the California Plumbing Code.

If construction plans and specifications are used to meet this requirement, include as attachments in pdf format. Only the relevant plan sheets and specification sections should be included in the report. For plan sheets, these typically include civil and/or utility sheets, plumbing sheets, and if applicable, irrigation sheets. Include legend and symbol sheets as needed to interpret the drawings. Drawings should be "as-built."

[1]California Code of Regulations Title 22, Section 60301.250 defines Dual Plumed System as a system that utilizes separate piping systems for recycled water and potable water within a facility and where recycled water is used 1) to serve plumbing outlets (excluding fire suppression systems) within a building, or 2) for landscape irrigation at individual residences.

[2]Derived from Title 22, Article 5, "Dual Plumbed Recycled Water Systems" Sections 60313-60316. If the recycled water use area includes more than one facility with a dual plumbed system, provide the required information for each facility.

All recycled and potable water systems and piping must be clearly delineated (and differentiated from each other) using highlighters or other suitable means. The preferred method is to use purple highlighting for recycled water, and blue for potable. Highlighting can be applied to the original CAD drawings or overlaid in the pdf version. Call out and/or highlight points-of-connection to City mains, location of meters and backflow devices, and points of connection to buildings. Clearly delineate any food preparation or food service/consumption areas. If needed for clarity, also provide a simplified site map.

CROSS-CONNECTION AND BACKFLOW PREVENTION

The methods to be used to assure that the installation and operation of the dual plumbed system will not result in cross-connections between the recycled water system and the potable water system. This would typically include a description of "in-house" controls and procedures to prevent cross-connection, and a description of procedures for initial and periodic cross connection testing. For the latter, the procedure specified in the California Plumbing Code, which is attached to this document, may be used. Cross-connection testing will be performed by the City's Cross Connection Control Specialist before recycled water service is provided to the site. Note that the use of potable water as a backup to the recycled system is permitted only if the potable water is introduced through an approved air gap.

CERTIFICATION STATEMENT

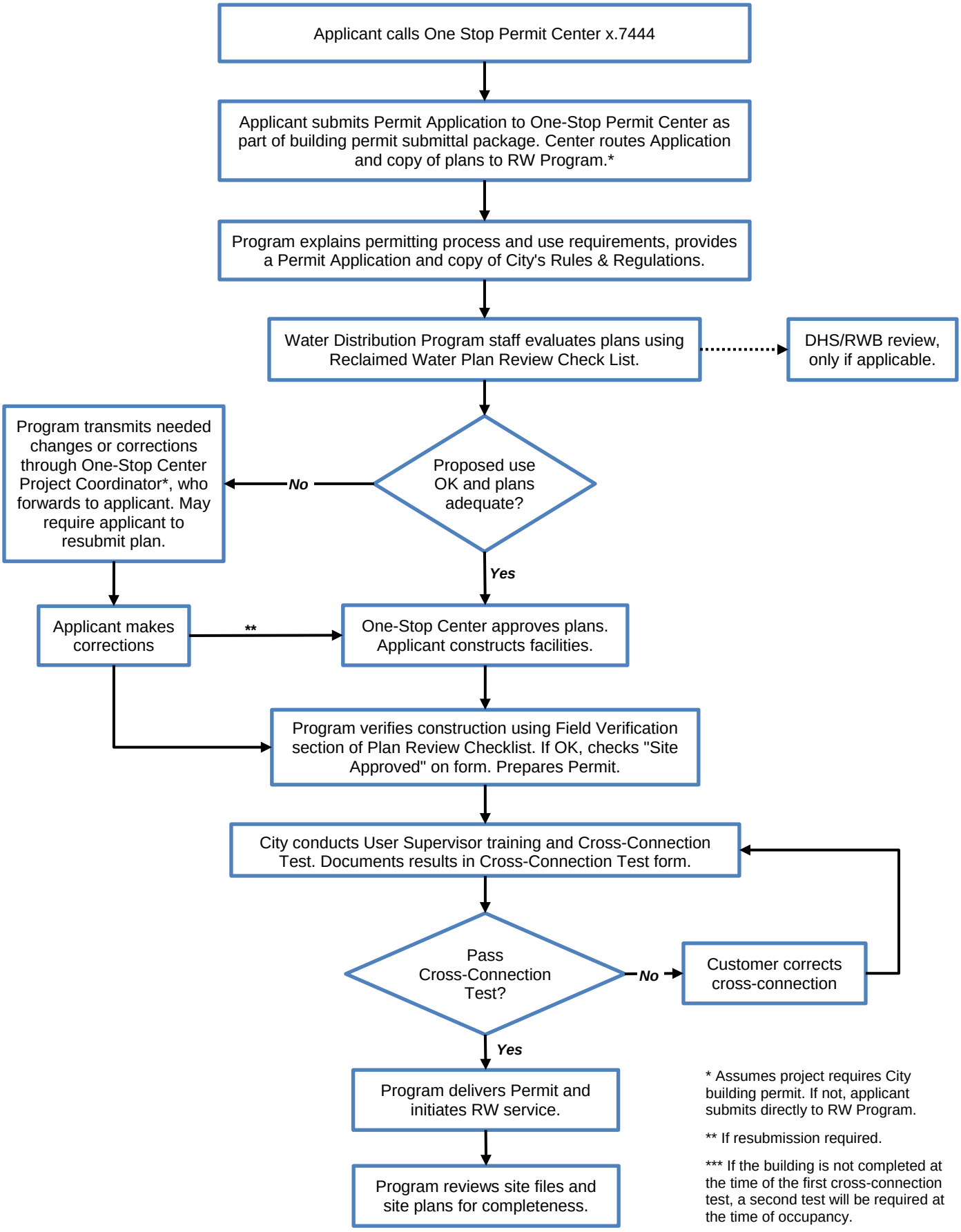
The report shall be stamped by a qualified engineer licensed to practice in California and shall contain the following certification statement with signature:

> *This document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete.*

Site Assessment and Permitting Process Flowsheet

New Construction of Recycled Water Systems

Sunnyvale



* Assumes project requires City building permit. If not, applicant submits directly to RW Program.

** If resubmission required.

*** If the building is not completed at the time of the first cross-connection test, a second test will be required at the time of occupancy.

12/10/2015

RECYCLED WATER PLAN REVIEW CHECKLIST

Sunnyvale Recycled Water Program

For use by City staff in cases of new construction

Sunnyvale

SITE WHERE USE IS PROPOSED	REVIEW STATUS
Name or Description of Site:	Date Received / /
Location or Address:	Date Reviewed / /
	Reviewed By:
Contact Person Name and Telephone:	☐ Approved ☐ Returned ☐ Rejected
	Site Number:

THE SITE AND PIPING PLANS ARE ☐ Separate ☐ Combined Number of Sheets _____

A. ADEQUACY OF SITE PLAN

ARE THE FOLLOWING SHOWN ON THE SITE PLAN?

Yes	No	N/A	General	Yes	No	N/A	
☐	☐	☐	All Buildings on the Site	☐	☐	☐	Adjacent Streets
☐	☐	☐	The Boundaries of the Intended Use Area	☐	☐	☐	Locations of All Major Improvements on the Site

Public Facilities Supplied with Recycled Water or Potable Water Source PLANS INDICATE NONE ☐

☐	☐	☐	Drinking Fountains	☐	☐	☐	Swimming and Wading Pools
☐	☐	☐	Restrooms	☐	☐	☐	Decorative Fountains
☐	☐	☐	Outdoor Eating Areas	☐	☐	☐	Showers
☐	☐	☐	Snack Bars	☐	☐	☐	Other: _____

Water Features Within 100 feet of Site Plan (may be off property)

☐	☐	☐	Wells	☐	☐	☐	Reservoirs
☐	☐	☐	Lakes	☐	☐	☐	Storage Tanks
☐	☐	☐	Ponds	☐	☐	☐	Other: _____

B. ADEQUACY OF PIPING PLANS

ARE THE FOLLOWING SHOWN ON THE PIPING PLAN?

Yes	No	N/A		Yes	No	N/A	
☐	☐	☐	Potable Water Service Connection(s)	☐	☐	☐	Fire Service Connection(s)
☐	☐	☐	Recycled Water Service Connection(s)	☐	☐	☐	Other: _____
☐	☐	☐	The complete Recycled water system(s)				
☐	☐	☐	The potable system in the vicinity of the Recycled water system				
☐	☐	☐	All sources of Recycled water and potable water				
☐	☐	☐	The location and type of all existing and new backflow prevention devices				
☐	☐	☐	The location and type of all existing and new water meters				
☐	☐	☐	The location of outdoor hose bibs, quick couplers and other points of ready access to Recycled or potable water systems				
☐	☐	☐	The location of irrigation controllers, valves, and fixtures (sprinklers, etc.)				
☐	☐	☐	Other relevant items: _____				

C. PLAN ADEQUACY DETERMINATION

☐ ☐ ☐ Plans are adequate for determining compliance. If **"No"**, indicated necessary changes in Section E below.

D. COMPLIANCE REQUIREMENTS

Yes	No	N/A	
			GENERAL
☐	☐	☐	Are the proposed uses of Recycled water and use areas approved under Title 22?
			SEPARATION OF RECYCLED AND POTABLE PIPING
			Note: Review separation of Recycled water and potable water piping relative to DHS guidelines:
☐	☐	☐	Are "basic separation" standards met (4' horizontal, 1' vertical, potable above Recycled)
☐	☐	☐	If No, has a waiver of requirements per Title 22 §64551 been obtained?
☐	☐	☐	If No, describe deviations and require applicant to justify why standards or alternative criteria cannot be met.
			_____
			_____
			_____
			BACKFLOW PREVENTION DEVICES
			Note: All premises served by <u>both</u> potable water and Recycled water shall have an air gap or reduced pressure principle backflow prevention device (RP) on the potable water supply.
☐	☐	☐	Are the potable water and Recycled water systems completely separated, with no cross connections?
☐	☐	☐	Are the proper backflow prevention devices shown in the proper locations for protection of the public potable water distribution system, per Title 17 requirements? (Reduced pressure principal backflow prevention devices should be located as close as possible to all potable water meters and at least 12 inches above grade).
☐	☐	☐	Do conditions of use dictate that the Recycled water distribution system be protected by a backflow prevention device? (Such protection would be indicated in cases such as: Recycled water system feeds an industrial process that involves chemicals; the Recycled water irrigation system has chemical fertilizer injection; Recycled water connects to an irrigation water storage pond without air gap).
☐	☐	☐	Are the proper backflow prevention devices shown in the proper locations for protection of <u>on-site</u> potable water supply per applicable UPC requirements? (Though not specifically related to Recycled water, these devices should be shown on the plans. Backflow prevention devices are required at non air-gap points of connection to ponds, wading pools, swimming pools, fountains, etc., where the impoundment is supplied by the potable water on-site piping. Usually atmospheric vacuum breakers located near the point of connection are adequate, unless there is valving downstream of the protection device, in which case pressure vacuum breakers are required).
			Comments: _____
			_____
			WELLS
☐	☐	☐	If there are wells located on-site or near the use site, are the wells separated from all Recycled water irrigation use areas by at least 50 feet and from all Recycled water impoundments by at least 100 feet?
			Comments: _____
			CONSTRUCTION DETAILS
☐	☐	☐	If plans are used for construction, do the plans show all necessary details to properly construct the system?
☐	☐	☐	Do plans identify the appropriate materials for Recycled water use? (e.g. purple pipe or wrap)
☐	☐	☐	Are the appropriate types and locations of signs and other identification devices indicated?
☐	☐	☐	If the design calls for an air gap, is a suitable detail provided?
☐	☐	☐	Are there any hose bibs shown on the Recycled water system? (Hose bibs are <u>not</u> permitted on the Recycled system)
☐	☐	☐	If quick connects are used on the Recycled system, are they of a different type than on the potable system?
			Comments: _____
			_____

E. COMPLIANCE DETERMINATION

☐ **Approved**. The Recycled water system(s) shown on these plans comply with the Guidelines for Recycled Water Users and other applicable criteria.

☐ **Approved, with corrections noted**.

☐ **Not Approved**. The following corrections are required before the plans are approved:

Note: In cases where Plan Checking is coordinated through the City's One-Stop Permit Center, the above corrections are to be transmitted to the One-Stop Project Coordinator rather than to the applicant.

_____ _____

Date Signed

COPIES: _____ File (Original)
_____ Applicant
_____ Other

Appendix C

Site Inspection Report Forms

Site Inspection Report – Irrigation Service

Site Inspection Report – Industrial, Cooling Tower & Dual-Plumbed Service

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Sunnyvale

ACCOUNT NUMBER | PERMIT NUMBER 1

RETAIL CUSTOMER NAME | METER NO.1 | METER NO. 2

RETAIL CUSTOMER ADDRESS | LOCATION ID

IRRIGATION SERVICE

SITE INSPECTION REPORT (DUE July 1, 20__)

INSPECTION TYPE: **ANNUAL** ☐ **PROGRAM** ☐

The City of Sunnyvale requires that a Site Inspection Report be submitted annually. If you have questions regarding this mandatory report, please contact the Recycled Water Coordinator at (408) 730-7561.

Yes	No	PLEASE COMPLETE 1-7 AND NOTE HOW ANY ISSUES ARE RESOLVED.
☐	☐	1. Are advisory signs and tags in good condition and posted consistent with City of Sunnyvale approved plans to inform the public that water is recycled? If not, describe actions taken to correct (if you do not have City of Sunnyvale approved plans for the site, please state that here):
☐	☐	2. Is there evidence of recycled water runoff from the site? If yes, please estimate the volume, and sketch affected area on the back of this sheet (or attach a separate sheet if needed). Also, describe actions taken to correct (and date completed):
☐	☐	3. Is there an odor of wastewater origin within the site? If yes, describe apparent source, characterization, direction of travel, and any public use areas or off-site facilities affected by the odor. Also, describe actions to correct (and date completed):
☐	☐	4. Is there evidence of ponding of recycled water, and/or evidence of mosquitoes breeding on the site due to ponded water? If yes, describe actions taken to correct (and date completed):
☐	☐	5. Is there evidence of leaks or breaks in the recycled water system pipelines or tubing? If yes, describe actions taken to correct (and date completed):
☐	☐	6. Is there evidence of plugged, broken or otherwise faulty drip irrigation system emitters or spray irrigation sprinklers on this site? Also, describe actions taken to correct (and date completed):
☐	☐	7. In the last year, has the plumbing configuration changed from what has been approved? If yes, describe the modifications and note if they were reviewed by the City of Sunnyvale:

I certify that the information in this report, to the best of my knowledge, is correct and true.

SITE SUPERVISOR OF RECORD (PRINT) | SIGNATURE | DATE OF INSPECTION

MAILING ADDRESS | CITY | STATE | ZIP

OFFICE PHONE | EXTENSION | CELL PHONE | FAX | EMAIL

Email (scanned), mail or fax forms to: City of Sunnyvale Recycled Water Program
Attn: Raymond Orozco; rorozco@sunnyvale.ca.gov
221 Commercial St, P.O. Box 3707, Sunnyvale, CA 94088-3707; Fax: (408) 733-1611

Sunnyvale

ACCOUNT NUMBER | PERMIT NUMBER 1

RETAIL CUSTOMER NAME | METER NO.1 | METER NO. 2

RETAIL CUSTOMER ADDRESS | LOCATION ID

INDUSTRIAL, COOLING TOWER, AND DUAL-PLUMBED SERVICE

SITE INSPECTION REPORT (DUE July 1, 20__)

INSPECTION TYPE: **ANNUAL** ☐ **PROGRAM** ☐

The City of Sunnyvale requires that a Site Inspection Report be submitted annually. If you have questions regarding this mandatory report, please contact the Recycled Water Coordinator at (408) 730-7561.

Yes No	PLEASE COMPLETE 1-8 AND NOTE HOW ANY ISSUES ARE RESOLVED.
☐ ☐	1. Are advisory signs and tags in good condition and posted consistent with City of Sunnyvale approved plans to inform the public that water is recycled? If not, describe actions taken to correct (if you do not have City of Sunnyvale approved plans for the site, please state that here):
☐ ☐	2. Is there evidence of recycled water runoff from the site? If yes, please estimate the volume, and sketch affected area on the back of this sheet (or attach a separate sheet if needed). Also, describe actions taken to correct (and date completed):
☐ ☐	3. Is there an odor of wastewater origin within the site? If yes, describe apparent source, characterization, direction of travel, and any public use areas or off-site facilities affected by the odor. Also, describe actions to correct (and date completed):
☐ ☐	4. Are tamper evident valve seals intact and exposed piping for the recycled water system labeled as per City approved plans? If not, describe actions taken to correct (and date completed):
☐ ☐	5. Is there evidence of leaks or breaks in the recycled water system pipelines or tubing? If yes, describe actions taken to correct (and date completed):
☐ ☐	6. In the last year, has the plumbing configuration changed from what has been approved, including (if service includes USE OF recycled water in cooling tower) changes to the tower such as modifications to the approved air gap or drift eliminator? If yes, describe the modifications and note if they were reviewed by the City:
	7. For services that include cooling tower recycled water use, recycled water must be treated with chlorine or other biocide to minimize growth of Legionella or other microorganisms. Indicate the type of biocide used:
	8. All dual-plumbed facilities must be visually inspected by an AWWA certified Cross-Connection Specialist annually, and a cross-connection test completed every four years. Please provide the following information for the annual inspection and attach the cross-connection test if due (our records show your last test was completed _____): INSPECTOR NAME DATE OF INSPECTION CERTIFICATION NUMBER

I certify that the information in this report, to the best of my knowledge, is correct and true.

SITE SUPERVISOR OF RECORD (PRINT) | SIGNATURE | DATE OF INSPECTION

MAILING ADDRESS | CITY | STATE | ZIP

OFFICE PHONE | EXTENSION | CELL PHONE | FAX | EMAIL

Email (scanned), mail or fax forms to: City of Sunnyvale Recycled Water Program
Attn: Raymond Orozco; rorozco@sunnyvale.ca.gov
221 Commercial St, P.O. Box 3707, Sunnyvale, CA 94088-3707; Fax: (408) 733-1611

Appendix D

Recycled Water Signage Examples

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IRRIGATION
RECYCLED WATER
DO NOT DRINK
NO BEBER


Irrigated with
RECYCLED
WATER
Do Not
Drink
No Beber


amazon

Appendix E

Recycled Water Design and Construction Standards

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Sunnyvale

Recycled Water Program
DESIGN AND CONSTRUCTION STANDARDS

Environmental Services Department
Department of Public Works

November 2, 2018

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Contents

Contents

PURPOSE AND INTENT

The *Recycled Water Design and Construction Standards* (RW Standards) are intended to assist with planning, designing, and constructing recycled water systems to ensure uniformity in design concepts, format, methodology, procedures, construction materials, and quality of work products. They are complimentary to the operation and maintenance requirements contained in the *Recycled Water Rules and Regulations* (RW Rules and Regulations), and when applied appropriately provide assurances for the health, safety, and general welfare of City of Sunnyvale (City) residents and customers that are consistent with State law.

The RW Standards do not limit the responsibility of the design consultant or customer. They instead assist in providing professionally sound, efficient, uniform, and workable criteria and requirements for recycled water improvements and use. The RW Standards do not address all aspects of a complete design. For areas not addressed in the RW Standards, the design consultant and customer must use good engineering judgment and practices.

RECYCLED WATER AVAILABILITY

Unless required under a City-adopted area specific plan or Project Condition of Approval, the use of recycled water in Sunnyvale is voluntary. Recognizing the benefits of recycled water, many potential customers have actively sought recycled water service for irrigation or indoor use, particularly in cases of new construction. The City's Community Development staff and Water and Sewer Division staff can advise prospective customers if recycled water is available in a particular area. The City is not obligated to provide recycled water service, and may deny a prospective customer's request based on cost or other considerations. A customer may, at their own expense and without expectation of reimbursement by the City, extend a recycled water main to a particular area but only upon approval by the City.

AUTHORIZED USES OF RECYCLED WATER

The City provides high-quality recycled water to its customers that meets or exceeds the rigorous standards for tertiary disinfected recycled water contained in California Code of Regulations (CCR) Title 22 by subjecting wastewater entering the Sunnyvale Water Pollution Control Plant to multiple treatment processes. The State Water Resources Control Board's (SWRCB) Division of Drinking Water (DDW) lists tertiary disinfected recycled water as having the most available approved uses out of all the recycled water options available.

GENERAL REQUIREMENTS FOR RECYCLED WATER SYSTEMS

The design of recycled water systems and the preparation of applicable documents shall be under the direction of a responsible professional landscape architect, civil engineer, or mechanical engineer registered in the State of California. A recycled water system is separate and independent of any potable water system. Components of on-site and off-site recycled water systems shall be identified with appropriate signage, tags, tape, color, or other means in conformance with these Standards and with the most current versions of the standards listed below to differentiate them from a potable system and to protect against cross-connections.

Current Standards

- City of Sunnyvale Recycled Water Rules and Regulations.
- City of Sunnyvale Standard Details and Standard Specifications.
- City of Sunnyvale Standard Construction Notes.
- City of Sunnyvale Municipal Code (SMC).
- Laws and Standards of the State of California State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW) relating to Recycled Water.
- California Building Code (CBC) as amended by SMC.
- California Plumbing Code (CPC) as amended by SMC.
- California Code of Regulations Title 17, regulations relating to cross-connections.
- California Code of Regulations Title 22, Division 4 Wastewater Recycling Criteria.
- University of Southern California Foundation for Cross-Connection Control and Hydraulic Research.
- San Francisco Bay Regional Water Quality Control Board (RWQCB). City of Sunnyvale Water Reclamation Requirements (Order 94-069).
- American Water Works Association (AWWA). Guideline for Distribution of Non-Potable Water and Guidelines for the On-Site Retrofit of Facilities Using Tertiary Recycled Water.

Service and Lateral Meters

Prior to performing any work in the public right-of-way, the customer must first obtain an Encroachment Permit from the Department of Public Works. For all on-site work, the customer must also obtain a Building Permit from the Community Development Department.

For new recycled water service laterals, the City will, at the expense of the customer, perform the tap at the main, and furnish and install the meter and meter box in accordance with its *Standard Details and Standard Specifications*. Installation of the lateral between the tap and the meter is the responsibility of the customer. After a lateral is installed and passes City inspection, it becomes the property of the City. All meters and meter boxes are the sole property of the City, and may only be repaired, replaced, or removed by the City. The customer shall exercise reasonable care to prevent the meters and appurtenances installed upon the premises from being damaged or destroyed. If any defects are noted, the Water and Sewer Division must be notified. Any damage occurring to a meter or other appurtenance or pipes owned by the City shall be paid for by the customer. The customer is responsible for all maintenance and repairs of piping downstream of the meter.

Note: *It is strictly forbidden for any person other than City staff to operate any valves or touch or modify any portion of the recycled water piping upstream of and including the meter and meter box.*

Recycled Water Permits

Prior to activating recycled water service at a facility or site, an application for a Permit to Use Recycled Water must be submitted to the Water and Sewer Division of the Environmental Services Department for each site or service connection. After determining that the application is complete and the site meets all design requirements, the City will conduct a cross-connection test and issue a permit. The City's permitting process and cross-connection testing protocol are described in more detail in the RW Rules and Regulations.

OFF-SITE RECYCLED WATER FACILITIES

The following requirements apply to facilities located upstream of the recycled water meter, which are typically but not necessarily in the public right-of-way. Operation and maintenance of all off-site recycled water systems, including recycled water pipelines, valves, connections, storage facilities, and other related equipment and property up to and including the meter, shall be under the management and control of the City. No other persons except authorized representatives of the City shall have the right to enter upon any of the off-site facilities. Only City personnel and their representatives shall operate, adjust, change, alter, move, or relocate any portion of the off-site recycled water system.

RESTRICTIONS AND REQUIRED SEPARATIONS

The following requirements are to be implemented at off-site facilities and are derived from the recycled water series contained within the *City of Sunnyvale Standard Details and Standard Specifications*.

Depth of Pipeline Cover

The top of recycled water distribution pipelines must be a minimum of 4-feet below the finished grade, unless otherwise approved. The depth of cover on service lines must be a minimum of 30-inches below the finished grade.

Separation from other Utility Pipelines

The minimum separation requirements vary depending on the recycled water pipe material to be used during construction and the contents of the nearby utility. Refer to City Standard Detail RW series (**Appendix A**) for more detailed information and possible joint control requirements associated with these separations

Horizontal

A 5-foot horizontal separation outside of pipe to outside of pipe must be maintained when a new recycled water pipeline is built parallel to an existing potable water pipeline, an existing sanitary sewer, an existing sewage force main, or an existing recycled water pipeline. For new lateral lines, a minimum separation of 4-feet from a potable water line as measured from outside of pipe to outside of pipe must be maintained unless otherwise approved by the City on a case-by-case basis.

Vertical

At crossings of potable water, recycled water, and/or sewer pipelines, recycled water pipelines must be located from the ground surface in the order of descending quality, with potable water above recycled water and recycled water above sewer. Provide a minimum of 1-foot vertical separation between outside top and bottom surfaces of pipes.

Note: *A pipeline tap must be no closer than 18-inches from a valve, coupling, joint, or fitting unless it is at the end of the pipeline.*

Alternative Construction Criteria

When new recycled water mains are being installed in existing developed areas, local conditions (e.g. available space, limited slope, existing structures) may create a situation in which there is no alternative but to install recycled water mains at a distance less than that required by these standards. In such cases, the design consultant must obtain approval from the SWRCB Division of Drinking Water per CCR Title 22, Section 64572.

IDENTIFICATION OF PIPES, FITTINGS, AND EQUIPMENT

Painting and tagging/labeling of recycled water system components is required to clearly differentiate them from a potable water, wastewater, and/or storm drain system and to prevent possible contamination through an illicit cross-connection. The following requirements are to be implemented at off-site facilities and are derived from the recycled water series contained within the *City of Sunnyvale Standard Details and Standard Specifications*.

Pipeline Identification

All transmission/distribution pipelines in the recycled water system, including service pipelines, valves, and other appurtenances, both above and below ground, shall be colored purple using Pantone 522C and embossed or integrally stamped and/or marked: "CAUTION: RECYCLED WATER – DO NOT DRINK," and "PELIGRO: AGUA IMPURA – NO BEBER." As an alternative, standard pipe may be wrapped with purple plastic and tape containing the warning notice. The tape shall cover the circumference of the pipe and be securely fastened.

Identification tapes for protection and identification of the pipeline are prepared with black printing on a purple field having the words "CAUTION – RECYCLED WATER – DO NOT DRINK" and "PELIGRO: AGUA IMPURA – NO BEBER" or some equivalent alternately on the tape. The overall tape width must be at least 3-inches and cover the width of the pipe and non-metallic. The tape shall be installed 1-foot over the pipe longitudinally, and be continuous in its coverage. Metallic pipe (steel and ductile iron) used for recycled water shall be poly-wrapped and taped for corrosion protection per City specifications applicable to potable water, using purple wrap containing the appropriate language.

Meters, Valves, and Boxes

Water meters and boxes used for recycled water service are provided and installed by the City and shall be tagged accordingly and/or painted purple using Pantone 522C. The tag shall have the following bilingual wording: "WARNING Recycled Water Do Not Drink / AVISO Agua Reciclada No Beber" or equivalent. These meters shall not be interchanged or used for potable water service after repairs and/or meter testing has been performed.

Main and lateral line valve boxes shall be Christy G-5 or approved equal with steel frame and heavy duty cover, and must have a recognizable inscription cast on the top surface, such as "Reclaimed/Recycled Water Do Not Drink – No Beber" or equivalent. Covers must be painted purple by using Pantone 522C.

Blow-Off and Air Release Valves

Blow-offs must be installed at low points along pipelines and at the ends of pipelines (where a pipeline may be extended in the future). This is necessary to drain the pipeline and to remove accumulated sediment.

Note: *Discharge of recycled water to storm drains is prohibited. Prior to any discharge to the sanitary sewer system, the discharger must contact the Water and Sewer Division.*

Local high points in the pipeline profile are to be avoided. A local high point is acceptable only if there is a service connection at this location, to allow trapped air to escape via the service. If no service is present at such locations, the pipeline profile may be deepened as needed to prevent local high points, and to prevent the need for air release valves (ARVs). In such instances, the pipeline designer must receive approval from City during the design process to determine the appropriate pipeline profile and placement of ARVs.

All above-ground and most below ground appurtenances for blow-offs and ARVs shall be consistently color-coded purple by using Pantone 522C and marked to differentiate recycled water facilities from potable water and/or wastewater facilities. A pipeline tap for blow-off or ARV must be no closer than 18-inches from a valve, coupling, joint, or fitting unless it is at the end of the pipeline.

Other Equipment

Other equipment such as backflow prevention devices, pumps, tanks, etc., shall be painted purple using Pantone 522C and have an approved purple identification tag equivalent or similar to those for meter and valve boxes.

Tracer Wire

Tracer wire must be installed along all recycled water pipelines. Wire shall be accessible with a minimum of 12-inch slack in all surface valve boxes and other features along the pipeline that are accessible from the ground surface, as specified in the *City of Sunnyvale Standard Details and Standard Specifications 32B*.

SIGNAGE AND PUBLIC NOTIFICATION

Adequate means of notification must be provided to inform the public, employees, and others that recycled water is being used. Conspicuous signs with appropriate wording that can be clearly read must be placed at site entrances and, if required by the City, at adequate intervals around the authorized use area. Signs shall be a minimum of 9” x 12” and shall include wording such as "Irrigated with Recycled Water" or "Using Recycled Water" and "Do Not Drink". Signs shall display a universal symbol identifying non-potable water.

ON-SITE RECYCLED WATER SYSTEMS

The requirements of this section apply to facilities located downstream of the recycled water meter, which are typically on the customer or site owner's property. All on-site recycled water facilities that benefit specifically from the use of recycled water are provided by the site owner or customer at their own expense. The customer, at their own expense, shall make all modifications to the potable water system on the premises required by the City to permit the use of recycled water, including the installation of approved backflow prevention devices.

RESTRICTIONS AND REQUIRED SEPARATIONS

Horizontal and vertical utility separations for on-site facilities shall follow the same requirements as those specified in the previous Chapter for off-site facilities unless specific exceptions listed below apply and are approved by the City. In addition, the following requirements and restrictions apply to all on-site facilities:

1. Areas irrigated with recycled water must be kept completely separated from domestic water wells and reservoirs. No irrigation with recycled water shall take place within 50-feet of any domestic water supply well, and no impoundment of recycled water shall take place within 100-feet of any domestic water supply well.
2. Connections to supplement the recycled water system with potable water may be made only through an air-gap separation.
3. Any irrigation runoff shall be confined to the recycled water use area, unless the runoff does not pose a public health threat and is authorized by the City.
4. No recycled water for irrigation shall be used during periods of rainfall or when soils are saturated such that runoff can occur.
5. Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities.
6. Drinking water fountains shall be protected against contact with recycled water spray, mist, or runoff.
7. Cooling towers shall employ drift eliminators and/or biocides if the public or employees can be exposed to the mist.
8. Garden hose bibs shall not be installed on any recycled water system. The use of quick couplers is permitted, subject to the identification requirements described in this Chapter.
9. Recycled water shall not be used as a domestic or animal water supply.

Exceptions

Exceptions to the general rule of a 1-foot minimum vertical separation between potable and recycled water for on-site facilities are as follows:

1. On irrigation systems where intermittently pressurized recycled water lines (service lines) serve sprinkler heads, the potable water line(s) may be placed under the recycled water service lines. No

special construction requirements are necessary if the 1-foot vertical separation is maintained.

2 On sites that use pressurized irrigation service lines with valve-in-head sprinklers, the potable water line(s) may be placed under the recycled water service lines, if additional protection is provided for the potable line. Common practices include sleeving or automatic flow control and/or shutoff devices that are installed and function properly on each lateral that cross a potable line.

BACKFLOW PREVENTION

Requirements governing backflow prevention are intended to protect the City's potable and recycled water supplies, and are not intended to protect customers from potential hazards of cross-connections within their own property. All backflow prevention devices are to meet the *City of Sunnyvale Standard Details and Standard Specifications* (18B through 32B).

The provision of recycled water to a site constitutes an auxiliary water supply not approved for potable use as described in Sunnyvale Municipal Code 12.28.190. All premises served by both potable water and recycled water shall have but not necessarily be limited to air gaps and/or reduced pressure principle devices (RP) on the potable and recycled water system. Additional pressure regulating devices may be required to further protect the potable water system, as the Water and Sewer Division deems necessary.

Approved RPs on potable water services, as required in these provisions, shall be provided, installed, tested, and maintained by the customer at the customer's expense. Test reports shall be submitted to the Utility Billing Division as directed. RPs shall be located on the property served immediately downstream of the meter and shall not be on City property or the public right of way. All devices shall be readily accessible for testing and maintenance and no device shall be submerged at any time.

IDENTIFICATION OF PIPES, FITTINGS, AND EQUIPMENT

Painting and tagging/labeling of recycled water system components is required to clearly differentiate them from a potable water, wastewater, and/or storm drain system and to prevent possible contamination through an illicit cross-connection. The following identification requirements are to be implemented at on-site facilities and are derived from the *Standard Details and Standard Specifications* recycled water series.

All above-ground equipment which may contain recycled water, including but not limited to pumps, storage reservoirs, piping, valves, strainers, controllers, and quick-couplers, shall be clearly and adequately identified by purple color-coding, tags, stickers, and/or signage as indicated below. The City will provide examples of identification devices and approved wording for such devices. Customers shall maintain all signage and identification devices, and replace, repair or refurbish all devices as needed.

Pipeline Identification

New on-site pipelines must be identified as recycled water pipelines by using a purple color-code that differentiates them from potable water pipelines. Piping shall be embossed or integrally stamped and/or marked: "CAUTION: RECYCLED WATER – DO NOT DRINK", and "PELIGRO: AGUA IMPURA –NO BEBER" or equivalent.

As an alternative, standard pipe may be wrapped with purple plastic and tape containing the warning notice. The tape shall cover the circumference of the pipe and be securely fastened.

Note: *For dual plumbing systems, piping shall be manufactured with purple color integral to the materials or shall be labelled using purple-colored adhesive Mylar tape along the entire length of the pipe as required in California Plumbing Code Section 16A.*

All temporary and permanent connections to a recycled water system must be identified in the manner described above to differentiate them from connections to a potable water system.

Conversion of a Potable System

When converting an existing on-site potable water system to recycled water usage (retrofit), the potable water system must be accurately located and tested in coordination with the Water and Sewer Division. The City will abandon the potable tap on the main line and establish a new connection to the recycled water main. Necessary actions shall be taken to bring the retrofitted system into compliance with the RW Standards. If the existing system is approved by the City, except for pipe identification, the line can be considered approved for recycled water service. If the acceptability of the existing line cannot be verified, the line must be uncovered and inspected, and deficiencies identified before use. However, all replacements of an existing recycled water irrigation system must be color-coded for identification in accordance with the RW Standards. Refer to the RW Rules and Regulations for more information on the requirement for converting a potable water system for recycled water use.

Irrigation Systems

Irrigation system valve boxes shall be Carson Purple Irrigation Valve Boxes or approved equal, and must have a recognizable inscription cast on the top surface, such as “Reclaimed/Recycled Water Do Not Drink – No Beber” or equivalent. Alternatively, the irrigation valve boxes may have a 2-inch x 3-inch minimum tag securely affixed to the outside of lid. The tag shall have the following bilingual wording: “Reclaimed/Recycled Water Do Not Drink – No Beber” or equivalent. Irrigation controllers shall have the same tag as specified for meter and valve boxes, located on the inside and outside of the box.

Retrofits will not be required to replace existing green valve boxes. However, green boxes are required to have a warning label or nameplate permanently attached onto the lid with rivets, screws or bolts. Warning labels shall read “Recycled Water – Do Not Drink – Beber” or equivalent.

Sprinkler heads should be ordered with purple markings or fabricated with purple components. Retrofit projects will not be required to change out non-purple sprinkler heads and bubblers.

Quick-Coupling Valves

Quick-coupling valves on recycled water systems shall be visibly different from those used on the potable system. The use of Acme threaded couplings for recycled water is preferred, and shall be required for sites where both recycled water and potable water quick coupling valves are present.

Newly constructed sites shall have quick coupling valves installed in purple valve boxes and recycled water identification tags attached to the valve or to the inside of the box so that the tag is clearly visible when the box lid is removed. Retrofit sites will not be required to change-out existing green valve boxes. However, warning labels or nameplates must be permanently installed onto the lid with reviets, screws or bolts. Warning Labels shall read "Recycled Water – Do Not Drink – No Beber" or equivalent.

Quick coupling valves shall be fitted with a permanently attached and locking cover made of purple rubber or vinyl and imprinted with the words "RECYCLED WATER." 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." 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.

Note: *The use of garden hose bibs on the recycled water system is strictly prohibited.*

Booster Pumps

Customers that provide booster pumps to increase the operating pressure must identify the pumping systems as recycled water, avoid the release of recycled water in an uncontrolled manner, and provide proper drainage of the packing seal water. The signage must be readily seen by all operations personnel that are in the working area.

Storage Tanks

Recycled water storage tanks may have potable water connections for makeup from potable water sources. In all cases and under all circumstances, an approved air gap separation must be provided between the storage tank and the potable water discharge point. A copy of the proposed air gap assembly plans shall be submitted to the Water and Sewer Division for review and approval.

Seal Water

Any potable water used as seal water for recycled water pump seals must be adequately protected against backflow.

Construction

Recycled water for construction may only be used for soil compaction during grading operations, dust control, and consolidation and compaction of backfill in trenches for non-potable water, sanitary sewer, storm drain, gas pipelines, and electric conduits. Recycled water may not be used for water jetting and consolidation or compaction of backfill in trenches for potable water pipelines.

Recycled water for construction purposes is obtained from a permanent water tanker filling station located at the Sunnyvale Water Pollution Control Plant and is subject to availability. The use of recycled water for construction purposes must be approved by the City of Sunnyvale Environmental Services Department. A permit must be obtained from the Water Pollution Control Plant before construction

begins. The permit application and other applicable forms and program requirements are included in **Appendix B**.

Note: *Recycled water from the tank filling station may not be used for residential purposes, including construction.*

Equipment and Facilities Cleaning

Any equipment or facilities such as storage ponds, tanks, temporary piping or valves, and portable pumps used with recycled water must be cleaned and disinfected before being removed from the approved use area(s) for use at another jobsite.

SIGNAGE AND PUBLIC NOTIFICATION

Adequate means of notification must be provided to inform the public, employees, and others that recycled water is being used. Conspicuous signs with appropriate wording that can be clearly read must be placed at site entrances and, if required by the City, at adequate intervals around the authorized use area. Signs shall be a minimum of 9" x 12" and shall include wording such as "Irrigated with Recycled Water" or "Using Recycled Water" and "Do Not Drink". Signs shall display a universal symbol identifying non-potable water. Languages in addition to English must be used on signs where appropriate.

The City can assist the customer with the proper placement of signage, equipment tags, and other notifications during the design and construction of the recycled water system, as part of the annual site inspections or permit renewal process, or as requested by the customer.

CUSTOMER DOCUMENTATION

Contract Documents must delineate the proposed recycled water service area, the proposed facility location, the sizes and types of all potable and recycled water pipelines and service connections and other on-site facilities. The Contract Documents must include the layout of existing potable water pipelines and facilities, including any areas from which recycled water must be specifically excluded.

Plans and drawings must be prepared by a professional civil engineer, a mechanical engineer, or landscape architect registered in the state of California for the construction of on-site recycled water facilities must be submitted during the Plan Check process for review and approval by the Environmental Services Department. For dual plumbed facilities, refer to additional requirements included in the RW Rules and Regulations.

Contract Documents

The following information is to be provided on the Contract Documents by every customer applying for a permit to use recycled water:

1. Meter size (inch diameter).
2. Irrigated area to be served through the recycled water meter (square feet or acres).
3. Peak flow required through the meter (gpm).

4 Estimate of the yearly recycled water requirement (acre-feet or CCF).

5 Direction of overland drainage pattern.

6 Location of existing wells (if applicable).

7 Boundary location of 100-Year Flood Plan (if applicable).

8 Location of potable water pipelines and sanitary sewers within metered service area.

9 Location of storm drains within metered service area.

Site Plans and Specifications

The drawings shall indicate locations of drinking fountains, designated food preparation areas and/or designated outdoor eating areas on this site.

Include City of Sunnyvale Recycled Water Design Drawing General Notes (Drawings RW-3A and RW-3B) and Public Works Department/Engineering Division Construction General Notes on all recycled water improvement and irrigation drawings. Also include Recycled Water Labels (Drawings RW-1A, RW-1B, and RW-1C) as applicable.

Irrigation Systems

If on-site facilities include a landscape irrigation system, the following data for the materials used in the irrigation system must be included on the plans:

1 A pipe schedule listing pipe sizes and materials of construction.

2 Valve types and/or sizes.

3 The following information for each type of sprinkler head:

- Sprinkler radius (feet).
- Operating pressure (psi).
- Flow [gpm or gallons per hour (gph)] Sprinkler pattern.
- Manufacturer, model number, and all pertinent information.

4 Drip irrigation information and all pertinent information.

Dual-Plumbed Systems

Dual-plumbed systems occur when both potable water and recycled water are present inside a building. For example, a building where recycled water is used for toilet flushing is a dual-plumbed facility. In these instances, a *Dual-Plumbing Engineering Report* must be submitted as part of the permit application packet, demonstrating compliance with the applicable CCR Title 22 and California Plumbing Code requirements. Refer to the RW Rules and Regulations for additional requirements for dual-plumbed systems.

Note: *The City may require submission of an Engineering Report, or its equivalent, for other "in-building" uses of recycled water which do not fall under the Title 22 definition of "dual-plumbed", but which*

raise similar concerns and necessitate more detailed documentation for City approval. Examples include recycled water being used in an industrial process, fire suppression systems, or cooling towers.

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Appendices

Appendix A

Sunnyvale Standard Detail Recycled Water Series

Appendix B

Sunnyvale Recycled Water Truck Program

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Appendix A

Sunnyvale Standard Detail Recycled Water Series

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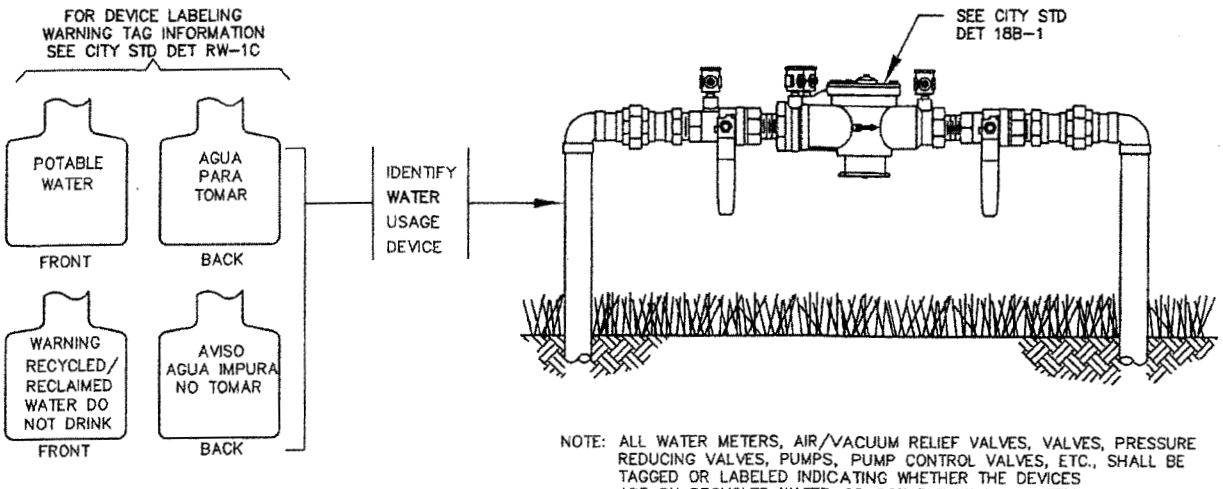


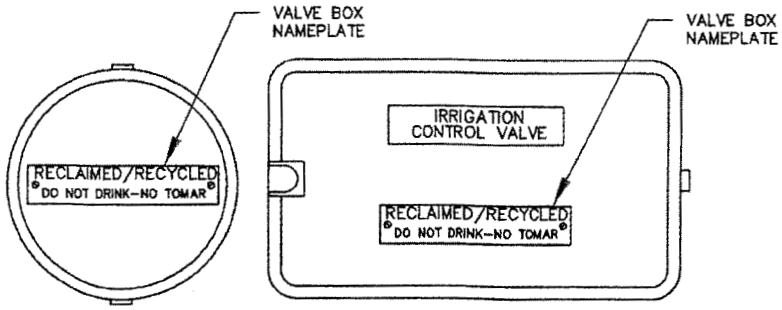
NOTE: ALL WATER METERS, AIR/VACUUM RELIEF VALVES, VALVES, PRESSURE REDUCING VALVES, PUMPS, PUMP CONTROL VALVES, ETC., SHALL BE TAGGED OR LABELED INDICATING WHETHER THE DEVICES ARE ON RECYCLED WATER OR POTABLE WATER SYSTEM.

WATER CONTROL DEVICE DETAIL

NOT TO SCALE

IRRIGATION VALVE BOX NOTES:

1. FOR NEW INSTALLATIONS, INSTALL CARSON PURPLE IRRIGATION VALVE BOXES (OR EQUAL) THAT ARE USED FOR RECYCLED WATER APPLICATIONS. BOXES SHALL BE IMPRINTED WITH THE INFORMATION THAT IS SHOWN ON THE VALVE BOX NAMEPLATE. SEE RIGHT -->

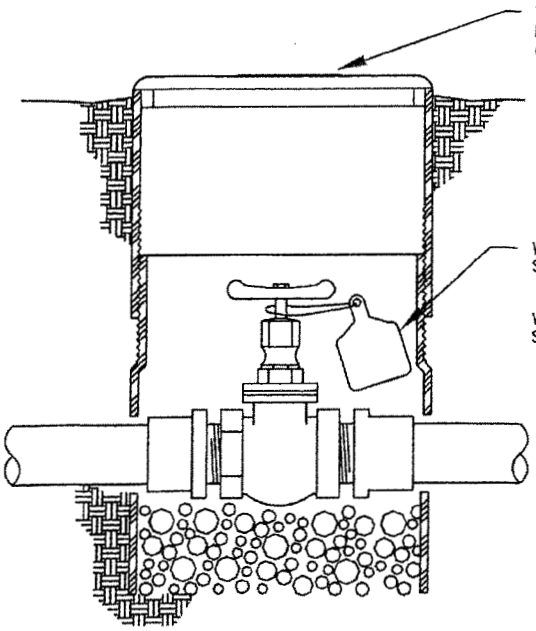


VALVE BOX NAMEPLATE INFO: T. CHRISTY ENTERPRISES, INC. CATALOG P/S: 3800 (OR APPROVED EQUAL).

IRRIGATION BOX COVERS/LIDS DETAIL

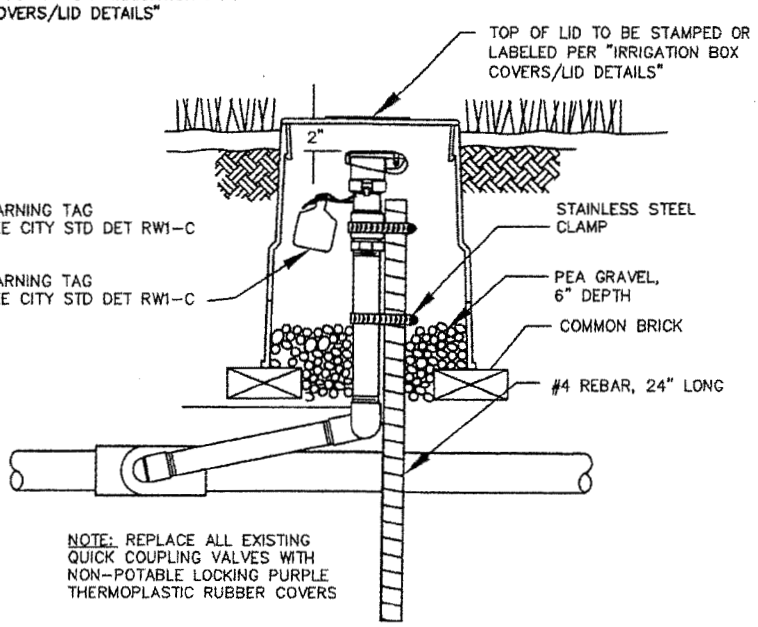
NOT TO SCALE

RECYCLED WATER LABELS - 1	APPROVED BY:	
	DATE : DEC 2014 **REVISED : -**	DWG. **RW-1A**



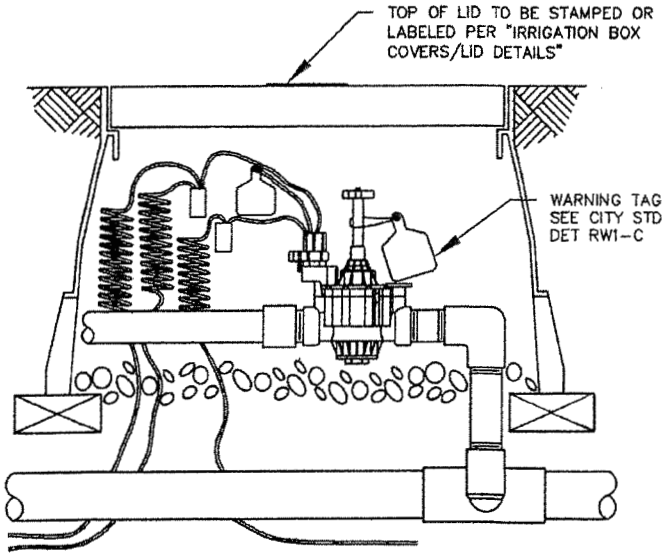
GATE VALVE DETAIL

NOT TO SCALE



QUICK COUPLING VALVE DETAIL

NOT TO SCALE



REMOTE CONTROL VALVE DETAIL

NOT TO SCALE

RECYCLED WATER LABELS - 2

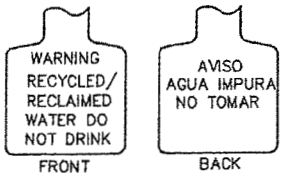
APPROVED BY:

DATE : DEC 2014
REVISED : -

DWG. RW-1B

RECYCLED WATER

RECYCLED WATER COLOR: PURPLE



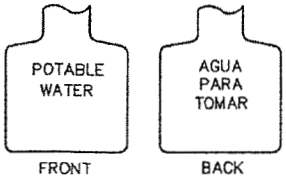
FRONT BACK

SAMPLE WARNING TAG. BACKGROUND PURPLE (PANTONE 512) WITH BLACK LETTERING.

NOTE: T CHRISTY ENTERPRISES INC.
P/N: ID-MAX-P2-RC006 (OR APPROVED EQUAL)

POTABLE WATER

DRINKING WATER COLOR: BLUE

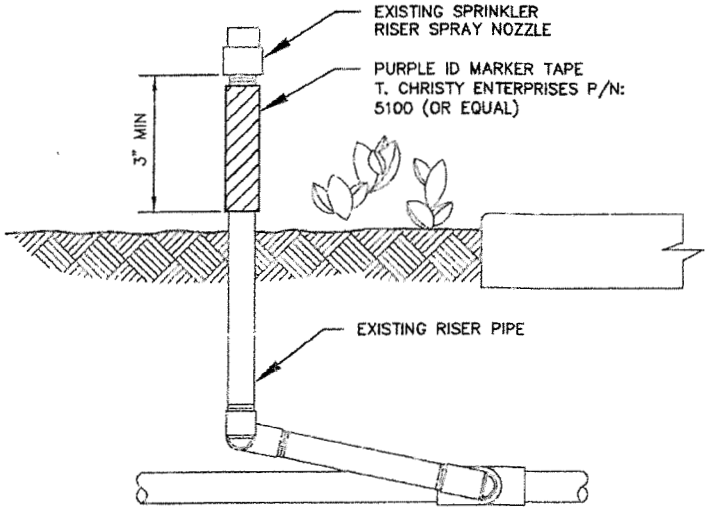


FRONT BACK

NOTE: T CHRISTY ENTERPRISES INC.
P/N: ID-MAX-B1-PW014 (OR APPROVED EQUAL)

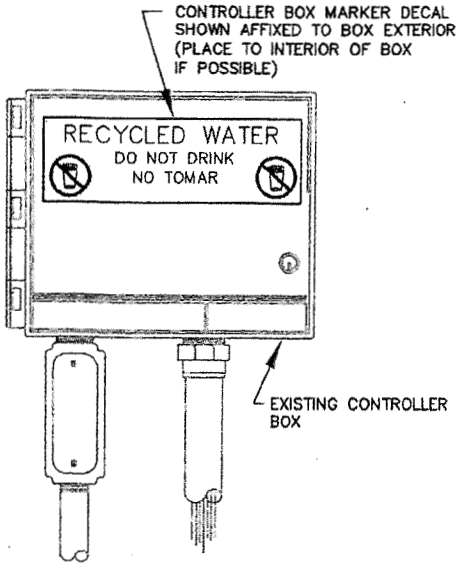
WARNING TAG INFORMATION

NOT TO SCALE



RECYCLED WATER RISER MARKER DETAIL

NOT TO SCALE



NOTE: T CHRISTY ENTERPRISES, INC.
CATALOG P/N: 4100 (OR APPROVED EQUAL)

CONTROLLER BOX MARKER DETAIL

NOT TO SCALE

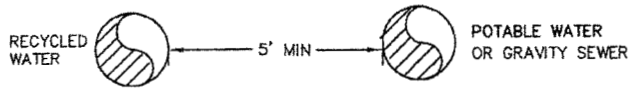
RECYCLED WATER LABELS - 3	APPROVED BY:	
	DATE : DEC 2014 **REVISED : -**	DWG. **RW-1C**

SITUATION

CRITERIA

PARALLEL

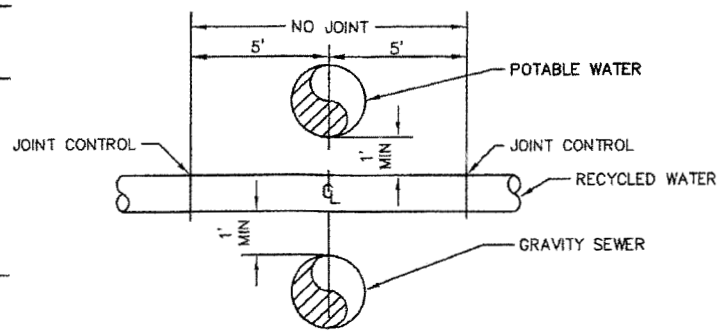
CASE 1



* NO JOINT CONTROL FOR STEEL, DIP, AND PVC

CROSSING #1

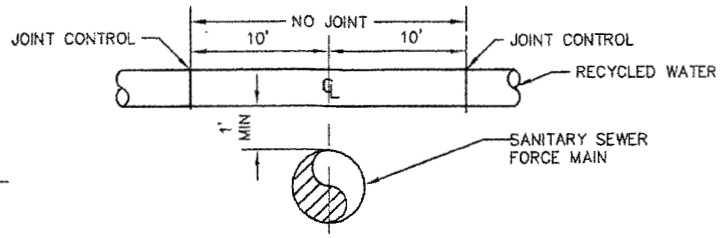
CASE 2A
SEE RW-2B



* JOINT CONTROL FOR STEEL, DIP, AND PVC
* RECYCLED WATER PIPELINE SHOULD BE BELOW POTABLE PIPELINES AND ABOVE STORM AND SANITARY SEWER PIPELINES.

CROSSING #2

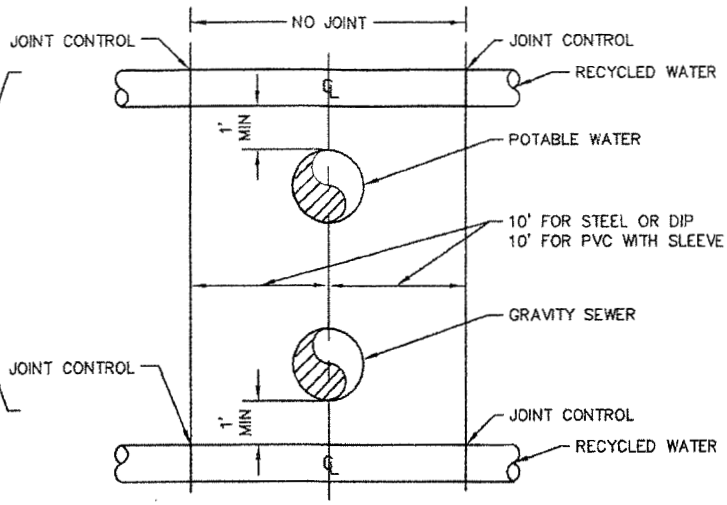
CASE 2B
SEE RW-2B



* NO PVC
* STEEL WITH DOUBLE WELDED JOINTS
* DIP WITH MECHANICAL RESTRAINT JOINTS
* LOCATE JOINTS MIN. 10' FROM THE CROSSING

CROSSING #3

CASE 2C
SEE RW-2B



* STEEL WITH DOUBLE WELDED JOINTS
* DIP WITH MECHANICAL RESTRAINT JOINTS
* LOCATE JOINTS MIN. 10' FROM THE CROSSING (STEEL & DIP)
* PVC PIPE WITH JOINT RESTRAINT AND REQUIRED CONTINUOUSLY SLEEVED FOR 20' FROM THE CROSSING

PIPE CLEARANCE REQUIREMENT DETAILS

NOT TO SCALE

RECYCLED WATER SEPARATION REQUIREMENTS - 1

APPROVED BY:

DATE : DEC 2014
REVISED : –

DWG. RW-2A

BASIC SEPARATION STANDARDS:

CASE 1. PARALLEL CONSTRUCTION

WHEN RECYCLED WATER MAINS ARE AT LEAST 5 FEET (MEASURED FROM EDGE OF PIPE-TO-EDGE OF PIPE) FROM POTABLE WATER AND/OR SANITARY SEWER MAINS OR STORM DRAINS, RECYCLED WATER MAIN CAN BE INSTALLED WITH STEEL PIPE (SP), DUCTILE IRON (DIP), AND PLASTIC PIPE (PVC) WITHOUT JOINT CONTROL. WHEN LOCATED NEAR A SEWER FORCE MAIN, RECYCLED WATER MAIN IS TO BE CONSTRUCTED MAINTAINING THE 10 FEET MINIMUM SEPARATION REQUIREMENT AND ONLY SP AND DIP ARE ACCEPTABLE MATERIALS (SEE PARALLEL DETAIL ON CITY STD DETAIL RW-2A).

CASE 2. CROSSING CONSTRUCTION

2A. (SEE CROSSING #1 DETAIL ON CITY STD DETAIL RW-2A) AT CROSSING WHERE RECYCLED WATER MAINS ARE TO BE CONSTRUCTED. MAINTAIN 1 FOOT MINIMUM VERTICAL CLEARANCE (MEASURED FROM EDGE-OF-PIPE TO EDGE-OF-PIPE) FROM ANY UNDERGROUND UTILITIES, INCLUDING POTABLE WATER LINES, SANITARY SEWERS, STORM DRAINS, GAS LINES, ELECTRICAL DUCTBANKS, ETC. WHEN RECYCLED WATER MAINS ARE 1 FOOT BELOW THE POTABLE WATER MAINS AND/OR 1 FOOT ABOVE THE SANITARY SEWER MAINS, THE PIPE JOINTS MUST BE LOCATED AT LEAST 5 FEET FROM THE EXISTING PIPE (MEASURED FROM CENTERLINE OF EXISTING PIPE TO THE JOINT). SP, DIP, AND PVC ARE ALL ACCEPTABLE PIPE MATERIALS.

2B. (SEE CROSSING #2 DETAIL ON CITY STD DETAIL RW-2A) WHEN CROSSING A SANITARY SEWER FORCE MAIN, THE RECYCLED WATER MAIN MUST BE LOCATED AT LEAST 1 FOOT ABOVE THE EXISTING FORCE MAIN. ONLY SP WITH DOUBLE WELDED JOINTS AND DIP WITH MECHANICALLY RESTRAINED JOINTS ARE ACCEPTABLE. RECYCLED WATER PIPE JOINTS MUST BE LOCATED AT LEAST 10 FEET FROM THE CENTERLINE OF EXISTING SANITARY SEWERS FORCE MAIN.

2C. (SEE CROSSING #3 DETAIL ON CITY STD DETAIL RW-2A) WHEN THE RECYCLED WATER MAINS ARE 1 FEET ABOVE THE POTABLE WATER LINES AND/OR 1 FOOT BELOW THE SANITARY SEWER MAINS, SP SHALL BE CONSTRUCTED WITH DOUBLE WELDED JOINTS, DIP USED SHALL HAVE MECHANICAL RESTRAINED JOINTS. BOTH SP AND DIP JOINTS MUST BE LOCATED AT LEAST 10 FEET FROM THE CENTERLINE OF EXISTING SANITARY SEWERS AND/OR EXISTING WATER LINES. IF PVC IS USED FOR RECYCLED WATER PIPELINE AT CROSSING, IN ADDITION TO THE JOINT THRUST RESTRAINT DEVICES, A CONTINUOUS SLEEVE FOR A DISTANCE OF 10 FEET ON EITHER SIDE OF CROSSING SHALL BE INSTALLED.

GENERAL NOTES

1. ALL SP USED FOR PIPING SHALL MEET A MINIMUM INTERNAL PRESSURE OF 200 PSI. NO MINIMUM PIPE WALL THICKNESS REQUIRED. (PIPE WALL THICKNESS SHALL BE CHOSEN BASED ON THE INTERNAL PRESSURES AND EXTERNAL LOADS EXERTED ON THE PIPE, THE MOST CONSERVATIVE DESIGN FOR PIPE WALL THICKNESS MUST BE SPECIFIED).

2. DIP USED FOR PIPING, THE STANDARD PIPE WALL THICKNESS SHALL BE DETERMINED BY THE STANDARD PIPELINE DESIGN, THERE IS NO MINIMUM INTERNAL PRESSURE REQUIREMENT.

3. PVC USED FOR PIPING, A DIMENSION RATIO (DR) OF 14 AND PRESSURE CLASS OF 200 MUST BE SPECIFIED. ALSO REFER TO AWWA C900 REQUIREMENTS.

4. PROPER CORROSION PROTECTION TO PIPELINES IS REQUIRED WHICH INCLUDES BUT IS NOT LIMITED TO OUTSIDE COATING, INSIDE LINING, DIELECTRIC TREATMENT, AND OTHER CATHODIC PROTECTION.

5. ANY EXCEPTIONS TO THE REQUIREMENTS OF THIS DETAIL REQUIRE A SPECIAL REVIEW AND APPROVAL SHALL BE GRANTED BY THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH.

RECYCLED WATER SEPARATION REQUIREMENTS - 2

APPROVED BY:

DATE : DEC 2014
REVISED : -

DWG. **RW-2B**

IRRIGATION SYSTEM NOTES:

1. ALL WORK SHALL CONFORM TO EXISTING REGULATIONS INCLUDING, BUT NOT LIMITED TO:
   1.1. CITY OF SUNNYVALE RECYCLED WATER PROGRAM SITE DESIGN REQUIREMENTS (PROVIDED BY THE ENVIRONMENTAL SERVICES DEPARTMENT).
   1.2. CA DEPARTMENT OF PUBLIC HEALTH REGULATIONS, INCLUDING TITLES 17 AND 22.

2. CHANGES MADE TO THE APPROVED IRRIGATION PLANS SHALL BE SUBMITTED TO THE CITY CROSS CONNECTION SPECIALIST FOR REVIEW AND APPROVAL AT LEAST FOUR WEEKS PRIOR TO START OF CONSTRUCTION.

3. AT LEAST FIVE WORKING DAYS PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR, CUSTOMER, AND CITY CROSS CONNECTION SPECIALIST SHALL HOLD A PRE-CONSTRUCTION MEETING.

4. CONTRACTOR SHALL NOTIFY CITY OF SUNNYVALE, ENVIRONMENTAL SERVICES DEPARTMENT - RECLAIMED WATER USE SECTION AT TELEPHONE NUMBER (408) 730-7900 AND CUSTOMER A MINIMUM OF AT LEAST 2 WEEKS BEFORE WORK BEGINS. THE CONTRACTOR SHALL ALSO NOTIFY ENVIRONMENTAL SERVICES AND CUSTOMER AGAIN AT LEAST 48 HOURS IN WRISRING BEFORE STARTING ANY ONSITE WORK. CITY INSPECTOR MUST INSPECT AND/OR VERIFY:
   4.1. PRESENCE OF BACKFLOW PREVENTION AT ALL POTABLE POINTS OF CONNECTION.
   4.2. NEW UNDERGROUND PIPING (LABELING, CLEARANCES, BURIAL DEPTH, SLEEVING).
   4.3. PRESSURE TEST.
   4.4. INSTALLATION OF SIGNS, TAGS, LABELS, AND CONTROLLER DECALS.
   4.5. SITE PASSED A CROSS-CONNECTION TEST PERFORMED BY A CERTIFIED AWWA CROSS-CONNECTION SPECIALIST.
   4.6. NEW METER INSTALLATION.
   4.7. COVERAGE TEST.

5. AT NO TIME SHALL CROSS-CONNECTION FROM POTABLE WATER TO RECYCLED WATER BE PERMITTED.

6. ALL NEW ON-SITE BURIED RECYCLED WATER PIPING SHALL BE IDENTIFIED BY THE FOLLOWING METHODS:
   6.1 USING PURPLE-COLORED PVC PIPE WITH CONTINUOUS WORDING "CAUTION - RECYCLED WATER" PRINTED ON OPPOSITE SIDES OF THE PIPE. PIPE SHALL BE LAID WITH WORDING FACING UPWARDS.
   6.2 WARNING TAPE WITH A MINIMUM WIDTH OF 3 INCHES READING "CAUTION - RECYCLED WATER" (IN BLACK OR WHITE LETTERING ON PURPLE BACKGROUND) SHALL RUN CONTINUOUSLY ON TOP OF PIPING AND SHALL BE ATTACHED TO PIPING WITH PLASTIC TAPE BANDED AROUND THE WARNING TAPE AND THE PIPE EVERY 5 FEET ON CENTER.

7. CONSTANT-PRESSURE MAINLINE PIPING 2 INCHES AND SMALLER SHALL BE PVC PIPE; CONSTANT PRESSURE MAINLINE PIPING 2 ½ INCHES AND LARGER SHALL BE CLASS 315; AND INTERMITTENT-PRESSURE LATERAL PIPING SHALL BE CLASS 200 OR SCHEDULE 40. COPPER PIPE SHALL BE TYPE "K".

8. ALL ON-SITE RECYCLED WATER PIPING SHALL BE BURIED TO A MINIMUM DEPTH FROM FINISHED GRADE TO TOP OF PIPE (MINIMUM COVER) OF:

8.1. PRESSURIZED LINES OF 3 INCHES AND LARGER:	24 INCHES
8.2. PRESSURIZED LINES 2 ½ INCHES AND SMALLER:	18 INCHES
8.3. INTERMITTENT-PRESSURE LINES:	12 INCHES

9. ALL RECYCLED WATER PIPING, OTHER THAN PVC PIPING WITH SOLVENT WELDED JOINTS SHALL BE PROTECTED AGAINST MOVEMENT WITH THRUST BLOCKS OR RESTRAINED JOINTS OR OTHER APPROVED METHOD.

10. MAINTAIN A 5-FOOT HORIZONTAL SEPARATION BETWEEN PRESSURIZED RECYCLED WATER IRRIGATION PIPING AND POTABLE WATER PIPING. AT PIPE CROSSINGS, RECYCLED WATER IRRIGATION WATER PIPING MUST BE 12 INCHES BELOW POTABLE WATER LINES. IF RECYCLED WATER PIPING MUST CROSS OVER POTABLE WATER LINES, THE RECYCLED WATER PIPING SHALL BE AT LEAST 12 INCHES ABOVE THE POTABLE LINES AND SHALL BE INSTALLED IN A PVC SLEEVE WHICH EXTENDS A MINIMUM OF 10 FEET ON EITHER SIDE OF THE POTABLE WATER PIPING (SEE CITY STD DET RW-02A).

11. POTABLE WATER AND RECYCLED WATER PIPING SHALL NOT BE INSTALLED IN THE SAME TRENCH.

12. ALL RECYCLED WATER SYSTEM REMOTE CONTROL VALVES, QUICK COUPLING VALVES, GATE VALVES, BLOW OFF VALVES, STRAINERS, AND PRESSURE-REGULATING VALVES SHALL BE INSTALLED BELOW GRADE IN VALVE BOXES. VALVE BOXES SHALL BE LABELED PER CITY RW-1A.

13. NO HOSE BIBS SHALL BE ALLOWED ON THE RECYCLED WATER IRRIGATION SYSTEM. EXISTING HOSE BIBS TO BE CONNECTED TO RECYCLED WATER SHALL BE REPLACED WITH QUICK COUPLING VALVES. QUICK COUPLING VALVES SHALL BE PER CITY STANDARD DETAIL RW-1B AND LABELED PER CITY STD DET RW-1A.

14. LABEL ALL POTABLE WATER METERS AND ABOVE GROUND POTABLE WATER PIPES/DEVICES (BACKFLOW PREVENTERS, HOWE BIBS, ETC.) WITHIN OUR NEAR THE RECYCLED WATER USE AREA WITH TAGS OR LABELS READING "POTABLE WATER" IN BLACK LETTERS ON BLUE BACKGROUND, PER CITY STD DET RW-1A, RW-1B, AND RW-1C.

15. ALL RECYCLED WATER IRRIGATION SYSTEMS SHALL INCLUDE THE FOLLOWING:
   15.1. A WYE STRAINER (WITH A 20 MESH OR FINER SCREEN) INSTALLED AS CLOSE AS PRACTICAL TO THE RECYCLED WATER METER BOX.
   15.2. A PRESSURE REGULATING VALVE INSTALLED IMMEDIATELY DOWNSTREAM OF THE STRAINER IF BOOSTER PUMP STATION IS NOT PRESENT.
   15.3. THESE COMPONENTS SHALL BE INSTALLED WITH ISOLATION VALVES.

16. PLACE RECYCLED WATER ADVISORY SIGNS AT ENTRANCE TO THE RECYCLED WATER USE AREA IN A MANNER THAT DOES NOT OBSTRUCT THEM FROM VIEW.

17. THE CONTRACTOR SHALL PROVIDE THE ENGINEER AND UPDATE AS NECESSARY, A CONSTRUCTION SCHEDULE THAT SHOWS THE START OF EACH CONSTRUCTION ACTIVITY, INCLUDING REQUIRED TESTS, INSPECTIONS AND INITIATION OF RECYCLED WATER SERVICE.

18. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH UNDERGROUND SERVICE ALERT (800) 227-2600 AND PROPERTY OWNER TO LOCATE UTILITY CROSSINGS AND TO EXCAVATE WITH CAUTION TO AVOID UTILITY DAMAGE.

19. ALL UTILITIES AND IMPROVEMENTS THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE COMPLETED RESTORED TO THE SATISFACTION OF THE ENGINEER.

20. ALL REFUSE AND OTHER DEMOLISHED WORK SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE LEGALLY DISPOSED OF OFF-SITE. EXCEPTION IS ANY EXISTING IRRIGATION SYSTEM BACKFLOW PREVENTER DEVICE - REUSE BACKFLOW DEVICE IS POSSIBLE AND ON THE UNIVERSITY OF SOUTHERN CALIFORNIA (USC) APPROVAL LIST. OTHERWISE CONTACT CITY TO DETERMINE IF SITE OWNER WISHES TO SALVAGE THE DEVICE AND PROVIDE TO OWNER IF REQUESTED, OTHERWISE DISPOSE.

21. CONTRACTOR IS PROHIBITED FROM DISCHARGING POLLUTANTS (OILS, GARBAGE, CHEMICALS, SEDIMENTS, SOILS, ETC.) TO THE STORM DRAIN SYSTEM.

RECYCLED WATER
DESIGN DRAWING GENERAL NOTES - 1

APPROVED BY:

DATE : DEC 2014	DWG. RW-3A
REVISED : -	

IRRIGATION SYSTEM NOTES (CONTINUED FROM RW-3A):

22. PRIOR TO TURNING OFF ANY WATER METER OR OTHER UTILITY, THE CONTRACTOR SHALL COORDINATE WITH ENGINEER TO ESTABLISH WORKING HOURS, ACCESS, AND OTHER CONSTRAINTS FOR EACH SITE. THE CONTRACTOR SHALL NOTIFY CUSTOMER AND THE ENGINEER TWO WEEKS BEFORE THE PLANNED OUTAGE AND AT LEAST THREE DAYS IN ADVANCE OF THE ACTUAL OUTAGE.

23. PRIOR TO RECEIVING RECYCLED WATER, EACH SITE MUST BE PERMITTED BY CITY OF SUNNYVALE ENVIRONMENTAL SERVICES DEPARTMENT. A PERMIT WILL BE GRANTED AFTER:
    - 23.1. CONSTRUCTION HAS BEEN COMPLETED AND INSPECTED TO SHOW CONFORMANCE TO CALIFORNIA DEPARTMENT OF PUBLIC HEALTH (CDPH) APPROVED PLANS.
    - 23.2. SITE HAS PASSED REQUIRED CROSS-CONNECTION TEST PERFORMED BY A CERTIFIED AWWA CROSS-CONNECTION SPECIALIST.
    - 23.3. A FINAL ON-SITE INSPECTION HAS BEEN CONDUCTED TO CONFIRM THAT ALL REQUIREMENTS HAVE BEEN MET.
    - 23.4. THE OWNERS OR OWNER'S REPRESENTATIVE HAS COMPLETED CITY RECYCLED WATER SITE-SUPERVISORY TRAINING. FOR TRAINING CONTACT ENVIRONMENTAL SERVICES DEPARTMENT AT (408) 730-7900.

24. ALL RECYCLED WATER METERS WILL BE IN PLACE AND LOCKED OFF, OR WILL BE SET BY THE ENVIRONMENTAL SERVICES DEPARTMENT, BEFORE CONSTRUCTION IS COMPLETED. AFTER THE SITE PASSES A CROSS-CONNECTION TEST, THE RECYCLED WATER METER WILL BE UNLOCKED BY THE ENVIRONMENTAL SERVICES STAFF.

25. NO OVERSPRAY OR RUNOFF OF RECYCLED WATER SHALL BE ALLOWED ON ANY NON-APPROVED USE AREA. UPON RECEIVING RECYCLED WATER, THE ON-SITE SPRAY MIST OR RUNOFF SHALL NOT ENTER DWELLINGS OR DESIGNATED OUTDOOR EATING AREAS. DRINKING WATER FOUNTAINS BE PROTECTED AGAINST CONTACT WITH RECYCLED WATER SPRAY, MIST, OR RUNOFF.

26. CONTRACTOR SHALL SUBMIT RECORD DRAWINGS SHOWING AS-BUILT CONDITIONS OF IRRIGATION SYSTEM AND RELATED WORK TO THE ENVIRONMENTAL SERVICES DEPARTMENT – RECYCLED WATER SECTION WITHIN 30 DAYS OF SITE RECEIVING RECYCLED WATER.

27. NO IRRIGATION WITH DISINFECTED TERTIARY RECYCLED WATER SHALL TAKE PLACE WITHIN 50 FEET OF ANY DOMESTIC WATER SUPPLY WELL UNLESS ALL OF THE FOLLOWING CONDITIONS HAVE BEEN MET:
    - 27.1. A GEOLOGICAL INVESTIGATION DEMONSTRATES THAT AN AQUITARD EXISTS AT THE WELL BETWEEN THE UPPERMOST AQUIFER BEING DRAWN FROM AND THE GROUND SURFACE.
    - 27.2. THE WELL CONTAINS AN ANNULAR SEAL THAT EXTENDS FROM THE SURFACE INTO THE AQUITARD.
    - 27.3. THE WELL IS HOUSED TO PREVENT ANY RECYCLED WATER SPRAY FROM COMING INTO CONTACT WITH THE WELLHEAD FACILITIES.
    - 27.4. THE GROUND SURFACE IMMEDIATELY AROUND THE WELLHEAD IS CONTOURED TO ALLOW SURFACE WATER TO DRAIN AWAY FROM THE WELL.
    - 27.5. THE OWNER OF THE WELL APPROVES THE ELIMINATION OF THE BUFFER ZONE REQUIREMENT.

28. NO IMPOUNDMENT OF DISINFECTED TERTIARY RECYCLED WATER SHALL OCCUR WITHIN 100 FEET OF ANY DOMESTIC WATER SUPPLY WELL.

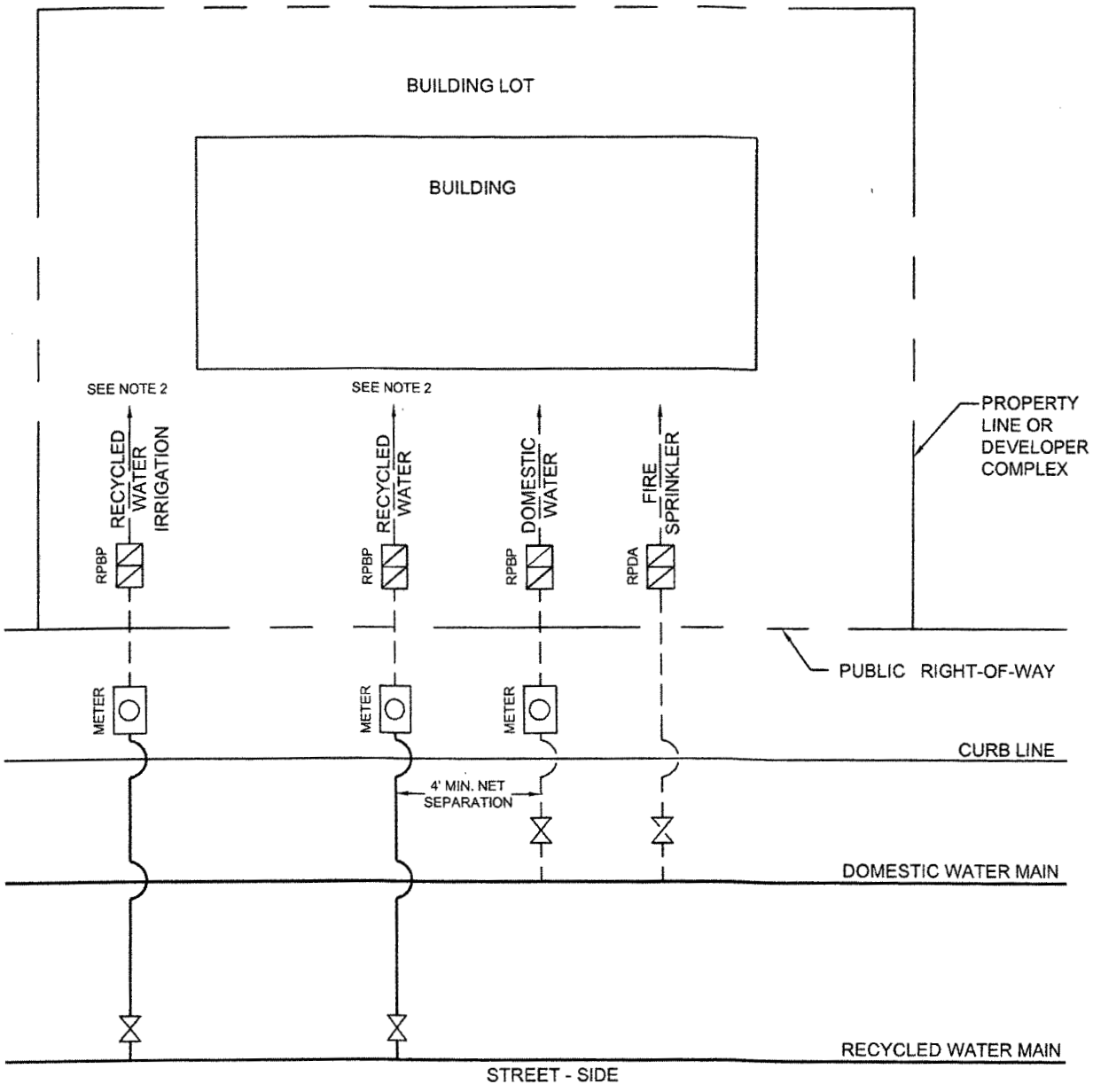
29. INSTALL BACKFLOW PREVENTER ASSEMBLY ON ALL POTABLE WATER AND FIRE SERVICES PER CITY STD DET 188-1.

30. PRIOR TO ACTUAL SERVICE CONNECTION TO RECYCLED WATER SYSTEM, CONTRACTOR SHALL PROVIDE TEMPORARY PIPING TO POTABLE SYSTEM SO THAT CITY PERSONNEL MAY PERFORM CROSS-CONNECTION TEST. UPON SUCCESSFUL CROSS-CONNECTION TEST, CONTRACTOR SHALL REMOVE TEMPORARY PIPING AND PERFORM FINAL CONNECTION TO THE RECYCLED WATER METER.

CONTRACTOR SHALL RESTORE THE AREAS IMPACTED BY THE CONSTRUCTION TO THEIR ORIGINAL CONDITION UNLESS OTHERWISE NOTED.

32. ADD RECYCLED WATER DECAL STICKER TO THE EXTERIOR OF ALL IRRIGATION CONTROLLERS OPERATING IN THE RECYCLED WATER USE AREA.

RECYCLED WATER DESIGN DRAWING GENERAL NOTES - 2	APPROVED BY:	
	DATE : DEC 2014 REVISED : -	DWG. **RW-3B**



NOTE:

1. ALL BACKFLOW PREVENTERS MUST BE APPROVED PER CITY STANDARD DETAIL 20B OR 20B-1.
2. BACKFLOW PREVENTER FOR RECYCLED WATER SYSTEM MUST MEET PLUMBING CODE AND CALIFORNIA CODE OF REGULATION REQUIREMENTS.
3. METERS TO BE INSTALLED PER STANDARD DETAIL DRAWING 4B, 4B-1A AND RW-1A

ABBREVIATIONS:

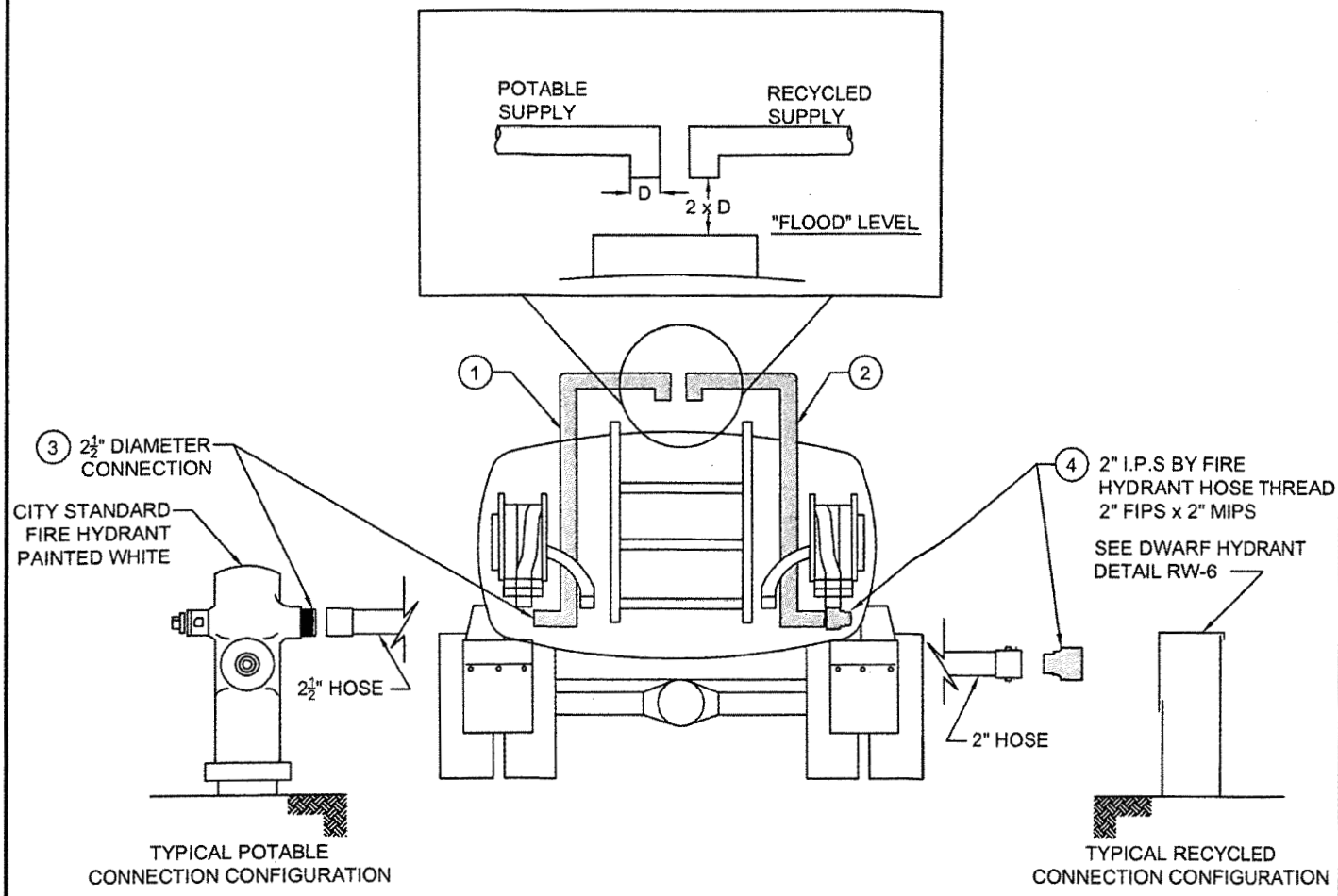
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
RPDA	REDUCED PRESSURE DETECTOR ASSEMBLY

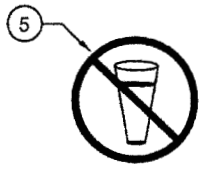
INSTALLATION OF RECYCLED WATER SERVICE LINES

APPROVED BY:

DATE: APRIL 2016
REVISED: FEB 2017

DWG. RW-4





NOTES:

1. THE POTABLE SUPPLY PIPELINE ON TRUCK SHALL BE PAINTED BLUE WITH "POTABLE WATER" STENCILED ON THE PIPELINE.
2. THE RECYCLED SUPPLY PIPELINE ON TRUCK SHALL BE PAINTED PURPLE WITH "RECYCLED WATER" STENCILED ON THE PIPELINE.
3. THE POTABLE SUPPLY CONNECTION BETWEEN THE HOSE AND HYDRANT SHALL BE A STANDARD 2½" DIAMETER THREADED CONNECTION
4. THE RECYCLED SUPPLY CONNECTION BETWEEN THE HOSE AND HYDRANT SHALL BE A STANDARD 2" DIAMETER THREADED CONNECTION
5. SIGNAGE IS REQUIRED ON BOTH SIDES, WITH WORDING "RECYCLED WATER - DO NOT DRINK" AND THE INTERNATIONAL SYMBOL SHOWN.

TYPICAL TRUCK AND WATER SUPPLY SYSTEMS		APPROVED BY:
	DATE : APRIL 2016	DWG. RW-5

Appendix B

Sunnyvale Recycled Water Truck Program

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Sunnyvale Recycled Water Truck Program

City of Sunnyvale Environmental Services Department

The City of Sunnyvale's Recycled Water Truck Program supplies clean, safe, tertiary-treated recycled water from the Sunnyvale Water Pollution Control Plant. All recycled water produced in Sunnyvale undergoes a rigorous treatment process to ensure it meets the protective standards set by the California Department of Public Health and qualifies for unrestricted uses.

General Program Requirements

1. Customers interested in using recycled water for construction and other non-potable uses approved by the City must first apply for a *Recycled Water Truck Program Use Permit*. Customers can obtain the appropriate application for their desired use by using one of the following three options:
   - Download the form titled *Recycled Water Truck Program Use Permit* from https://sunnyvale.ca.gov/property/water/recycled/truck.htm.
   - Contact the Recycled Water Truck Program directly at green@sunnyvale.ca.gov or (408) 730-7260 and request an application form be emailed or mailed to you.
   - Pick-up in person, at the Sunnyvale Water Pollution Control Plant, located at 1444 Borregas Avenue, Sunnyvale, CA 94088.
2. Application forms must be completed and returned with copies of valid truck registration (a copy for each truck must be attached to permit application) and driver's license attached (photocopies, PDFs, and scanned documents acceptable). Please allow up to 10-business days for the application to be processed. Options for submitting completed applications include:
   - Email to green@sunnyvale.ca.gov.
   - Deliver in person to the Sunnyvale Water Pollution Control Plant, located at 1444 Borregas Avenue, Sunnyvale, CA 94088.
   - Mail to City of Sunnyvale, Recycled Water Truck Program, 1444 Borregas Avenue, Sunnyvale, CA 94088-3707.
   - Fax to (408) 747-1139.
3. Before trucks can be filled for the first time, all truck owners and/or drivers are required to attend a brief on-site training in order to learn about using the filling station and the proper handling and use of recycled water. In addition, each vehicle to be filled must pass a City inspection to ensure that it is fitted with the proper backflow prevention equipment. Tank trucks must be equipped with an air gap. The City will coordinate the training and vehicle inspection once the application packet has been deemed complete. Typically, this will occur on the same day at the Water Pollution Control Plant. The Site Supervisor Training provided by the City to its customers may not be substituted for the on-site fill station training.

4. Once the customer completes the on-site training and a Sunnyvale inspector verifies the required air gap, Sunnyvale will issue a signed *Recycled Water Truck Program Use Permit* along with recycled water labels to affix to the customer's truck (both sides and rear). Sunnyvale provides the first set of signs at no charge; the customer will have to pay for any replacement signs.

5. The *Recycled Water Truck Program Use Permit* must be available for inspection in the truck(s) and at the job site where the recycled water is applied at all times. The customer must present a copy of their permit and identification during the check-in process at the Water Pollution Control Plant in order to proceed with filling their truck with recycled water.

6. Sunnyvale's recycled water may only be used within City boundaries.

7. Customers must provide their own hoses to connect to the recycled water hydrant.

8. Typical truck and recycled water system details can be found in the *City of Sunnyvale Standard Details and Standard Specifications* RW Series.

Sunnyvale Water Pollution Control Plant Requirements

1. Recycled water is offered at the Sunnyvale Water Pollution Control Plant, located at 1444 Borregas Avenue, CA 90488.

2. Recycled water is offered to customers M-F, from 7:00 am – 4:00 pm. The fill station's hydrant valves are locked when not in use. If customers wish to use the fill station outside of these hours, please contact the Recycled Water Truck Program at green@sunnyvale.ca.gov or (408) 730-7260. Exceptions may be granted under special circumstances at the City's discretion.

3. Prior to each filling operation, the customer is required to check-in at the Administrative Office and sign-in for every load taken. Customers must be able to present a valid *Recycled Water Truck Use Permit* and valid driver's license to City staff at the time they sign-in. City staff will also ensure that the vehicle has passed a City inspection and is approved for use.

4. If the driver was not included on the original permit application, the customer will need to submit the *Additional Driver and Vehicle Form* to have the driver added to their permit. The driver will then have to attend an on-site training. Similarly, if the vehicle brought to the fill station location was not included on the original permit application the customer will need to submit the *Additional Driver and Vehicle Form* and pass a vehicle inspection. The City will make every effort to accommodate the addition of new drivers and/or vehicles as soon as possible after receiving the form.

5. At the time of filling, trucks must have appropriately-placed recycled water signage to signify that they have been inspected and the air gap approved. If the truck does not have adequate signage, the Operator will not proceed will the fill process.

6. Once approved, an Operator from the Water Pollution Control Plant will assist the customer in filling their tank and collect totalizer readings from before and after the filling sequence.

7. NO IDLING. Please turn off your truck engine while filling or waiting at the filling station.

8. Do not block the road or the public parking spaces at the end of Carl Rd.
9. Please do not leave any trash or debris in the filling station area.

Recycled Water Handling and Use Requirements/Precautions

1. Do not drink recycled water or use it for food preparation. Additionally, the truck driver must notify workers and/or the public when recycled water is used at a site and tell them that they are not to drink recycled water or use it for food preparation.
2. Recycled water customers should apply hand sanitizer or wash their hands with soap and potable water after working with recycled water and especially before eating or smoking.
3. Precautions should be taken to avoid food coming into contact with recycled water while the use site is still wet.
4. Truck drivers should be equipped with an adequate first aid kit. Cuts or abrasions should be promptly washed, disinfected, and bandaged.
5. Trucked recycled water should be used soon after it is picked up. Sunnyvale's recycled water meets state public health requirements immediately after treatment. If a customer stores recycled water at the use site, Sunnyvale does not guarantee the quality of the recycled water over time.
6. Recycled water shall not be allowed to spray onto external drinking water fountains.
7. Recycled water shall not be applied where it could contact or enter passing vehicles, buildings, areas where food is handled or eaten, or storm drains.
8. Recycled water customers shall take adequate measures to prevent overspray, ponding, or run off of recycled water from the authorized recycled water use area unless it is specifically allowed by the Regional Water Quality Control Board or by an attachment to the Recycled Water Use Permit issued by Sunnyvale.
9. There shall be no irrigation or impoundment of recycled water within a minimum of 50-feet of any domestic (drinking water) well.
10. Vehicles used for transportation and distribution of recycled water must have water-tight valves and fittings, must not leak, and tanks must 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 to convey recycled water.
11. Recycled water must not be introduced into any permanent piping system and no connection shall be made between the tank truck and any part of a potable water system.
12. Tank trucks used to transport recycled water should not be used to carry potable water unless a thorough cleaning and disinfection process has been completed.

RECYCLED WATER TRUCK USE PERMIT

Sunnyvale Recycled Water Program

Sunnyvale

(For City use)
Permit Number: _____ **Effective Date of Permit:** _____

CUSTOMER INFORMATION

Name of Company: _____ Contact Name: _____

Contact Title: _____ Mailing Address: _____

City/ZIP: _____ Office Phone: _____

Cell or Other Phone: _____ Email: _____

Please fill out the **Driver Name** and **License Number** before submitting this form. Attach a copy of a current driver's license for each person listed. Please allow 10-business days to process the application. Drivers listed will complete **Driver Signature** in person after the on-site training. All new drivers must be trained and added to the permit. By signing, drivers certify that they have received training and agree to abide by the Truck Program Guidelines provided. *Use Attachment for Additional Drivers if necessary.*

Driver Name	CA Driver License #	Driver Signature *(Leave blank until training)*	(For City use) Trainer Initials	(For City use) Date

TRUCK INFORMATION

Provide the following information for the truck(s) for which a permit is requested. Attach a copy of a current vehicle registration for each vehicle. A City inspector must inspect each truck to determine that it is equipped with the necessary backflow prevention. *Use Attachment for Additional Trucks if necessary.*

Truck Trailer # (if applicable)	License Plate Number	Capacity of Tank or Storage Containers	(For City use) Vehicle Inspector Initials

RECYCLED WATER USE INFORMATION *(Check all that apply)*

Use of Recycled Water: ☐ Soil Compaction ☐ Dust Control ☐ Irrigation

☐ Sewer Flushing ☐ Street Cleaning ☐ Other: _____

Application Method: ☐ Tank Truck ☐ Spray ☐ Wash Water ☐ Other: _____

List the location(s) where you expect to apply recycled water within Sunnyvale's boundaries:

Address: _____

Address: _____

Address: _____

(Attach separate sheet if necessary)

RECYCLED WATER ACKNOWLEDGEMENTS

Customer agrees to follow all handling and use requirements for recycled water contained in the Sunnyvale Recycled Water Truck Program Guidelines in a manner consistent with State requirements. Customer agrees to install, maintain, and keep in place signs identifying that recycled water is in use. Sunnyvale provides the first set of signs at no charge; replacement signs to be paid for at cost by customer. ***Customer must initial here to acknowledge these requirements***:____ (initials)

Customer must identify the person responsible for implementing worker/public protection at each site (i.e., that humans are not to drink recycled water or use it for preparing food).

Name of Responsible Person: _____

CERTIFICATION & INDEMNIFICATION

I certify that I am an authorized agent for the company cited in this application and that I have authority to bind the company to the requirements of this permit and program. I hereby certify under penalty of perjury that the information provided in this permit application and in any attachment is true and accurate to the best of my knowledge. I also certify that I have read the applicable rules and regulations of the Regional Water Quality Control Board Order 94-069 and the Sunnyvale Recycled Water Truck Program Guidelines and agree to abide by them.

My company agrees to defend, indemnify, and hold harmless Sunnyvale and its Directors, officers, agents and employees from and against any and all loss, liability, expense, claims, suits, and damages, including attorneys' fees, arising out of or resulting from Permit Holder's, its associates', employees', subconsultants', or other agents' negligent acts, errors or omissions, or willful misconduct, in the operation and/or performance under this Recycled Water Use Permit.

Signature of Customer: _____ Title: _____

Print Name: _____ Date: _____

Company: _____

AUTHORIZATION

Customer is authorized to use recycled water from Sunnyvale's Recycled Water Truck Program in accordance with the Recycled Water Truck Program Guidelines and RWQCB Order 94-069.

Authorized Signature: _____

Filling Station Representative Signature: _____ Date: _____

ADDITIONAL DRIVER AND VEHICLE FORM

Sunnyvale Recycled Water Program

Sunnyvale

Contact Name: _____ Permit Number (if known): _____

Name of Company: _____ Address: _____

CUSTOMER INFORMATION

Please list below all drivers/vehicle operators who will access the fill station. All drivers must be trained and added to the permit. By signing, drivers certify that they have received training and agree to abide by the Truck Program Guidelines provided.

Driver Name	**CA Driver License**	**Driver Signature**	(For City Use)	
			Trainer Initials	**Date**

TRUCK INFORMATION

Provide the following information for the truck(s) for which a permit is requested. A City inspector must inspect each truck to determine that it is equipped with the necessary air gap before decal issuance.

Truck Trailer # (if applicable)	**License Plate Number**	**Capacity of Tank or Storage Containers**	(For City Use)
			Vehicle Inspector Initials

Appendix F

Water Reclamation Requirements for City of Sunnyvale Water Pollution Control Plant

Regional Water Quality Control Board Order R2-94-069

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 94-069

WATER RECLAMATION REQUIREMENTS FOR:

CITY OF SUNNYVALE
SUNNYVALE WATER POLLUTION CONTROL PLANT
SUNNYVALE
SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board), finds that:

1. The City of Sunnyvale (hereinafter called Producer and User) filed a Report of Waste Discharge dated September 14, 1990, accompanied by a Technical Support Document, for the use of reclaimed water throughout the service area of the Water Pollution Control Plant (WPCP).

2. The Producer proposes to divert an estimated 4.4 million gallons per day (mgd) of tertiary-treated effluent from its Water Pollution Control Plant for landscape irrigation and impoundment, and for industrial reuse. Potential reclaimed water users and use areas have been identified as listed below and shown in Figures 1 and 2 (attached). Users are not required to limit the quantity of use to the estimated usage below. Other potential users may be identified in the future and added to the following list.

Users	Estimated Usage (mgd)
Phase I	1.0
Baylands Park	
Twin Creeks Sports Park	
Lockheed Corporation	
Moffett Field Golf Course and Agricultural Land	
Caltrans	
Municipal Golf Course	
Truck Fill Stations	
Phase II	1.2
North of State Route 237	
East Duane Industrial Area	
City Parks and Schools (North/Central Sunnyvale)	

Users (cont.)	Estimated Usage (mgd)
Phase III	0.35
Southwest Sunnyvale Parks, Playgrounds, and Homeowner Associations	
Phase IV	1.0
Cupertino/Los Altos Parks, Playgrounds, and Golf Courses	
Phase V	0.35
Southeast Sunnyvale Parks, Playgrounds, and Homeowner Associations	
Industrial Cooling Towers and Scrubbers (Phase I & II)	0.5
TOTAL	**4.4**

3. The Producer will authorize specific reuse projects located within the areas listed in Finding 2 of this Order on a case-by-case basis in accordance with an approved permit-based program of rules and regulations for reclaimed water Users. The Producer will design and incrementally install reclaimed water transmission facilities to serve these projects. Users will document compliance with all conditions of this Order and of Title 17 and Title 22 of the California Code of Regulations (CCR). Each User will demonstrate to the Producer the absence of cross-connections before being issued a permit. The Producer will maintain this information at its facility.

4. The Producer will continue to investigate other potential reuse strategies such as groundwater recharge, streamflow augmentation, and dual water supply for new construction. This will enable the Producer to move towards achieving a goal of reusing the maximum possible amount of reclaimed water.

5. The production and uses of reclaimed water are currently permitted under Order No. 91-043, adopted by the Board on March 20, 1991. On July 14, 1992, the Governor approved Assembly Bill No. 3012 (AB 3012), which added Section 13523.1 to the California Water Code, and authorizes regional boards to issue master reclamation permits to a supplier and/or distributor of reclaimed water in lieu of prescribing water reclamation requirements for a user of reclaimed water. AB 3012 also removes the requirement, except upon written request of a regional board, that Users file a report with a regional board to use reclaimed water from a supplier/distributor for whom a master reclamation permit has been issued. Similarly, AB 3012 exempts any such user of reclaimed water from the requirement to file a report with a regional board related to any material change in the character of the reclaimed water or its use. This Order is intended to be a master reclamation permit that is consistent with Section 13523.1.

6. Board Order No. 91-042 provided "blanket" authorization for tanker-truck distribution of reclaimed water and the expansion of existing fixed irrigation system projects already subject to water reuse requirements. Reclaimed water distribution at the truck fill stations operated by the Producer are currently permitted under Order No. 91-042.

7. This Order incorporates the requirements of Order No. 91-043 and Order No. 91-042, and therefore supersedes both Orders.

8. California Water Code Section 13512 states that it is the intention of the legislature that the State undertake all possible steps to encourage development of water reclamation facilities so that reclaimed water may be made available to help meet the growing water demands of the State.

   Section 13523 provides that a regional board, after consulting with and receiving the recommendations of the State Department of Health Services, and if it determines such action to be necessary to protect the public health, safety, or welfare, shall prescribe water reclamation requirements for water which is used or proposed to be used as reclaimed water. The use of reclaimed water for the purposes specified in Finding 2, could affect the public health, safety, or welfare, and requirements for those uses are, therefore, necessary in accordance with the California Water Code.

   In Section 13550, the Legislature defines the use of potable domestic water for non-potable uses, including but not limited to cemeteries, golf courses, parks, highway landscaped areas, irrigation, and industrial uses as a waste or an unreasonable use of such water within the meaning of Section 2 of Article X of the California Constitution when suitable reclaimed water is available.

   Section 13576(e) states that the use of reclaimed water has proven to be safe from a public health standpoint and that the State Department of Health Services is updating regulations for the use of reclaimed water.

9. This Order's requirements conform with and implement the water reclamation criteria of the State Department of Health Services (Title 22, Division 4, Chapter 3, Sections 60301-60355 of the California Code of Regulations [CCR]) to protect the public health, safety, and welfare.

10. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on December 17, 1986, prescribing water quality objectives for South San Francisco Bay and its tributaries. The Board amended its Basin Plan on September 16, 1992, and the State Water Resources Control Board (State Board) approved it on April 27, 1993, with approval from the State Office of Administrative Law pending. The Basin Plan supports water reclamation and further states that the disposal of wastewater to inland, estuarine, or coastal waters is not considered a permanent wastewater disposal solution where the potential exists for conservation and reclamation. The Basin Plan prescribes water quality objectives for reclaimed water, as well as for ground and surface waters of Santa Clara County. The Basin Plan identifies beneficial uses of the underlying groundwaters as:

- Industrial service and supply
- Municipal and domestic supply
- Agricultural supply

The Basin Plan identifies beneficial uses of the surface waters of South San Francisco Bay and its tributaries as:

- Water contact recreation
- Non-water contact recreation
- Wildlife habitat
- Preservation of rare and endangered species
- Estuarine habitat
- Fish migration
- Fish spawning
- Industrial service and process supply
- Shellfish harvesting
- Navigation
- Commercial and sport fishing

11. Effluent limitations of this Order are based on applicable CCR Title 22 regulations, the Basin Plan, current plant performance, and best professional judgment. The limitations are considered to be those attainable by best available technology, in the judgment of the Board.

12. The proposed uses of reclaimed water will maintain and enhance natural resources, and thus this Order is categorically exempt from the provisions of the California Environmental Quality Act in accordance with Title 14, California Administrative Code, Chapter 3, Section 15307.

13. The Board has notified the Users, Producer, and interested agencies and persons of its intent to amend water reclamation requirements for the proposed discharges, and has provided them with an opportunity for a public hearing and to submit their written views and recommendations.

14. The Board, at a public meeting, heard and considered all comments pertaining to these proposed uses of reclaimed water.

IT IS HEREBY ORDERED, that the City of Sunnyvale (Producer and User) and Users who have Producer-approved Reclaimed Water Use permits pursuant to this Order, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. Reclaimed Water Quality Specifications

1. Unrestricted Quality (Disinfected Tertiary) Reclaimed Water

The Producer shall assure that reclaimed water used for uses allowed under Title 22 for disinfected tertiary reclaimed water shall be an adequately oxidized, coagulated,

filtered, and disinfected water (as defined in latest version of CCR Title 22, Division 4, Chapter 3, Sections 60301-60335) that meets the following quality limits at all times:

a.	CBOD (5-day, 20°C)	20 mg/L daily maximum 10 mg/L monthly average
b.	Dissolved Oxygen	1.0 mg/L minimum
c.	Dissolved Sulfide	0.1 mg/L maximum
d.	Turbidity	2 NTU maximum daily average operating turbidity and not exceeding 5 NTU.
e.	Total coliform bacteria	At any point downstream of the disinfection facilities after adequate contact with disinfectant, the median number of total coliform organisms shall not exceed 2.2 MPN/100 mL as determined from the bacteriological results of the last seven (7) days for which analyses have been completed, and the number of total coliform organisms shall not exceed 23 MPN/100 mL in any sample.

2. Restricted Quality Reclaimed Water (23 MPN - Disinfected Secondary)

The Producer shall assure that reclaimed water to be used for uses allowed under Title 22 for disinfected secondary water, such as landscape irrigation where the public has restricted access or exposure, shall at a minimum be an adequately oxidized and disinfected water that meets the following quality limits prior to delivery for any such use at all times:

a.	CBOD (5-day, 20°C)	20 mg/L daily maximum 10 mg/L monthly average
b.	Dissolved Oxygen	1.0 mg/L minimum
c.	Dissolved Sulfide	0.1 mg/L maximum
d.	Total coliform bacteria	At any point downstream of the disinfection facilities after adequate contact with disinfectant, the median number of total coliform organisms shall not exceed 23 MPN/100 mL as determined from the bacteriological results of the last seven (7) days for which analyses have been completed, and the number of total coliform organisms shall not exceed 240 MPN/100 mL in any two consecutive samples.

3. The Producer shall discontinue delivery of reclaimed water to Users during any period in which it has reason to believe that the limits for that use as specified in A.1 or A.2 of this Order are not being met. The delivery of reclaimed water shall not be resumed until all conditions which caused the limits to be violated have been corrected.

4. The State Department of Health Services is currently revising the Title 22 regulations for water reuse. When revised regulations are finalized, the Executive Officer may authorize changes to the restricted and unrestricted reclaimed water uses consistent with those regulations.

B. Prohibitions

1. The treatment, storage, distribution, or reuse of reclaimed water shall not create a nuisance as defined in section 13050(m) of the California Water Code.

2. No reclaimed water used for irrigation shall be applied during periods of rainfall or when soils are saturated such that runoff occurs.

3. No reclaimed water used for irrigation shall be allowed to escape to areas outside the designated use areas by surface flow or by airborne spray.

4. Spray, mist, or runoff shall not enter a dwelling, food handling facility, or a place where the public may be present and shall not contact any drinking fountain.

5. No reclaimed water shall be discharged from the treatment facilities, irrigation holding tanks, storage ponds, or other containment, other than for irrigation or industrial reuse in accordance with this Order or for discharge to a municipal sewage collection system.

6. Reclaimed water shall not be used as a domestic or animal water supply. There shall be no cross-connections between the potable water supply and pipes containing reclaimed water. Supplementing reclaimed water with water used for domestic supply shall not be allowed except through an air-gap separation. In accordance with CCR Title 17, Section 7604, a reduced pressure principle backflow device shall be provided at premises where reclaimed water is used and there is no interconnection with the potable water system. This requirement does not apply to individual residences using reclaimed water for landscape irrigation as part of an approved dual plumbed use area as defined in CCR Title 22, Section 60312.

C. Provisions

1. Order No. 91-043 is hereby rescinded. This Order supersedes Order 91-042 for all uses specified by that Order.

2. The Producer will establish and enforce rules and regulations for reclaimed water Users, governing the design and construction of reclaimed water use facilities and the use of reclaimed water, in accordance with the uniform statewide reclamation criteria established pursuant to California Water Code Section 13521, and subject to Executive Officer review and approval. The Producer will also develop and submit for approval administrative procedures specifying how the reclaimed water rules and regulations and permit-based system for regulating users will be implemented.

3. Reclaimed Water Use permits, issued by the Producer in accordance with approved

rules and regulations, form the basis of permitted reclaimed water use by specific Users. Reclaimed Water Use permits shall specify self-monitoring requirements for each User. If someone other than the User is responsible for applying the reclaimed water (Distributor), e.g. a truck hauler, then the User shall inform them of these requirements in a written permit or other suitable manner. A Distributor shall fill out a Reclaimed Water Release Form when receiving reclaimed water from the Producer.

4. A copy of the Reclaimed Water Use permit and this Order must be provided to the Users by the Producer. The Users must have these available at all times for inspection by Regional Board staff, the Producer, or State/County Health Officers. The Distributors must carry the Reclaimed Water Release Form at all times.

5. The Producer shall comply with the self-monitoring program as adopted by the Board and as may be amended by the Executive Officer. The Producer is responsible for collecting reports from Users. Users are responsible for submitting on-site observation reports and use data to the Producer, who will compile and file self-monitoring reports with the Regional Board.

6. The Producer will be responsible for ensuring that reclaimed water meets the quality standards of this Order and for operation and maintenance of major transport facilities and associated appurtenances. Users will be responsible for the application of reclaimed water on their respective use areas and associated operations and maintenance. The Producer will conduct periodic inspections of User facilities to monitor compliance with conditions of the Producer's issued permit and this Order.

7. The Producer and Users shall maintain in good working order and operate as efficiently as possible any facility or control system installed by the Producer or Users to achieve compliance with the water reclamation requirements.

8. The Producer and Users shall provide employee training to assure proper operation of reclamation facilities, worker protection, and compliance with this Order. In accordance with CCR Title 17, Section 7586, each User shall designate a Reclaimed Water Supervisor responsible for compliance with permit conditions.

9. The Producer shall assure that the backflow preventers are in proper working order by testing initially and annually thereafter, in accordance with CCR Title 17, Section 7605. Reports of testing and maintenance shall be maintained by the Producer.

10. The Producer and Users shall assure that all above ground equipment, including pumps, piping, storage reservoir, and valves, etc. which may at any time contain reclaimed water shall be adequately and clearly identified with warning signs. The Producer and Users shall make all necessary provisions to inform the public that the liquid being distributed is reclaimed water and is unfit for human consumption.

11. Reclamation facilities shall be operated in conformance with the California Department of Health Services' "Guidelines for Use of Reclaimed Wastewater for Irrigation and Impoundment," "Guidelines for Worker Protection at Reclamation Use

Areas," the American Water Works Association, California-Nevada Section's *Guidelines for the Distribution of Non-potable Water*, and the Producer's approved reclaimed water use rules and regulations and administrative procedures.

12. The Producer and Users shall permit the Board or its authorized representative in accordance with California Water Code Section 13267(c):

    a. Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of the Order.

    b. Access to and copy of any records that must be kept under the conditions of this Order.

    c. Inspection of any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order.

    d. To photograph, sample, and monitor for the purpose of assuring compliance with this Order.

13. The Board will revise this Order periodically and may revise these requirements when necessary.

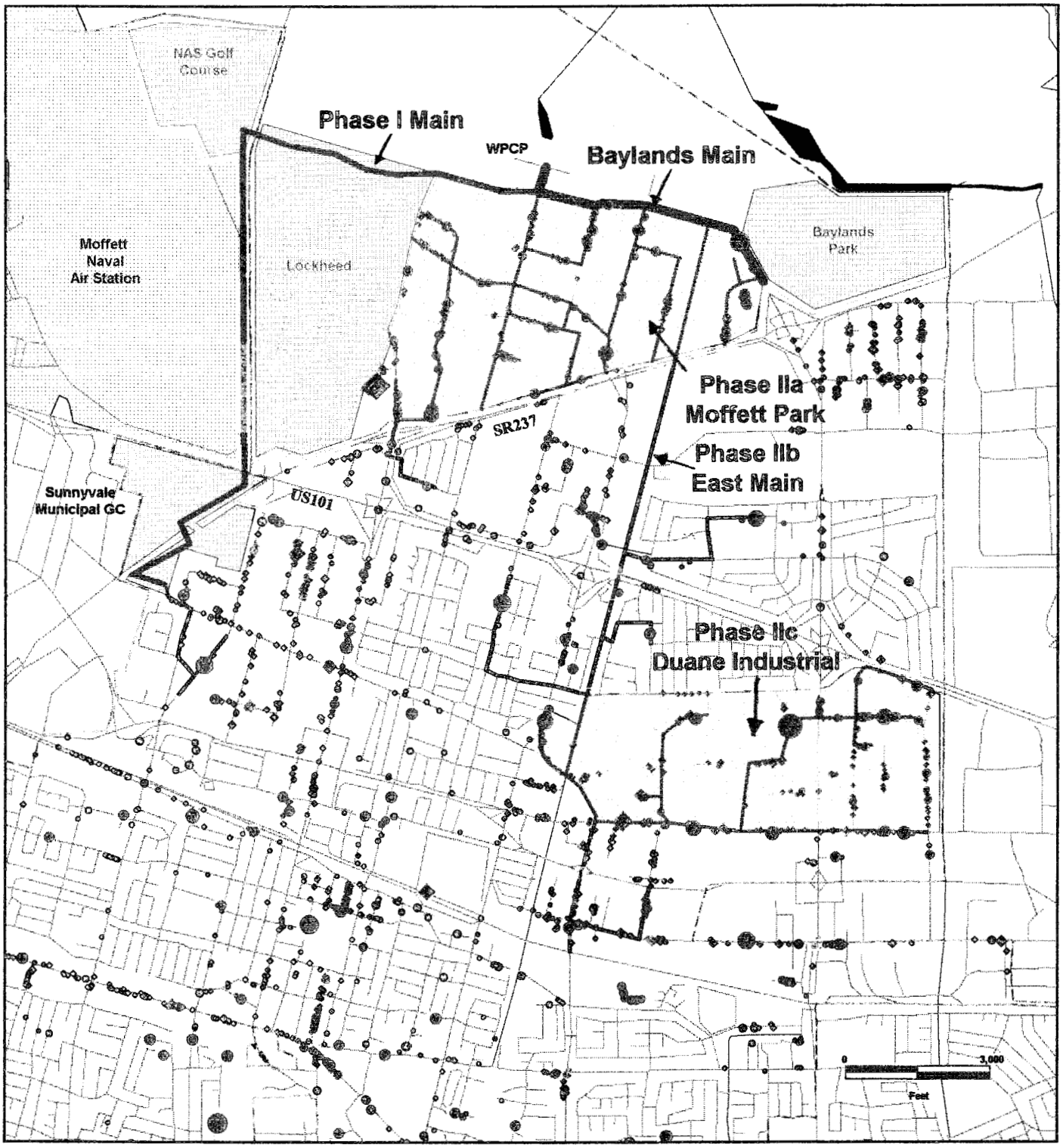
I, Steven R. Ritchie, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on June 15, 1994.

STEVEN R. RITCHIE
EXECUTIVE OFFICER

Attachments:

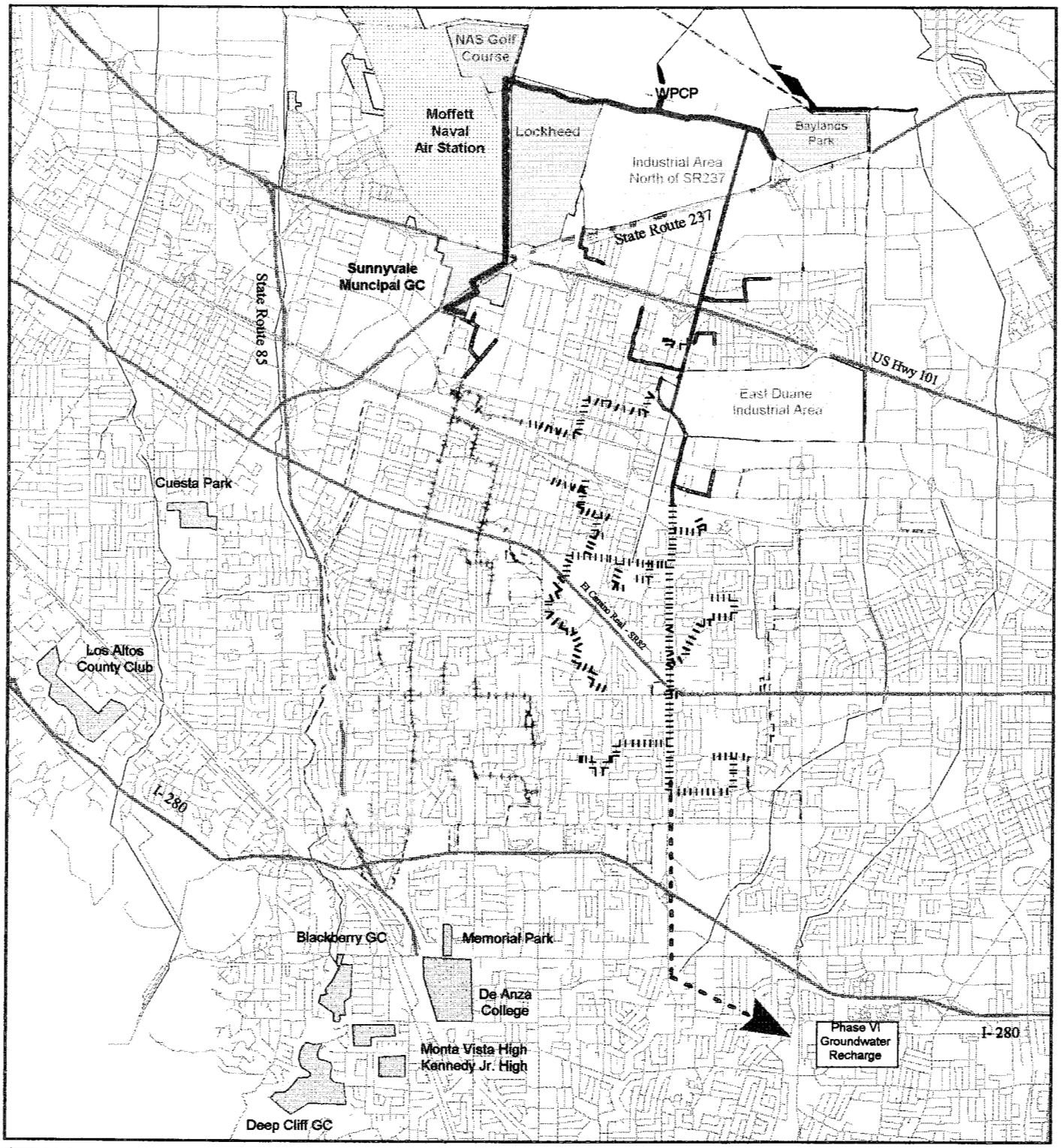
A. Figures 1 and 2 -- Sunnyvale WPCP Water Reclamation Reuse Areas
B. DOHS Guidelines for Use of Reclaimed Wastewater for Irrigation and Impoundment
C. DOHS Guidelines for Worker Protection at Water Reclamation Use Areas
D. Self-Monitoring Program

File No. 2189.8382 (SMM)



N	**Water Recycling Program** **Phase I & II Pipelines and Non-Residential Landscape Demand** City of Sunnyvale	**Legend** Phase I & Baylands Phase IIa, b, & c **Demand (CCF)** 1 100,000 Existing Landscape Estimated Landscape	Figure No. 1 EOA, Inc. 02/09/94

9402SR02.WOR



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Water Recycling Program
Draft Conceptual Master Plan
Pipeline Phasing Alternatives

City of Sunnyvale

Legend

- Phase I - Baylands, LMSC Municipal GC, Moffett GC, & US101
- Phase II - Partial North SR237 & East Duane Industrial Areas
- Phase III - West Header Parks, Playgrounds & HOA's
- Phase IV - Cupertino/Los Altos Extensions (Golf Courses & Parks)
- Phase V - East Header Parks, Playgrounds & HOA's

Figure No. 2

EOA, Inc.

02/09/94

9402SR02.WOR

CALIFORNIA REGIOANL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

CITY OF SUNNYVALE
SUNNYVALE WATER POLLUTION CONTROL PLANT
RECYCLED WATER PROGRAM
SANTACLARA COUNTY

ORDER 94-069

(Revised on December 28, 1999, consisting of Attachments C and D from General Water Reuse Requirements, Order No. 96-011)

ATTACHMENT C

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

Order No. 96–011

A. GENERAL

Reporting responsibilities of water recycling agencies are specified in Sections 13255(a), 13267(b), 13268, 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No. 73-16.

The principal purposes of a monitoring program by water recyclers, also referred to as the self-monitoring program, are:

1) To document compliance with water quality requirements and prohibitions established by this Regional Board; and

2) To facilitate self-policing by the water recyclers.

B. RECYCLED WATER MONITORING

A Producer shall develop and implement a water reuse monitoring program. When the User(s) is other than the Producer, delegation of responsibilities must be clearly spelled out and included in the Producer's Water Use Permits.

Recycled Water Effluent Quality – Producer Program

The Producer's self-monitoring program is applicable during periods when recycled water is in use. The SMP program shall include the observations, sampling, measurements, and analyses prescribed in Table 1.

Description of Sampling and Observation Stations

a. Recycled Water

Station	Description
E-001	Location at the wastewater treatment plant where a representative sample of treated effluent being diverted for reuse can be obtained and total diverted flow can be measured.

Monitoring of Recycled Water Users - Producer/User Program

Self-Monitoring Program

The Producer will set individual user monitoring requirements based on the size, volume used, complexity, etc. of each use area. Producer conducted monitoring, or user self-monitoring if approved by the Producer, shall be conducted at least annually.

All recycled use areas, while recycled water is being used, shall beinspected at a frequency, specified by the Producer's Water Reuse Permit , for the following deficiencies or violations of use:

1. Standard Observations

   a. Evidence of runoff of recycled water from the site (show affected area on a sketch, estimate volume).

   b. Odor of wastewater origin from irrigation site. If present, indicate apparent source, characterization,and direction of travel.

c. Evidence of ponding of recycled water, and evidence of mosquitoes breeding within the irrigation area due to ponded water.

d. Warning signs properly posted to inform public that irrigation or water use is recycled water which is not safe for drinking.

e. Evidence of leaks or breaks in the irrigation system pipelines or tubing.

f. Evidence of broken, or otherwise faulty drip irrigation system emitters or spray irrigation sprinklers.

g. Evidence of overflows, leaks, erosion of dikes, etc. of storage pond(s) or impoundment(s).

All violations shall be followed by a discussion of when and how deficiences were corrected.

2. Description of Sampling and Observation Stations

a. Land Observation Stations

Station	Description
L-1 to L-n	Locations at a sufficient number of points at reuse areas in order to ensure compliance with water reuse requirements.

b. Impoundment Stations

Station	Description
P-1 to P-n	Locations at points along the periphery of each storage, ornamental, golf course, or other pond or impoundment.

Inspection Program

A Producer shall also conduct periodic random inspections of Users to ensure compliance with DHS reuse criteria and the Water Reuse Permit. Inspections shall be performed when recycled water is being used. Any significant repairs or modifications made to the system involving compliance with this Order shall be described in the Annual Report.

C. REPORTING REQUIREMENTS

1. Significant Violation Reporting

Violations of the DHS reuse criteria that impact or threaten to impact public health or water quality shall be reported to the Board by phone within 24 hours, followed by a written report within 15 days describing corrective actions taken.

2. Annual Report to the Regional Board

An annual report for each calender year shall be submitted to the Board by the Producer by March 15 of each year. The report shall contain a statement by the reporting official, under penalty of perjury, that to the best of the signer's knowledge the report is true and correct.

The report shall include:

a. Tabulation of SMP recycled water analyses (see Table 1).

b. A tabular summary of recycled water use by billing period by each User.

c. A list of new authorized recycled water Users, including the name of customers, application, source and projected annual flow to be delivered.

d. A summary of the total daily recycled water delivered by the Producer.

e. Tabulation of User site inspections conducted by the Producer.

f. A summary of effluent violations related to recycled water use, violations found during inspection of reuse sites, corrective actions taken and any changes to, or revoking of User authorizations by the Producer.

In addition there shall be a comprehensive discussion of the progress and results of the water recycling program. The discussion shall also include:

g. An update regarding current and future development of the water recycling program, including planning, design and construction of facilities, preparation of required reports and technical documents and progress toward regulatory approvals.

h. Progress and evaluation of any special studies or projects being undertaken related to the program.

I, Loretta Barsamian, Executive Officer, do hereby certify that the foregoing Self-Monitoring Program is effective on the date shown below and may be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the Producers. Revisions to the SMP will be authorized in writing by the Executive Officer.

Loretta K. Barsamian
Executive Officer

Attachment:
Table 1 – Producer Schedule for Sampling, Measurements, and Analyses

File No. 2107.00

January 17, 1996

Table 1: Producer's Schedule Sampling & Analyses

	E-001		All L	All P
TYPE OF SAMPLE	Grab	Cont.	Obs.	Obs.
Flow Rate (gallons/day)		D	D*	D*
Total Coliform (MPN/100ml)	D**/#			
Turbidity (NTU)		D**/#		
Dissolved Oxygen (mg/l)	3/W**			
Dis. Sulfides (mg/l) (if DO <1mg/l)	3/W**			
Appl. Stand. Observations			A***	A***

LEGEND FOR TABLE 1

Type of Sample

Grab = Instantaneous grab sample
Cont. = Continuous monitoring (recorder)
Obs. = Observation

Sampling Frequency

D = Daily
3/W = Three times per week
A = Annually

* Records of recycled water use at each site may be compiled from billing period readings (divided by number of days to obtain daily flow) and submitted with the annual report.

** Equivalent routine effluent (NPDES/WDR) monitoring data collected on days and during times (grab samples) recycled water is being produced can be submitted in fulfillment of these requirements.

*** User sites to be inspected a minimum of annually for "Applicable Standard Observations" based on the size and complexity of each site in accordance with the Producer's Water Reuse Program.

\# Unless current NPDES or WDR sampling frequency is less. Turbidity would apply to tertiary water only and is based on a 24-hour composite sample.

ATTACHMENT D

STANDARD PROVISIONS
&
REPORTING REQUIREMENTS

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

January 1996

STANDARD PROVISIONS AND REPORTING REQUIREMENTS

for

WATER REUSE ORDERS

A. GENERAL PROVISIONS

1. Duty to Comply

   a. A water recycler must comply with all of the conditions of this Order. Any Order noncompliance constitutes a violation of the Porter-Cologne Water Quality Control Act and/or Basin Plan and is subject to enforcement action.

   b. The filing of a request by the Producer for an Order modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition.

2. Duty to Mitigate

   The Producer shall take all reasonable steps to minimize or prevent any discharge in violation of this Order which has a reasonable likelihood of adversely affecting public health or the environment, including such accelerated or additional monitoring as requested by the Board or Executive Officer to determine the nature and impact of the violation.

3. Property Rights

   This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, nor protect the discharger from liabilities under federal, state or local laws.

4. Duty to Provide Information

   The Producer shall furnish, within a reasonable time, any information the Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the Order. The Producer shall also furnish to the Board, upon request, copies of records required to be kept by its Order.

5. Availability

   A copy of this Order shall be maintained at Producer and distributor facilities and be available at all times to operating personnel.

B. TREATMENT RELIABILITY

1. The Producer shall, at all times, properly operate and maintain all facilities and systems of treatment disposal and control (and related appurtenances) which are installed or used by the Producer to achieve compliance with this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. All of these procedures shall be described in an Operation and Maintenance Manual. The Producer shall keep in a state of readiness all systems necessary to achieve compliance with the conditions of this Order. All systems, both those in service and reserve, shall be inspected and maintained on a regular basis. Records shall be kept of the tests and made available to the Board.

2. Recycled water treatment facilities subject to this Order shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to Division 4, Chapter 14, Title 23 of the California Code of Regulations. (See Definition E. 4)

C. GENERAL REPORTING REQUIREMENTS

1. Signatory Requirements

a. All reports required by the order and Order and other information requested by the Board shall be signed by a principal owner or operator, or by a duly authorized representative of that person.

Duly authorized representative is one whose:

1) Authorization specifies either an individual or a position having responsibililty for the overall operation of the regulated facility or activity, such as general manager in a partnership, manager, operator of a well or a well field, superintendent, positon of equivalent responsibility, or an individual or positon having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named positon.); and

2) Written authorization is submitted to the Board. If an authorization becomes no longer accurate because a different individual or positon has responsibililty for the overall operation of the facility, a new authorization satisfying the requirements above must be submitted to the Board prior to or together with any reports, information, or applications to be signed by an authorized representative.

b. Certification

All reports signed by a duly authorized representative under Provision C.1.a. shall contain the following certification:

"I certify under penalty of law that this document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

2. Should the responsible reporting party discover that it failed to submit any relevant facts or that it submitted incorrect information in any report, it shall promptly submit the missing or correct information.

3. False Reporting

   Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order, including monitoring reports or reports of compliance or noncompliance shall be subject to enforcement procedures as identified in Section D of these Provisions.

D. ENFORCEMENT

1. The provision contained in this enforcement section shall not act as a limitation on the statutory or regulatory authority of the Board.

2. Any violation of the Order constitutes violation of the California Water Code and regulations adopted thereunder and is the basis for enforcement action, Order termination, Order revocation and reissuance, denial of an application for Order reissuance; or a combination thereof.

3. The Board may impose administrative civil liability, may refer a discharger to the State Attorney General to seek civil monetary penalties, may seek injunctive relief or take other appropriate enforcement action as provided in the California Water Code for violation of Board orders.