



City of Mountain View Customer Guidelines for Recycled Water Use

Updated: January 2016*

*Changes made to Standard Details (Appendix E)

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Section 1. Introduction

Recycled water is used throughout California for non-potable uses such as irrigation, toilet flushing and cooling towers. Recycled water is produced from wastewater that undergoes a high level of additional treatment transforming it to a very high quality water supply. Using recycled water significantly reduces demands on the potable water supply, conserving this valuable resource. In this set of guidelines, “recycled water” is wastewater that has been treated to the highest classification of recycled water - disinfected tertiary recycled water.

1.1. Purpose

The purpose of these Customer Guidelines to Recycled Water Use is to outline the requirements for customers to design, construct, operate, and maintain their on-site recycled water system, and to document the process for connecting to the City’s recycled water system.

The City of Mountain View (City) will work closely with recycled water customers to ensure that every on-site recycled water system is designed, constructed, operated and maintained for safe use of recycled water. **Section 1** provides information about why these guidelines are necessary, how they were developed, and who to contact if you have any questions.

1.2. Background

These guidelines were developed to be consistent with several recycled water requirements, including the San Francisco Bay Regional Water Quality Control Board Order No. 93-160, Title 22 of the California Code of Regulations, the City’s Municipal Code, and other codes, laws, statutes or regulations governing recycled water use. Information from the American Water Works Association (AWWA) California/Nevada Section’s Guidelines for the On-Site Retrofit of Facilities Using Disinfected Tertiary Recycled Water was also used in the development of these guidelines. Customers preparing to follow these guidelines should check with the City for updates which may affect their project.

To aid in understanding the terminology in this document, a list of definitions is provided in **Appendix A**.

1.3. Local Authority

The City is the local authority having the responsibility for implementing and enforcing these guidelines for the use of recycled water within the City of Mountain View. Various regulations governing recycled water use are outlined in the resolutions, policies and ordinances of the City that are cited herein.

1.4. Severability

If any section, subsection, clause or phrase of these guidelines is for any reason held to be invalid, the remaining portions of these guidelines shall remain in effect.

1.5. References

1. **California Code of Regulations (CCR), Title 22, Division 4, Chapter 3, "Water Recycling Criteria"**: These regulations are written by the California Department of Public Health (CDPH) and specify the approved uses and use area requirements, such as hose bib restrictions, prohibition of irrigation near wells, etc. The regulations govern both the City's recycled water system as well as the Customer's on-site recycled water system.
2. **California Code of Regulations (CCR), Title 17, Division 1, Chapter 5, "Drinking Water Supply – Backflow Prevention"**: Title 17 specifies requirements intended to protect the public drinking water supply from contamination. Some requirements specified in Title 17 include backflow prevention devices, designation of a Customer Site Supervisor and cross-connection testing requirements.
3. **California Code of Regulations (CCR), Title 24, Part 5, Chapter 16A, "Non-Potable Water Reuse Systems"**: Title 24, Part 5 is the California Plumbing Code (CPC), which is based on the Uniform Plumbing Code (UPC). Specified in Title 24 are requirements for delivering recycling water to a building including plumbing fixture, signage, inspection and cross-connection testing.
4. **American Water Works Association (AWWA), California-Nevada Section, Guidelines for the On-Site Retrofit of Facilities Using Disinfected Tertiary Recycled Water**: This document provides recommended guidelines for retrofitting existing infrastructure downstream of the recycled water meter so that Customers can use recycled water.
5. **Regional Water Quality Control Board Order No. 93-160**: The San Francisco Bay Regional Water Quality Control Board (RWQCB) is the agency responsible for regulating the use of recycled water in the San Francisco Bay Area. The RWQCB promulgated Order No. 93-160, which contains the specific requirements that the City and its Customers must follow in order to use recycled water from the Palo Alto Regional Water Quality Control Plant (RWQCP).
6. **Agreement to Implement Order No. 93-160**: Pursuant to an agreement with the City of Palo Alto (Contract No. C059999), the City of Mountain View is designated as the responsibility for implementing the requirements of Order No. 93-160 within the City's jurisdiction.
7. **City of Mountain View Code of Ordinances**: Various City of Mountain View ordinances apply to the use of recycled water, as described specifically in Chapter 35, Water, Sewage and other Municipal Services. Applicable sections of Chapter 35 include, but are not limited to, Backflow Prevention and Cross-Connection Control, and Recycled Water for Irrigation. The City is responsible for adopting and enforcing ordinances for the protection of public health and the municipal water supply, as well as requiring the use of recycled water to help supplement the overall water supply.
8. **City of Mountain View Customer Guidelines for Recycled Water Use**: The guidelines described herein are to be followed by all recycled water users and Site Supervisors. The City is responsible for updating these guidelines as required by applicable State law and regulations.

1.6. City Contacts

For questions about connecting your property to the City's recycled water system contact:

Recycled Water Program
City of Mountain View – Public Services Division
231 North Whisman Road
Mountain View, CA 94043

Phone: (650) 903-6329
Fax: (650) 962-8079

1.7. Acknowledgements

In preparing this document, the City acknowledges the assistance of a number of entities including the City of Palo Alto and the City of San Jose. The City is also grateful to the City of Redwood City, City of San Jose, South Bay Water Recycling and the WateReuse Association for sharing key reference material used to generate these guidelines.

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Section 2. Planning for Recycled Water Use

2.1. Uses of Recycled Water

Sites may use recycled water for a variety of non-potable uses approved by California Department of Public Health (CDPH), including landscape irrigation, toilet flushing and commercial cooling systems. **Table 1** lists several common urban uses of recycled water that are approved in Mountain View. If you wish to use recycled water for anything that is not listed in **Table 1**, please contact the City to discuss your proposed use of recycled water.

Sites located within the City’s recycled water service area are required to use recycled water for landscape irrigation. The City may exempt your site from this requirement if recycled water will not be available to serve the site in the foreseeable future, or for other select reasons described in Chapter 35, Article V, of the City Code. In order to protect the public water supply, all uses of recycled water (e.g., irrigation, uses for indoor toilets and urinals) must be metered separately from the potable water supply system and must have no on-site cross-connections to the potable water supply system.

For your reference, a copy of City Code Chapter 35, Article V (Recycled Water for Irrigation), is included as **Appendix B** and a map of the City’s current Recycled Water Service Area is included as **Appendix C**.

Table 1. Approved Uses of Recycled Water in Mountain View

OUTDOOR USES	
	Irrigation of: <ul style="list-style-type: none"> • Commercial and residential landscaping • Parks and playgrounds • School yards • Golf courses • Cemeteries • Food crops
	Decorative fountains
	Recreational impoundments
	Commercial car washes
	Cleaning roads, sidewalks and outdoor work areas
	Backfill consolidation
	Soil compaction
	Mixing concrete
	Dust control on roads and streets
	Firefighting
	Sewer flushing
INDOOR USES	
	Flushing toilets and urinals
	Commercial laundries
	Cooling or air conditioning (industrial / commercial)
	Priming drain traps
	Industrial process water
	Industrial boiler feed

2.2. Permits

Prior to receiving recycled water at your site, you must obtain a Recycled Water Use Permit from the City. The purpose of the permit is to ensure that recycled water is used responsibly. To obtain your permit, please follow the steps outlined in **Section 2.3**. Your site may begin using recycled water once the permit has been finalized. Please be aware that there are many ongoing responsibilities to using recycled water (described in **Section 4**) and that the City may revoke your permit if these duties are not fulfilled. Please note that the Recycled Water Use Permit Application (**Appendix D**) should be packaged with the Building Permit for submittal to the Building Division.

2.3. Procedures for Obtaining Recycled Water Service

The complete procedures for obtaining recycled water are shown in **Figure 1**. Properties with existing connections to the recycled water system may be exempt from steps 1 to 3 outlined in **Figure 1**. Please contact the City using the contact information shown in **Section 1.6** if you have any questions. Specific forms and details needed to obtain recycled water service are listed in **Figure 1**.

Figure 1a: Steps to Connect to the Mountain View Recycled Water System. Additional steps for Dual-Plumbed systems are shown in Figure 1b.

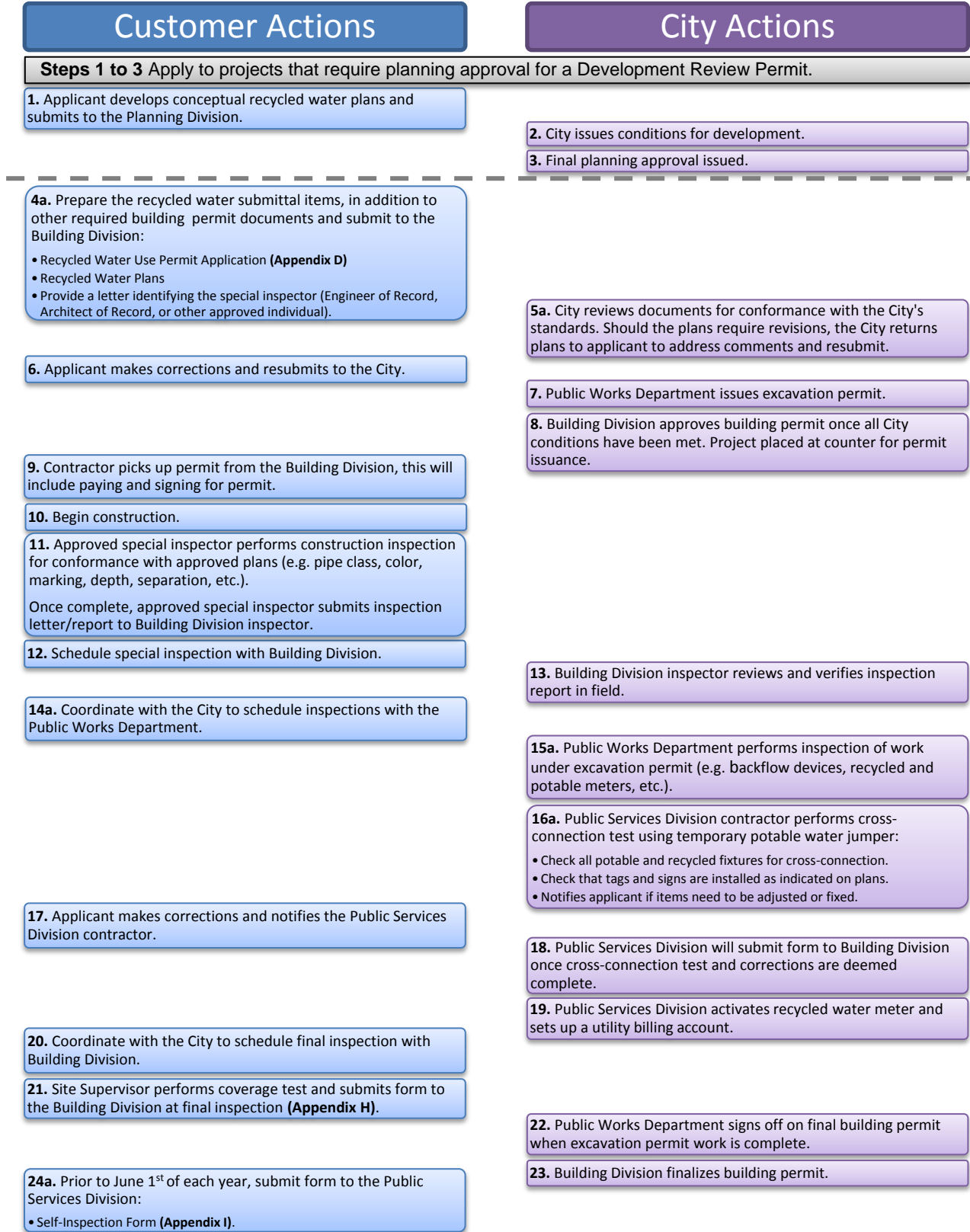


Figure 1b. Additional steps for Dual-Plumbed systems to connect to the Mountain View Recycled Water System.

Dual Plumbed Systems should follow the rules and regulations put forth by the City of Mountain View, the California Code of Regulations (Title 22, Division 4), and the California Plumbing Code (Chapter 16A).

Customer Actions

4b. The items in the Dual Plumbing Engineering Report is listed in Title 22 of the California Code of Regulations (**Appendix K**) which includes the following:

- Description of the intended use area.
- Plans and specifications.
- Methods to be used by the recycled water agency to assure that the installation and operation of the dual plumbed system will not result in cross connections.

14b. Notify Building Division for inspection.

24b. Prior to June 1st, submit forms to the Public Services Division (**Appendix G**):

- Annual self-inspection form.
- Cross-connection test every four (4) years.

City Actions

5b. For sites using recycled water for indoor purposes, submit Dual Plumbing Engineering Report to Public Services.

The City will submit Dual Plumbing Engineering Report to the California Department of Public Health (CDPH) once City staff deems recycled water plans complete. CDPH review and approval could take 30 days or more.

15b. Building Division performs inspection of the dual plumbed system to check for compliance with the California Plumbing Code CH 16A (e.g. piping, material, fixtures, labeling).

16b. Public Services Division contractor performs cross-connection test using temporary potable water jumper:

- Check all potable and recycled fixtures for cross-connection.
- Check that tags and signs are installed as indicated on plans.
- Perform a Visual cross-connection system inspection every year
- Perform a Physical cross-connection test every four (4) years

2.4. Protection of Public Health

If real or potential hazards occur during construction or operation of any on-site recycled water system, the City will order corrective actions or terminate your recycled water service in order to protect public health. These hazards include, but are not limited to:

- Cross-connections with the potable system.
- Unapproved/prohibited uses of recycled water.
- Improper tagging, signing or marking.

In some circumstances, the City may elect to temporarily replace your recycled water supply with potable water. All necessary modifications, including the installation of a new lateral connecting to the potable water pipeline, installation of a backflow preventer, new connection to the on-site water pipeline, and disinfection of the on-site water supply, will be at the Customer's expense.

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Section 3. Design, Installation and Inspection Requirements

The purpose of this section is to outline the process for design, installation, identification and inspection of on-site recycled water systems. Facilities referred to herein as “on-site” include all piping and appurtenances located on the Customer’s property downstream of the water meter. All on-site facilities are owned, operated and maintained by the Customer.

All recycled water facilities upstream of, and including, the recycled water meter and meter box are the property and responsibility of the City. These facilities include recycled water distribution pipelines, the recycled water lateral, meter box and meter.

3.1. On-Site Design Requirements

Table 2 outlines the on-site design requirements for the use of recycled water. For site-specific design questions or to discuss the requirements for your proposed project, please contact the City at the contact information shown in **Section 1.6**.

Before any new on-site recycled water system is constructed or any existing on-site recycled water system is modified, **on-site recycled water system plans must be prepared by the Customer and approved by the City.** Please refer to **Section 2.3** for the process to get the plans approved and **Section 3.2** for the information to be included on these plans.

Table 2: On-Site Recycled Water System Design Requirements

No Cross-Connections	No cross-connections are allowed between the on-site recycled water system and any other water system (e.g., potable or other).
Pressure	The City’s recycled water system currently provides recycled water at pressures ranging between 65 to 100 psi. Designers should contact the City to determine the pressure available at their recycled water point of connection. Customers may, at their discretion, choose to install a pressure regulating valve for their on-site recycled water system. Pressure regulating valves are not required by the City.
Service Connection	Designers should contact the City or consult their approved development plans to verify the recycled water meter location, the size of the lateral and meter size approved to serve their facility. All new recycled water services shall be located at least 10’ from any potable water service.
Pipe Color and Marking	Please refer to Appendix E for specific pipe color and marking requirements.
Depth of Cover and Pipe Class For All New Pipelines	New pipelines installed by the Customer for their on-site recycled water system must meet the requirements outlined in the Standard Notes and Details (Appendix E).
Separation Requirements	New pipelines installed by the Customer for their on-site recycled water system must meet the requirements outlined in the Standard Notes and Details (Appendix E).

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<p>Backflow Prevention Device</p>	<p><u>For Recycled Water Connection</u> Backflow preventers are generally not required on recycled water services. However, the City may require installation of a backflow preventer if it is needed to protect the public water supply.</p> <p><u>For Potable Water Connection</u> Backflow preventers are required for all potable water services at sites where recycled water is used. A reduced pressure principal backflow device must be located as close as practicable to the downstream side of every potable water meter.</p> <p>When required, new backflow preventers installed by the Customer must meet the requirements outlined in the Standard Notes and Details (Appendix E). Recycled water backflow preventers shall be the type specified in the City Municipal Code (Part II, Chapter 35, Article II), shall be tested and monitored through the City's backflow device testing program, and shall be labeled and painted in accordance with these guidelines.</p>
<p>Exceptions for Existing Irrigation Systems</p>	<p>Facilities where the existing buried piping system is converted from potable to recycled water do not need to provide the minimum separation requirements for parallel potable and recycled water pipelines, as long as the existing facilities are not being modified. Other separation requirements (e.g., groundwater wells) still apply.</p> <p>Any new buried piping added to the existing piping at these facilities are not exempt from the separation requirements outlined in these guidelines.</p> <p>In addition, any existing potable water or recycled water piping uncovered for any reason during construction must be marked according to Appendix E.</p>
<p>Prevent Overspray, Runoff and Ponding</p>	<p>Irrigation systems must be designed and operated to prevent overspray or runoff of recycled water outside of the approved use area. Ponding of recycled water within the approved use area is also prohibited.</p>
<p>Protection of Groundwater Wells</p>	<p>Irrigation systems must be designed to prevent irrigation of recycled water within 50' of any domestic water supply well. Recycled water impoundments must be located at least 100' away from any domestic water supply well.</p>
<p>Protection of Drinking Fountains and Outdoor Eating Areas</p>	<p>Drinking fountains, outdoor eating areas and other similar areas where food is produced or consumed that are located within the approved recycled water use area must be protected from overspray with recycled water.</p> <p>Protection may be achieved by:</p> <ul style="list-style-type: none"> • Relocating the irrigation system • Directing the spray from the irrigation system to not hit these areas • Relocating or modifying the drinking fountains or outdoor eating areas • Other methods approved by the City.
<p>Hose Bibs</p>	<p>Hose bibs are not allowed on any on-site recycled water system. Quick-coupling valves specifically designed for recycled water use that use reverse-threaded quick coupler keys may be used in lieu of hose bibs.</p>
<p>Tagging and Labeling</p>	<p>Identification of potable and recycled water piping and appurtenances is required as sites receiving recycled water. Please refer to Appendix E for specific tagging and labeling requirements.</p>

<p>Signage</p>	<p>Appendix E and Appendix J describe the standard recycled water advisory signs to be located within each Customer’s approved recycled water use area. Recycled water advisory signs are to be placed on the Customer’s property at locations specified below.</p> <p><u>For Landscape Irrigation, signs shall be located at:</u></p> <ul style="list-style-type: none"> • Property entrances (vehicular, and bicycle, pedestrian) • Water features supplied with recycled water • Each end of streetscapes (no further than 1,000’ apart) or medians. <p><u>For Indoor Uses (e.g., toilet and urinal flushing), signs shall be located in:</u></p> <ul style="list-style-type: none"> • Each room using recycled water. <p>The Customer is encouraged to consult with the City to specify exact sign placement. Please refer to Appendix E and Appendix J for specific signage requirements.</p>
<p>Chemical Injection</p>	<p>Delivery of chemical fertilizers or pesticides to landscaped areas by means of injection into the on-site recycled water system is prohibited by the City.</p>
<p>On-Site Backup</p>	<p>Sites using recycled water for toilet and urinal flushing are <u>required</u> to have an on-site backup water supply. Please refer to Appendix J for these requirements.</p> <p>Sites using recycled water for purposes other than toilet and urinal flushing (e.g., landscape irrigation or cooling) are not required to have an on-site backup water supply, however an on-site backup system may be installed at the discretion of the Customer.</p> <p>Proposed on-site backups must adhere to all applicable codes and regulations, including but not limited to, CCR Title 17, and must be equipped with an air gap to prevent the cross-connection between the on-site potable and recycled water systems. The proposed design for all on-site backup water supplies must be included in the Dual Plumbing Engineering Report, if such a report is required for your project.</p>

3.2. Information Required on Plans for Irrigation Uses

The information to be submitted by Customers wishing to use recycled water in landscape irrigation is outlined below. Additional information required for Customers intending to use recycled water for indoor uses (e.g., toilet or urinal flushing) is contained in **Section 3.3**.

Please note that preparation of plans in accordance with these guidelines does not exempt you from submitting other plans normally required by the City. Other improvement plans must still be submitted in accordance with standard procedures.

On-site recycled water system plans prepared for landscape irrigation must include the following:

- Site Plans
- Standard Notes and Details
- Site Information Box

Site Plans: Customer shall prepare site plans for their on-site recycled water system. These site plans may encompass multiple sheets, as the designer sees fit. The content of these site plans must include the following items and be stamped by either a civil engineer or landscape architect licensed to perform work in the State of California:

- ✓ Boundaries of the intended recycled water use area.
- ✓ Potable and recycled water use areas should be non-contiguous and be separated by hardscape.
- ✓ Adjacent streets.
- ✓ Locations of all major improvements on the site.
- ✓ All sources of water, including any on-site groundwater wells.
- ✓ Water meters (recycled water and potable water).
- ✓ Type and location of backflow prevention devices.
- ✓ Complete plans for on-site recycled water system including locating strainers, master valves, pressure regulating valves, control valves, irrigation main lines and quick couplers.
- ✓ Irrigation system legend that specifies all materials for construction of the on-site recycled water system, including pipelines, appurtenances and type of water conveyed in that facility.
- ✓ The Standard Notes and Details (**Appendix E**) shall be part of the Customer's design drawings submitted for approval to the City and referenced in the Customer's site plan drawings where applicable (see below).
- ✓ Replacement of existing hose bibs or quick couplers on the on-site recycled water system with quick couplers specific to recycled water use (i.e., reverse threaded with purple lid).
- ✓ Location of all irrigation system controllers.
- ✓ Location of recycled water advisory signs.
- ✓ Location of all new potable water and new recycled water pipelines and how these pipelines comply with the minimum pipeline separation requirements.
- ✓ Location of existing potable water pipelines in recycled water use area (if available).
- ✓ Clear delineation of which facilities are existing and which facilities are proposed to be constructed as part of the project.
- ✓ Location (and callouts for labeling per Standard Notes and Details) of any potable water outlets within the Customer's recycled water use area (e.g., drinking fountains, hose bibs).
- ✓ Location of any water impoundments within 100' of the Customer's property, including lakes, ponds, reservoirs and decorative fountains.
- ✓ Completed Site Information Box (**Figure 2**).
- ✓ Other details as required to properly construct the on-site recycled water system.
- ✓ All public facilities supplied with recycled or potable water service (e.g., rest rooms, outdoor eating areas, snack bars, swimming pools, decorative fountains and outdoor showers). If there are no public facilities located in the defined use area, please note on the plans that no public facilities exist.
- ✓ Recycled and potable irrigation pipelines do not cross parcel boundary lines.

Standard Notes and Details: The Standard Notes and Details (**Appendix E**) specify the tagging, labeling, and pipe identification criteria for on-site recycled water systems. On-site recycled water systems must be tagged and labeled in accordance with these guidelines before the City can finalize your Recycled Water Use Permit.

Site information box: The information box shown in **Figure 2** must be included in the plans for each separately metered on-site recycled water system. Place this information on the same sheet for each property.

Figure 2: General Site Information for Recycled Water Use

GENERAL SITE INFORMATION FOR RECYCLED WATER USE		
1. LANDSCAPED RECYCLED WATER IRRIGATION USE AREA: (square footage).		
2. PUBLIC ACCESS TO SITE GROUNDS IS: (indicate UNRESTRICTED or RESTRICTED).		
3. OWNER: (legal property owner's name).		
4. PROPERTY MANAGER CONTACT: (name, title and telephone number).		
5. TENANT(S): (name(s) and telephone number(s); if not applicable, state NOT APPLICABLE).		
6. RECYCLED WATER METER(S): (for example, ONE; if none, state NONE).		
7. POTABLE WATER METER(S): (for example, ONE; if none, state NONE).		
8. DUAL PLUMBING ON-SITE: (indicate YES or NO)		
9. ON-SITE WELL LOCATIONS: (for example, ONE; if none, state NONE).		
10. WELLS ON ADJACENT SITES LOCATED WITHIN 50' OF RECYCLED WATER APPROVED USE AREA OR WITHIN 100' OF ANY RECYCLED WATER IMPOUNDMENT: (for example, ONE; if none, state NONE).		
11. OUTDOOR DRINKING FOUNTAINS IN/NEAR THE RECYCLED WATER APPROVED USE AREA: (for example, ONE; if none, state NONE).		
12. OUTDOOR EATING AREA(S) IN/NEAR THE RECYCLED WATER APPROVED USE AREA: (for example, ONE; if none, state NONE).		
13. WATER FEATURES ON-SITE: (examples below; if none, state NONE).		
<u>Number</u>	<u>Type</u>	<u>Water Source</u>
One	fountain	recycled
One	pond	potable

Additional information is required for sites proposing to use recycled water for indoor uses. This information is summarized in **Section 3.3**.

3.3. Use of Recycled Water for Approved Indoor Uses

If you are proposing to use recycled water inside a structure that is also plumbed with potable water you will be required to prepare a Dual Plumbing Engineering Report for that facility, in addition to all other required submittals. All dual plumbed systems must also meet applicable plumbing code requirements.

Dual Plumbing Engineering Report: Customers must prepare a Dual Plumbing Engineering Report for projects designed to use recycled water indoors. Once a Dual Plumbing Engineering Report has been submitted to the City, it will be routed to the CDPH for their review and approval. Please keep this process in mind when considering the timing of your project, and submit the Dual Plumbing Engineering Report as early as possible.

The required contents of the Dual Plumbing Engineering Report are defined in the CCR Title 22, Section 60314, and include the following:

- A detailed description of the intended use area identifying:
 - ✓ The number, location and type of facilities within the use area proposing to use dual plumbed systems.
 - ✓ The average number of persons estimated to be served by each facility on a daily basis.
 - ✓ The specific boundaries of the proposed use area, including a map showing the location of each facility to be served.
 - ✓ The person or persons responsible for operation of the dual plumbed system at each facility.
 - ✓ The specific use to be made of the recycled water at each facility.
- Plans and specifications for the plumbing within the building proposed to be dual plumbed shall be prepared that show the following information:
 - ✓ Proposed piping system to be used.
 - ✓ Pipe locations of both the recycled and potable systems.
 - ✓ Type and location of the outlets and plumbing fixtures that will be accessible to the public.
 - ✓ The methods and devices to be used to prevent backflow of recycled water into the public water system.
- 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 piping system and the potable water piping system. This shall include a description of pressure, dye or other test methods to be used to test the system every four years.

Plumbing Design: The design of a dual plumbed recycled water system must meet the requirements of the City of Mountain View Plumbing Code (Municipal Code Part II, Chapter 8, Article II). An excerpt from the City's current Plumbing Code related to the indoor use of recycled water is attached as **Appendix J**.

On-Site Backup Water Supply: Sites using recycled water for toilet and urinal flushing are required by the City to have an on-site backup water supply. Sites using recycled water for purposes other than toilet and urinal flushing are not required by the City to have an on-site backup water supply, however one may be installed at the discretion of the Customer. Proposed on-site backups must adhere to all applicable codes and regulations, including but not limited to, CCR Title 17, and must be equipped with an air gap to prevent the cross-connection between the on-site potable and recycled water systems. The proposed design for all on-site backup water supplies must be included in the Dual Plumbing Engineering Report.

3.4. Construction Process

Once the plans are approved and the Customer has obtained all required City permits, the Customer may begin construction of their recycled water system. Though every construction process is unique, the key elements of City involvement in the connection of the Customer's property are as follows:

- Construction inspection
- Cross-connection testing
- Coverage testing
- Finalization of the Recycled Water Use Permit

How the City is involved in each of these steps is outlined below:

Construction Inspection: Prior to the construction inspection, the City must have the identification of the special inspector on record. If this has not been completed, the customer must submit a letter to the City identifying the special inspector (e.g. Engineer of Record, Architect of Record, or other approved individual).

Any installation for recycled water is required to have a special inspection by an approved special inspector to ensure that the on-site recycled water system was constructed per the approved plans and specifications. Approved special inspector shall submit a letter/report to the Building Division verifying that the on-site recycled water system was constructed per the approved plans and specifications.

Once the construction inspection is complete, schedule a special inspection with the Building Division, so a Building Division inspector can review and verify the inspection report in the field.

Cross-Connection Testing: In order to prevent cross-connections between the on-site potable and recycled water systems, no site may receive recycled water until a cross-connection test has been completed. This test is needed to ensure the absolute separation of the on-site water supplies (potable, recycled, other).

For new sites, the on-site recycled water system will be supplied with a temporary supply of potable water to perform a cross-connection test via a jumper connection. After passing this test the jumper must be removed and the on-site recycled water system connected to the recycled water meter. Jumpers are prohibited at all times other than for performance of the cross-connection test.

The cross-connection test must be performed prior to finalization of the Recycled Water Use Permit and connection to the recycled water meter. The testing is to be performed by the City and its certified Cross-Connection Control Specialist, however the Customer's Site Supervisor must be present for the duration of the test.

The cross-connection testing procedure is outlined in **Appendix G**. If the test is passed, the Customer will receive a copy of the Certification Form (**Appendix G**) documenting the test results. If the test is not passed, the Customer will be directed to perform the required corrective actions and the test will need to be performed again.

Cross-Connection Testing - Dual Plumbing: Prior to the operation of any dual plumbed recycled water system, the City will perform a cross-connection test using the methods identified in **Appendix G**. Following this initial test, the Customer is responsible for ensuring that all buildings receiving recycled water are tested for possible cross-connections at least once every four years from the initial test date, and visually inspected annually to determine whether more frequent cross-connection tests are necessary. All cross-connection testing must be conducted by a certified Cross-Connection Control Specialist in accordance with the method described in the Dual Plumbed Engineering Report for that building. The Customer's Site Supervisor must be present for the duration of all cross-connection tests.

Coverage Test: The Customer is responsible for preventing overspray or runoff of recycled water outside of the approved use area and for preventing ponding of recycled water within the use area. To ensure that overspray, runoff or ponding is minimized, the City and Site Supervisor will conduct a Coverage Test of the on-site recycled water system after it has been connected to the recycled water meter. The coverage test will allow the City to determine if conditions exist which have the potential to cause significant runoff or windblown spray outside the approved use area, or ponding within the use area. Spray patterns will be checked to see they do not encroach upon public facilities such as drinking fountains, outside eating areas or areas outside the approved use area.

Following performance of the Coverage Test the Site Supervisor must complete a Coverage Test form (**Appendix H**) and submit it to the City. Successful passage of the Coverage Test is needed before the City can finalize your Recycled Water Use Permit. If corrective actions are necessary to ensure that recycled water is applied only in the approved use area, the Customer will be directed to perform corrective maintenance of their system in a timely manner. The Customer is responsible for performing all modifications to the irrigation system and any costs associated with those modifications.

The Coverage Test form is attached to this document as **Appendix H**. The form shall be submitted to the City at the time of final inspection. Coordinate with the City to schedule a final inspection with the Building Division.

Finalization of the Recycled Water Use Permit: Final approval will be granted by the City upon satisfactory completion of the following:

- Cross-connection test
- Coverage test
- Completion of Site Supervisor Training by the Customer's designated Site Supervisor

Proof that the Site Supervisor has attended the necessary training should be submitted to the City within 90 days of installation of the recycled water meter.

Section 4. Operating and Maintaining Your On-Site Recycled Water System

Once an on-site recycled water system has been permitted by the City, the Customer is responsible for operating that system in accordance with these guidelines. The Customer is also responsible for obtaining City approval prior to making changes to their on-site recycled water system, such as adding additional uses of recycled water, expanding the existing system or changing how the system operates. Changes to an existing on-site recycled water system will necessitate a new cross-connection control test.

4.1. Customer Responsibilities

Day-to-day operation and maintenance of an on-site recycled water system is performed by a Customer-designated Site Supervisor; however it is the Customer's responsibility to ensure that their designated Site Supervisor is fulfilling the requirements outlined in these guidelines. Below is a list of the Customer's primary responsibilities:

- ✓ Assign a Site Supervisor and ensure the Site Supervisor has obtained the required training.
- ✓ Ensure that the on-site recycled water system is properly maintained in accordance with these guidelines.
- ✓ Ensure that the Site Supervisor submits an Annual Self-Inspection Report to the City before June 1 of each year.
- ✓ Obtain prior authorization from the City before making any modifications to the approved on-site recycled water system.
- ✓ Ensure that a new cross-connection test is performed by a certified Cross-Connection Control Specialist following any modifications to the system.
- ✓ Ensure that all materials used to repair and maintain the on-site recycled water system are approved or recommended for recycled water use.
- ✓ Report all violations and emergencies to the City.
- ✓ Notify the City if the Site Supervisor changes or if the property becomes occupied by a new tenant or owner.

Change of Site Supervisor: If the designated Site Supervisor is relieved of his / her duties, the Customer must designate a new person to fulfill the role of Site Supervisor and must have the new person attend Site Supervisor Training. Upon changing of the Site Supervisor, the Customer must contact the City within 30 days and provide the City with the contact information for the new Site Supervisor.

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 in order to receive a new permit.

4.2. Site Supervisor Responsibilities

The Customer must designate a Site Supervisor and have that person attend Site Supervisor Training in order for the City to finalize the Recycled Water Use Permit. The Site Supervisor must have the authority to carry out any requirements outlined in these guidelines.

The ongoing responsibilities of the Site Supervisor include the following:

- ✓ Operate and maintain the on-site recycled water system.
- ✓ Ensure that there are no existing or potential cross-connections made between the potable and the recycled water systems.
- ✓ Prevent and report violations for the on-site recycled water system.
- ✓ Inform the City of all failures, violations and emergencies that occur involving the recycled or potable water systems.
- ✓ Understand the requirements of these guidelines relating to the safe use of recycled water and the maintenance of accurate records.
- ✓ Be familiar with the basic concepts of backflow and cross-connection prevention, system testing and emergency procedures.
- ✓ Train personnel at the site on the proper uses of recycled water.
- ✓ Complete and submit an Annual Self-Inspection Report (**Appendix I**) prior to June 1 of each year.
- ✓ Perform regular inspections of the entire on-site 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 noted condition that violates the recycled water use requirements.
- ✓ Check all recycled water identification signs, tags, stickers and above-grade pipe markings for their proper placement and legibility. Replace damaged, unreadable or missing signs, tags, stickers and pipe markings.
- ✓ Check spray patterns to eliminate ponding, runoff and windblown spray conditions. If evidence of ponding or runoff is noted, affected areas should be indicated on a sketch and sprinkler heads should be adjusted to prevent further ponding or runoff. County Health regulations require that evidence of mosquitoes breeding within ponding should be noted and immediately eliminated.
- ✓ Establish and maintain an accurate recordkeeping system of all inspections, modifications and repair work.

Annual Self-Inspection Report: Annually, the Site Supervisor must complete a self-inspection report (**Appendix I**) and submit the signed and completed report to the City before June 1 of each calendar year. Failure to submit the Annual Self-Inspection Report may trigger an on-site inspection by City staff or discontinuance of service.

Modifications to the System: City approval is required prior to making changes to an on-site recycled water system, such as adding additional uses of recycled water, expanding the existing system or changing how the system operates. Changes to an existing on-site recycled water system may necessitate a new cross-connection control test.

4.3. Emergency Procedures

In case of earthquake, flood, fire, major freeze, nearby construction or other incident which could cause damage to the recycled or potable water systems, the Site Supervisor must inspect the potable and recycled water systems for damage as soon as it is safe to do so. If either system appears damaged, both the domestic and recycled water systems should be shut off at their points of connection. The Site Supervisor must immediately contact the City for further instruction.

To prevent contamination, damage or a public health hazard, the Customer may make emergency modifications or repairs without the prior approval of the City. As soon as possible after the modification (but within three days), the Customer must notify the City of the emergency modifications.

The Site Supervisor must immediately notify the City of any failure of backflow device or plumbing system or cross-connections between the recycled water and potable water system, whether or not it is believed a violation has occurred. The Site Supervisor must also notify the City of any violation that might occur because of any action the Customer's personnel might take during the operation of the recycled water or potable water systems. If there are any doubts whether a violation has occurred, the Site Supervisor must report each occurrence to the City so a decision can be made as to the need for further action.

Customer should also refer to City's Backflow Prevention and Cross-Connection Control in City's Code of Ordinances. The Municipal Code is available on-line at www.mountainview.gov.

4.4. Cross-Connection Emergency Response Procedure

If, due to a cross-connection on the Customer's premises, contamination of the potable water system is suspected or known, the Customer must immediately notify the City and invoke the following steps:

1. **Notify the City by telephone at (650) 903-6329 immediately.** This notification must be followed by a written notice within 24 hours that includes an explanation of the nature of the cross-connection, date and time discovered, and the contact information of the person reporting the cross-connection.
2. Shut down the recycled water supply to the facility.
3. Keep the potable system pressurized and post "Do Not Drink" signs at all potable water fixtures and outlets.
4. Provide bottled water for employees until the potable water system is deemed safe to drink.
5. Follow any procedures outlined by the Santa Clara County Public Health - Environmental Health Division, CDPH and the City.

The City will notify the Santa Clara County Public Health – Environmental Health Division of the reported cross-connection for further direction. Only after the county has informed the City that potable water can be consumed on-site again will the City bring the recycled water system back into service. Until this point the Customer may not remove the "Do Not Drink" signs from the potable water fixtures and outlets.

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APPENDIX A
Definitions

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Appendix A. Definitions

Whenever the following terms (or pronouns used in their place) occur in this document, their intent and meaning shall be interpreted as follows:

Air Gap. A physical separation between the free-flowing discharge end of a water supply pipeline and an open or non-pressurized receiving vessel. An approved air gap must be at least twice the diameter of the water supply pipe measured vertically above the overflow rim of the vessel and in no case less than 1".

Approved Use. An application of recycled water in a manner, and for a purpose, designated in a Recycled Water Use Permit issued by the City and in compliance with all applicable requirements.

Approved Use Area. A site with well-defined boundaries designated on the approved drawings to receive recycled water.

Cross-Connection. Any actual or potential physical connection between any part of a water system used or intended to supply water for drinking purposes and any source or system containing water or substance that is not or cannot be approved for human consumption. This includes direct piping between the two systems, regardless of the presence of valves, backflow prevention devices or other appurtenances.

Customer. Any person, persons or firm, including any public utility, municipality or other public body or institution, issued a Recycled Water Use Permit by the City. The customer may be the owner, tenant or property manager, as appropriate.

Intermittently Pressurized Line. Also known as a "lateral," it is the pipe section(s) between the control valve and the sprinkler head or drip emitters.

Landscape Impoundment. A body of recycled water used for aesthetic enjoyment or which otherwise serves a function not intended to include public contact.

On-site. Designates or relates to facilities owned and operated by the Customer.

Overspray. The spray of recycled water outside the approved irrigation area.

Operations Personnel. Any employee of a customer, whether permanent or temporary, or any contracted worker whose regular or assigned work involves the supervision, operation or maintenance of equipment on any portion of on-site facilities using recycled water.

Point of Connection. The point where the customer's system ties to the City's system, usually at the water meter.

Ponding. Retention of recycled water on the surface of the ground or other natural or manmade surface for a period following the cessation of an approved recycled water use activity.

Potable Water. Water that is authorized for human consumption according to the latest edition of the California Safe Drinking Water Act or other applicable standards.



Public. Any person or persons, other than the site owner or employees, who may come in contact with facilities and/or areas where recycled water is approved for use.

Rate and Fee Schedule. The schedule of all rates, charges, fees and assessments to be made concerning the use of recycled water served by the City.

Recycled Water. As defined in the California Code of Regulations (CCR), Title 22, Division 4, Chapter 3, "Water Recycling Criteria," recycled water is considered to be of the type considered to be "disinfected tertiary recycled water." This quality of recycled water can be used for all approved nonpotable water uses.

Recycled Water Use Permit. A permit issued by the City to the customer which outlines monitoring, self-inspection, reporting and site-specific requirements.

Reduced Pressure Principal Backflow Prevention Device. A type of backflow prevention device, usually installed near a water meter, which prevents backflow by a combination of double-check valves and a pressure-differential-relief valve with a resilient-seated shutoff valve on each end of the device.

Regulatory Agencies. Those public agencies legally constituted to protect the public health and water quality, such as the State Department of Public Health (DPH), the Regional Water Quality Control Board (RWQCB), State Water Resources Control Board (SWRCB) and the County Public Health Department.

Runoff. Recycled water which drains outside the approved irrigation area.

Service. The furnishing of recycled water to a customer through a metered connection to the on-site facilities.

Site Supervisor. The responsible person designated by the customer to be a liaison with the City. This person must have the authority to carry out any requirements of the City, must be responsible for the operation and maintenance of the recycled water system, and must prevent potential violations.

State of California Department of Public Health. Shall be the State of California Department of Public Health, Drinking Water Field Operations Branch, San Francisco District.

Unauthorized Discharge. Any release of recycled water that violates the Rules and Regulations of the City or applicable Federal, State or local statutes, regulations, ordinances, contracts or other requirements.

Violation. Noncompliance with any condition or conditions of the Recycled Water Use Permit by any person, action or occurrence, whether willfully or by accident.

Water Retailer. The local purveyor of recycled water for the specified service area (public or private); in this case, the City of Mountain View.

Windblown Spray. Dispersed, airborne particles of recycled water that can be transmitted through the air to locations other than those approved for the direct application of recycled water.

APPENDIX B

City Municipal Code Chapter 35, Article V (Recycled Water for Irrigation)

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Mountain View, California, Code of Ordinances >> PART II - THE CODE >> CHAPTER 35 - WATER, SEWAGE AND OTHER MUNICIPAL SERVICES >> ARTICLE V. - RECYCLED WATER FOR IRRIGATION >>

ARTICLE V. - RECYCLED WATER FOR IRRIGATION

SEC. 35.100.1. - Findings.

SEC. 35.100.2. - Converting existing potable water users to recycled water.

SEC. 35.100.3. - Use of recycled water in new construction.

SEC. 35.100.4. - Exemptions and adjustments.

SEC. 35.100.5. - Administrative provisions.

SEC. 35.100.6. - Appeals.

SEC. 35.100.7. - Failure to comply with this article.

SEC. 35.100.1. - Findings.

Potable water is one of our most precious natural resources and is becoming increasingly scarce in the semiarid State of California. The use of treated, nonpotable water for construction and irrigation will increase the amount of potable water available for other uses in the city. The City of Mountain View is dedicated to conserving the potable water supply. Recycled water is a sustainable water source that reduces potable water consumption and is not subject to rationing during drought. After careful study, the city council has determined that recycled water shall be used within the boundaries of the Shoreline Regional Park Community for irrigation purposes whenever it is available and beneficial to the customer.

This article will implement an important program that will assist the Shoreline Regional Park Community in preserving this precious commodity. In adopting this program, the council has balanced the needs of all water users and through this implementation strategy will allow water users sufficient flexibility to meet their potable and nonpotable water needs.

(Ord. No. 14.04, 12/26/04.)

SEC. 35.100.2. - Converting existing potable water users to recycled water.

Within the boundaries of the Shoreline Regional Park Community, retail, commercial and industrial customers to be served by recycled water in the initial conversion have been identified in the "Regional Water Recycling Facilities Planning Study" dated January 2004. This study may be amended from time to time to add additional customers. These customers will be notified by mail that a conversion to recycled water for irrigation purposes is required, along with the conditions of use, pricing and construction schedule. Recycled water customers may file a request for an exemption or adjustment from these requirements with the director of public works.

(Ord. No. 14.04, 12/26/04.)

SEC. 35.100.3. - Use of recycled water in new construction.

All applications for land use permits, building permits and other discretionary actions within the boundaries of the Shoreline Regional Park Community, filed after the adoption of this ordinance, shall include the following:

- a. Incorporation of recycled water usage into the design of landscape and irrigation systems.
- b. Consideration of plants suitable for irrigation with recycled water.
- c. The installation of the infrastructure necessary to connect the irrigation system to the city's recycled water supply.
- d. The use of recycled water in lieu of potable water during construction activity.

The city maintains the right to require recycled water use for additional purposes as appropriate.

(Ord. No. 14.04, 12/26/04.)



SEC. 35.100.4. - Exemptions and adjustments.

An application for an exemption or an adjustment to the requirement to use recycled water shall be made to the director of public works. Requests for an exemption or adjustment may be made consistent with state law and shall be based on the finding by the director that the use of recycled water demonstrates an adverse effect to the applicant's landscaping installed prior to the effective date of the ordinance codified herein. The director of public works may also consider any additional factors, including any special costs or hardships which may be created by the use of recycled water. A written determination will be made on all requests for exemptions or adjustments within ten (10) business days and mailed to the applicant.

(Ord. No. 14.04, 12/26/04.)

SEC. 35.100.5. - Administrative provisions.

The director of public works shall establish written application and appeals procedures and may promulgate guidelines for the implementation of this program.

(Ord. No. 14.04, 12/26/04.)

SEC. 35.100.6. - Appeals.

Denial of any application for an exemption and/or adjustment to the provisions of recycled water use may be appealed to the city manager, whose decision shall be final. An application for appeal shall be filed with the city clerk in writing within ten (10) business days after the director of public works' decision and shall state the specific grounds for the appeal. The city manager shall hear the appeal within sixty (60) calendar days after the appeal has been filed with the city clerk and shall issue a written decision within thirty (30) days.

(Ord. No. 14.04, 12/26/04.)

SEC. 35.100.7. - Failure to comply with this article.

In addition to existing penalties in state and local law for violation of the provisions of this article, the director of public works may assess the following penalties, subject to the appeal provisions set forth above:

- a. A water service surcharge of fifty percent (50%) of the general water service rate as set forth in Mountain View City Code Section 35.27 to use potable water for irrigation.
- b. Continued use of potable water for irrigation, after written warning or warnings by the director, may result in the discontinuation of water service supplied for irrigation by the City of Mountain View following a noticed hearing as set forth in Sec. 35.100.6. A charge as set forth in the city's master fee schedule shall be paid prior to the reactivation or restoration of water service.

(Ord. No. 14.04, 12/26/04.)

APPENDIX C

Map of the City's Recycled Water Service Area

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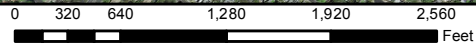
City of Mountain View - Recycled Water

Date: 3/7/2014



Recycled Water

- Main Line
- Irrigation Line



- 1 On Way
- 2 Palomas Way
- 3 Madero Way
- 4 Madero Way
- 5 Center Ave

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APPENDIX D

Recycled Water Use Permit Application

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RECYCLED WATER USE PERMIT APPLICATION

Date: _____
Site Name: _____ APN: _____
Service Address: _____
Location or Brief Legal Description of Site: _____
Type of Property (e.g., office building): _____
Expected Date to Commence Recycled Water Service: _____

Customer: _____ Site Supervisor*: _____
Contact Name: _____ Company / Organization: _____
Mailing Address: _____ Mailing Address: _____
City: _____ City: _____
State: _____ Zip: _____ State: _____ Zip: _____
Phone: _____ Phone: _____
Email: _____ Email: _____
24-Hour Phone: _____
*Attach certificate or letter of when to be completed

Brief description of Site Supervisor's current responsibilities and familiarity with the future recycled water system:

Brief description of proposed recycled water use(s):

Estimated recycled water requirements:	Area (SQ FT) or Size (COUNT)	Annual Demand (CCF)	Peak Demand (GPM)
Landscape Irrigation:	_____	_____	_____
Toilets / Urinals:	_____	_____	_____
Cooling:	_____	_____	_____
Other: _____	_____	_____	_____

This is a: new existing service.

Existing City Recycled Water Account No.(s): _____
Existing City Potable Water Account No.(s): _____

Is the potable system proposed to operate as backup? Yes No

Is an on-site pump proposed? Yes No

Excavation Permit No.: _____ **Building Permit No.:** _____



Plans, Specifications and Supporting Documents

For both new and existing services, plans, specifications and other necessary supporting documents must be submitted with this application for service. The plans, specifications and supporting documents must be sufficient to demonstrate that the facility will comply with the "City of Mountain View Customer Guidelines for Recycled Water Use." A copy of these rules is available online at:

www.recycledwater.mountainview.gov

Site Supervisor Certificate

Please attach a copy of the Certificate of Completion from the Site Supervisor Training Workshop. If the designated Site Supervisor has not yet obtained the certificate, then provide a letter stating the expected date of completion. Site Supervisor Training is provided by the South Bay Water Recycling on a quarterly basis, and the certificate of completion must be submitted to the City within 90 days of establishing a recycled water connection.

I understand and agree to all conditions for recycled water service as set forth in the City of Mountain View's Municipal Code and Recycled Water Guidelines and hereby certify under penalty of perjury that the information provided in this application and in any attachments is true and accurate to the best of my knowledge. I also certify that I have read and agree to abide by all conditions specified in the City of Mountain View's recycled water program which include conditions set forth in the Regional Water Quality Control Board's Order No. 93-160.

CUSTOMER: _____ TITLE: _____
 (SIGNATURE)

_____ DATE: _____
 (PRINT NAME)

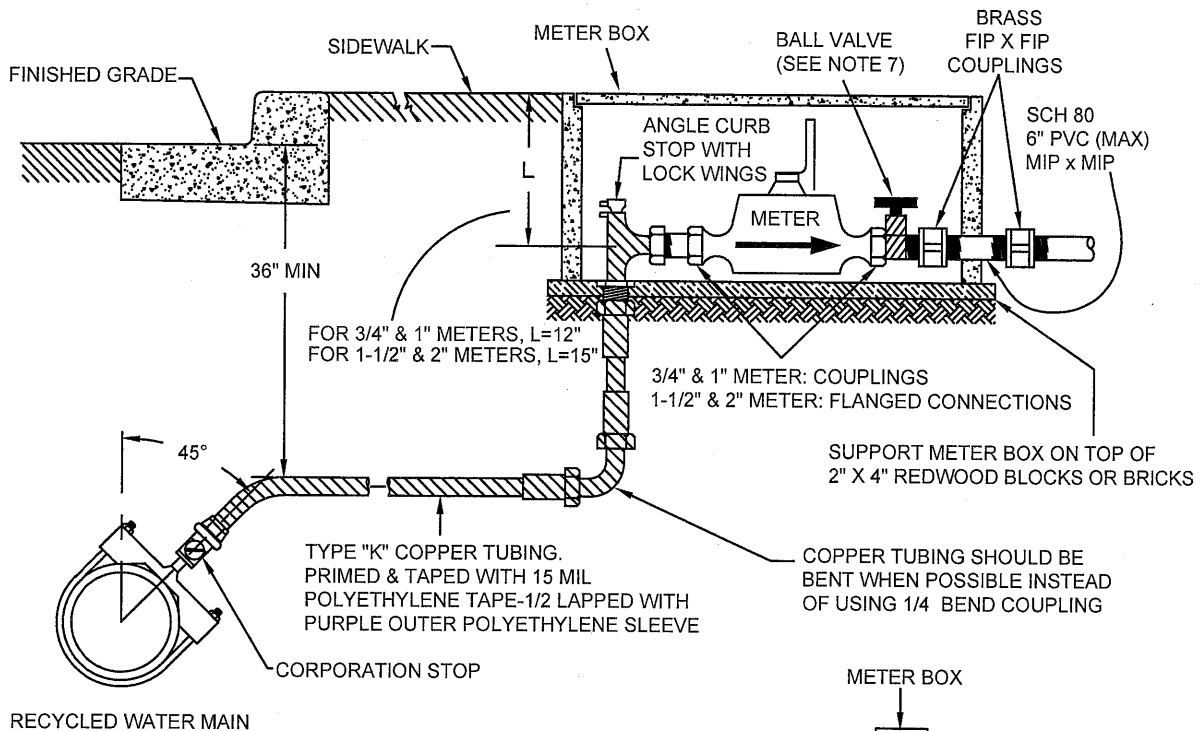
For City Use Only

Date	Action	Verified by
	1. Recycled Water Use Permit Application Completed	
	<i>(Indoor Uses Only)</i>	
	2. Dual-Plumbing Engineering Report Completed	
	3. Recycled Water Plans Completed	
	4. Construction Inspection Completed	
	5. Cross-connection Test Completed	
	6. Coverage Test Completed	
	7. Site Supervisor Training Certification Completed	
	8. Recycled Water Use Permit Issued	

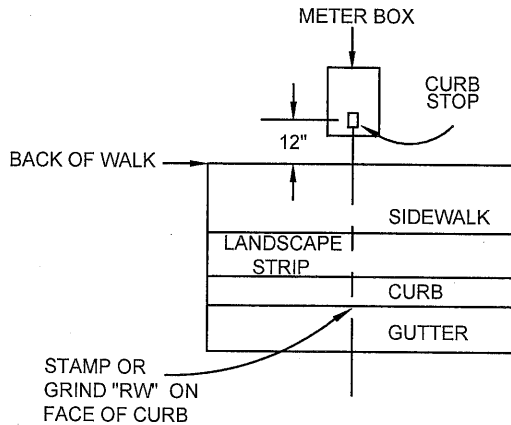
APPENDIX E

Standard Details for Recycled Water Systems

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MAIN TYPE	SERVICE CONNECTION TYPE
D.I.P.	STAINLESS STEEL FULL CIRCLE CLAMP WITH THREADED CORPORATION STOP TO BE USED ON ALL 1" AND 2" SERVICES.
P.V.C.	SERVICE SADDLES FORD S-90 OR AS APPROVED BY ENGINEER.



NOTES:

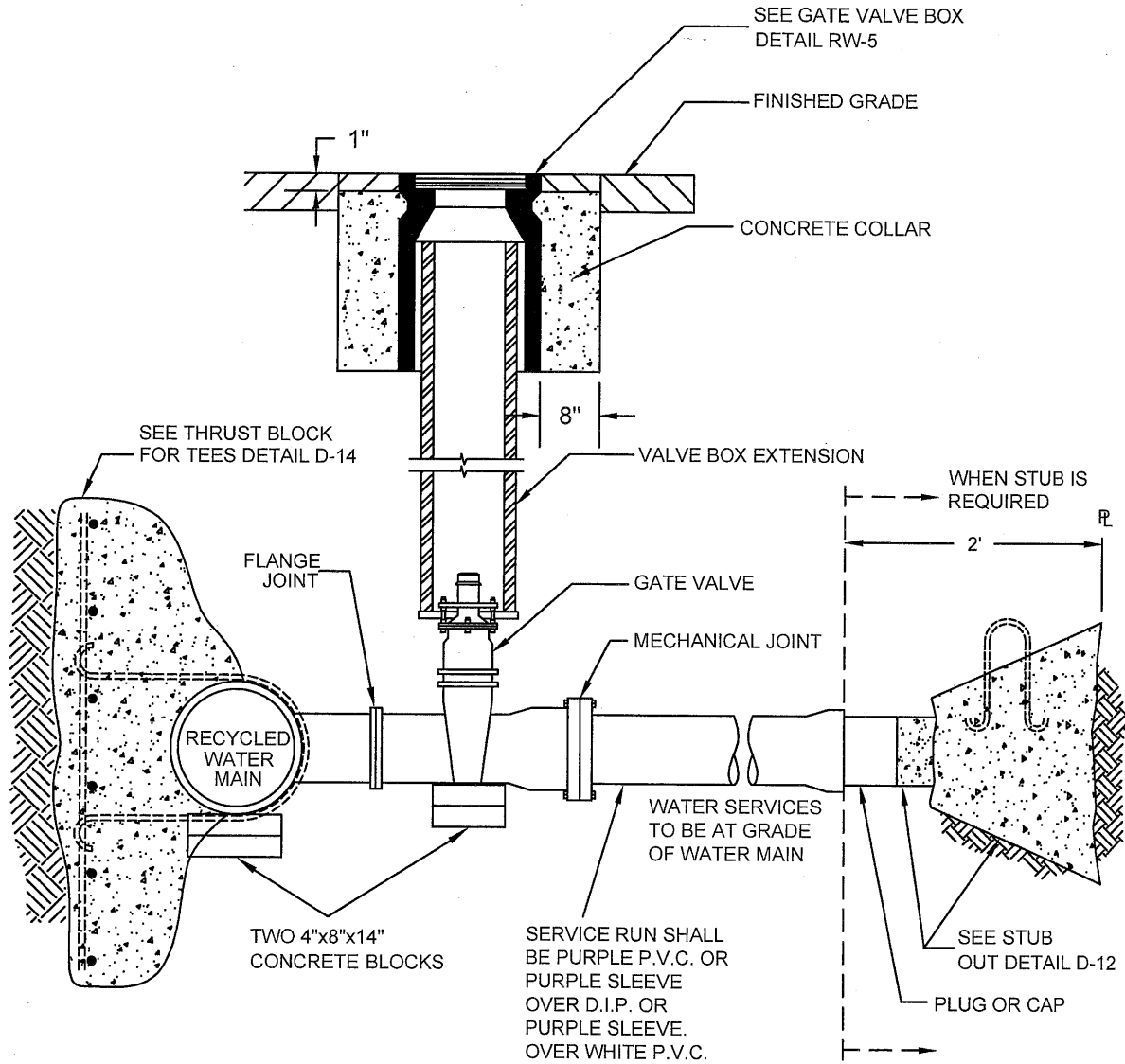
1. INSTALL ONE-FOURTH (1/4) INCH PLYWOOD TO BLOCK PIPE PENETRATIONS INTO METER BOX.
2. CLEAN METER BOX OF DEBRIS. NO EARTH-TO-METER CONTACT.
3. SEE STANDARD DETAIL D-31 FOR CATHODIC PROTECTION REQUIREMENT, WHEN REQUIRED BY ENGINEER BASED ON LOCATION.
4. METERS SHALL HAVE PURPLE RECYCLED WATER REGISTER.
5. METER BOX COVER AND LID SHALL BE PURPLE - STAMPED RECYCLED WATER.
6. WHEN USING A TURBINE METER, INSTALL STRAINER UPSTREAM OF METER.
7. 3/4" & 1" BALL VALVE SHALL BE STRAIGHT BALL VALVE BY METER SWIVEL NUT WITH LOCK WINGS. 1-1/2" & 2" BALL VALVE SHALL BE STRAIGHT BALL VALVE FLANGED WITH LOCK WINGS.

LOCATE ALL METERS BEHIND WALK

Revision	Date	Approved
Drawn: IL	Date: 6/30/15	
Checked: A	Scale: N.T.S.	
APPROVED BY: <i>Jacqueline A. Johnson</i> No. 57093 REGISTERED PROFESSIONAL ENGINEER CIVIL STATE OF CALIFORNIA 7/1/15 DATE EXP. 2/31/15 57093 R.C.E. NO.		

CITY OF MOUNTAIN VIEW
PUBLIC WORKS DEPARTMENT
STANDARD DETAIL
RECYCLED WATER
STANDARD 1" AND 2" WATER SERVICES WITH
3/4", 1", 1-1/2", AND 2" WATER METERS

FILE NO. **RW-1**



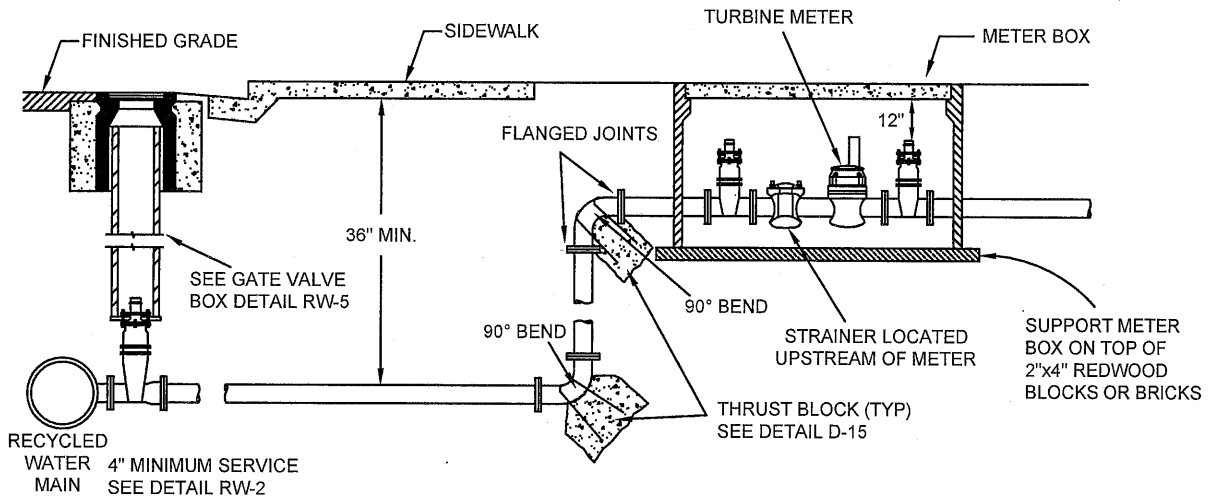
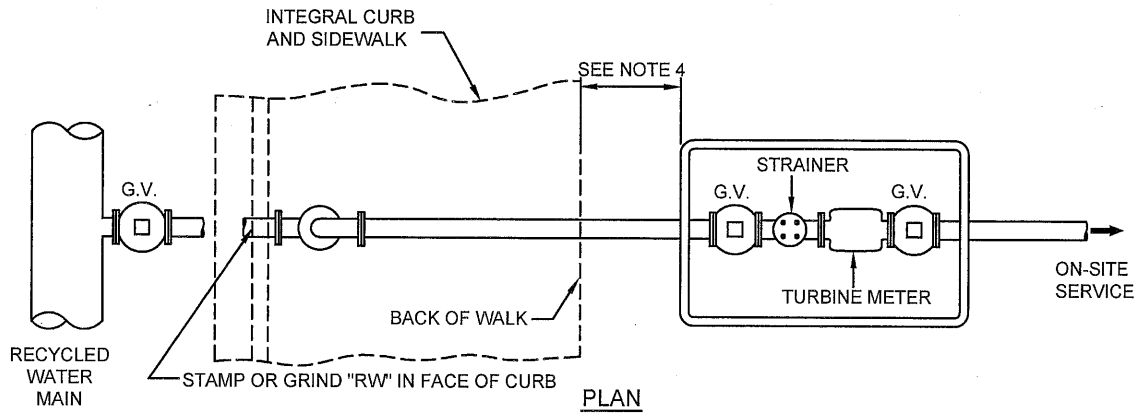
GATE VALVE ANCHOR REQUIRED WHEN VALVE IS NOT CONNECTED BY FLANGE JOINT TO MAIN TEE

Revision	Date	Approved
Drawn: <i>W</i>	Date: 6/30/15	
Checked: <i>A</i>	Scale: NTS	
APPROVED BY: <i>Jacqueline C. Solomon</i>		
DATE: 7/1/15	EXP: 2/31/15	57093 R.C.E. NO.

CITY OF MOUNTAIN VIEW
PUBLIC WORKS DEPARTMENT
STANDARD DETAIL

RECYCLED WATER
SERVICE 4" OR LARGER
WITH 3" OR LARGER METER

FILE NO. RW-2



ELEVATION

NOTES:

1. THE METER AND METER BOX MAY BE ROTATED 90° TO COMPENSATE FOR SPACE REQUIREMENTS.
2. ALL JOINTS SHALL BE FLANGED TYPE, OR MECHANICAL TYPE JOINTS WITH RETAINER GLANDS. COAT BOLTS, NUTS AND RETAINER GLANDS WITH MASTIC COATING SOLUTION.
3. WRAP ALL DUCTILE IRON PIPE, FITTINGS AND VALVES WITH 8 MIL PURPLE POLYETHYLENE SLEEVE.
4. LOCATION OF METER + BACKFLOW TO BE DETERMINED BY CITY ENGINEER.
5. INSTALL 1/4" PLYWOOD TO BLOCK PIPE PENETRATIONS INTO METER BOX
6. CLEAN METER BOX OF DEBRIS. NO EARTH TO METER CONTACT.
7. SEE STANDARD DETAIL D-31A FOR CATHODIC PROTECTION REQUIREMENTS, WHEN REQUIRED BY ENGINEER BASED ON LOCATION.
8. METERS SHALL HAVE PURPLE RECYCLED WATER REGISTER.
9. METER BOX COVER AND LID SHALL BE PURPLE - STAMPED RECYCLED.

Revision	Date	Approved
Drawn : II	Date : 6/30/15	
Checked : A	Scale : NTS	
APPROVED BY: <i>Jacqueline Chalmers</i>		
No. 57093		
DATE: 7/1/15	EXP. DATE: 12/31/15	57093 R.C.E. NO.

CITY OF MOUNTAIN VIEW
PUBLIC WORKS DEPARTMENT
STANDARD DETAIL

RECYCLED WATER
3" OR LARGER WATER METER
TURBINE TYPE WITH STRAINER

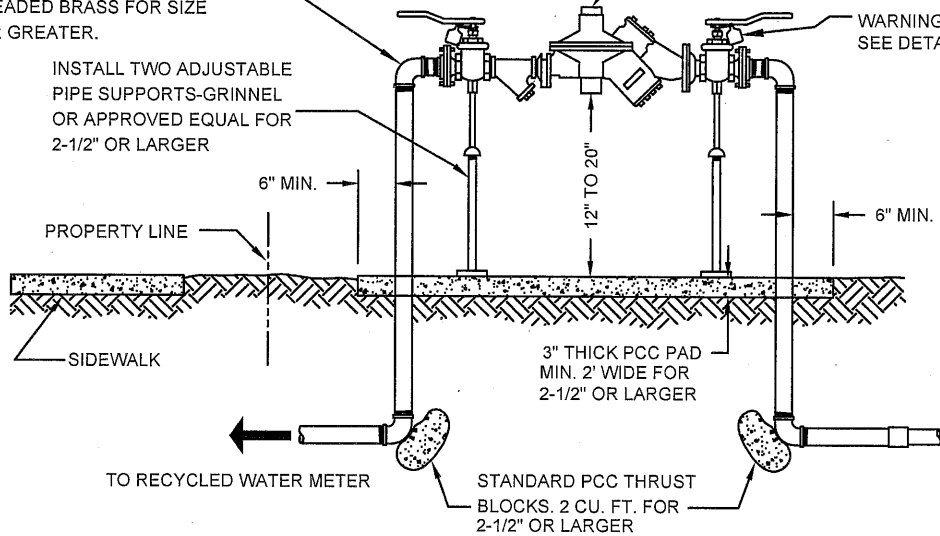
FILE NO. RW-3

PIPING, VALVES, NIPPLES, ETC. SHALL BE THREADED BRASS OR L-TYPE COPPER FOR SIZES 2" OR LESS, AND BE FLANGED DUCTILE IRON, L-TYPE COPPER, OR THREADED BRASS FOR SIZE 2-1/2" OR GREATER.

INSTALL TWO ADJUSTABLE PIPE SUPPORTS-GRINNEL OR APPROVED EQUAL FOR 2-1/2" OR LARGER

APPROVED REDUCED PRESSURE BACKFLOW PREVENTER

WARNING TAG SEE DETAIL RW-8

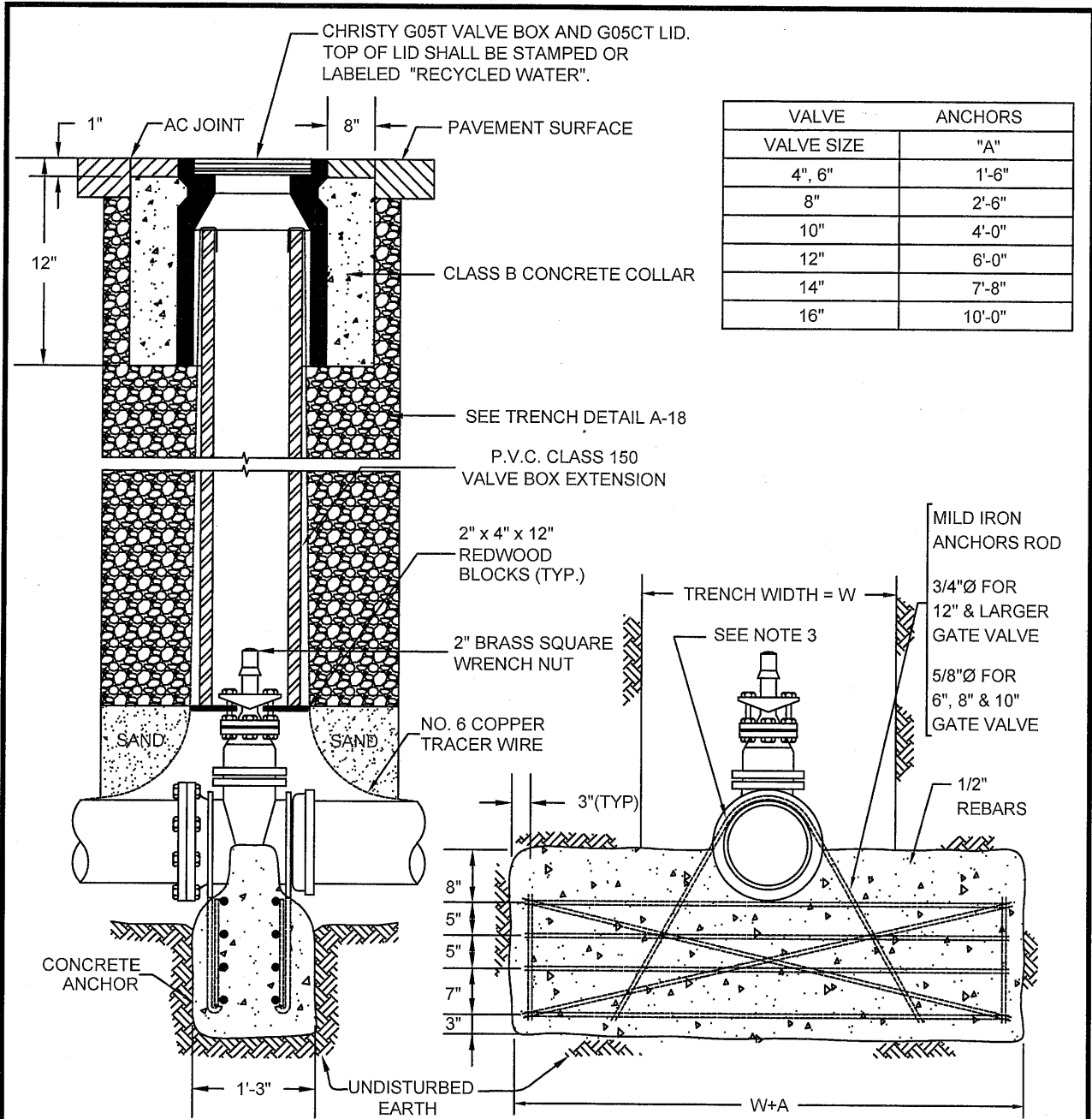


NOTES:

1. REDUCED PRESSURE TYPE BACKFLOW PREVENTION DEVICES ARE REQUIRED FOR ALL DUAL PLUMBED SITES OR AS OTHERWISE REQUIRED BY ENGINEER.
2. APPROVED REDUCED PRESSURE TYPE BACKFLOW PREVENTION DEVICES SHALL BE LISTED IN THE LATEST EDITION OF THE CITY STANDARD PROVISIONS.
3. ALL DEVICES THREE-QUARTER (3/4) INCH TO TWO (2) INCHES WILL HAVE FULL PORT DOMESTIC BALL VALVES, WITH THREADED ENDS. THREE (3) INCHES AND LARGER DEVICES WILL HAVE RESILIENT SEATED GATE VALVES, WITH FLANGED ENDS.
4. PRESSURE DIFFERENTIAL VALVE IS TO BE AT LEAST TWELVE (12) INCHES ABOVE GRADE TO A MAXIMUM OF TWENTY (20) INCHES.
5. BACKFLOW PREVENTION DEVICES SHALL BE INSTALLED ADJACENT TO AND ON PROPERTY SIDE OF SIDEWALK WHERE APPLICABLE.
6. NO CONNECTION BETWEEN THE BACKFLOW PREVENTER AND WATER METER WILL BE PERMITTED. BACKFLOW PREVENTERS SHALL BE PLACED DIRECTLY BEHIND THE WATER METERS UNLESS AN EXEMPTION IS GRANTED. IF AN EXEMPTION IS GRANTED, THE BACKFLOW PREVENTER SHALL BE SCREENED WITH LANDSCAPING AND THE TRENCHES SHALL BE LEFT OPEN SO THAT THE CITY CAN VERIFY THAT THERE ARE NO CONNECTIONS BETWEEN THE BACKFLOW PREVENTER AND THE METER. THE CITY RESERVES THE RIGHT TO TEST THE SYSTEM TO ENSURE THAT THESE REQUIREMENTS ARE MET.
7. WHERE A BACKFLOW PREVENTER IS INSTALLED MORE THAN ONE (1) FOOT BEHIND THE WATER OR IRRIGATION METER, THE PIPING BETWEEN THE BACKFLOW PREVENTER AND THE METER SHALL BE ENCASED IN CONTROLLED DENSITY FILL (CDF).
8. ALL ABOVE GROUND PIPING AND ASSEMBLY SHALL BE IDENTIFIED AS RECYCLED WATER SEE DETAIL RW-8.

Revision	Date	Approved
Drawn: IL	Date: 6/30/15	
Checked: A	Scale: NTS	
APPROVED BY: No. 57093 <i>Jacqueline Casolomon</i> 7/1/15 DATE		
57093 R.C.E. NO.		

<p>CITY OF MOUNTAIN VIEW PUBLIC WORKS DEPARTMENT STANDARD DETAIL</p> <p>RECYCLED WATER REDUCED PRESSURE BACKFLOW PREVENTER INSTALLATION</p>
FILE NO. RW-4



NOTES:

1. WHEN THERE IS A NEED TO RAISE VALVE COVER TO MEET NEW GRADE, ONLY ONE ADDITIONAL RING MAY BE ADDED.
2. FLANGES, BOLTS, AND NUTS SHALL BE KEPT CLEAR OF CONCRETE.
3. COAT EXPOSED PORTIONS OF ANCHOR RODS WITH A MASTIC COATING AND WRAP IN 10 MIL POLYETHYLENE TAPE.

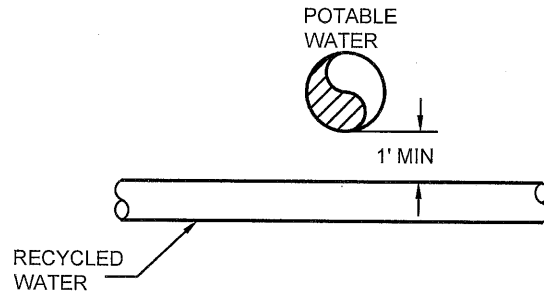
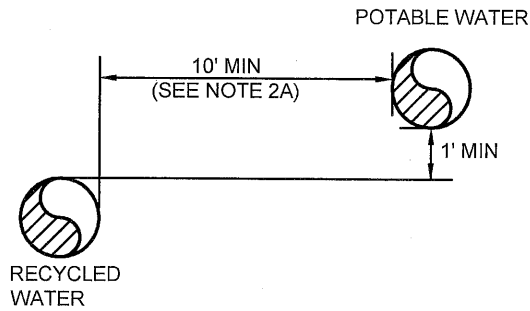
Revision	Date	Approved
Drawn : II	Date : 6/30/15	
Checked : A	Scale : N.T.S.	
APPROVED BY: <i>Jacqueline C. Strom</i>		
7/1/15	2/3/15	57093
DATE	EXP.	R.C.E. NO.

CITY OF MOUNTAIN VIEW
 PUBLIC WORKS DEPARTMENT
 STANDARD DETAIL
 RECYCLED WATER
 GATE VALVE BOX AND ANCHOR

FILE NO. RW-5

PARALLEL SEPARATION STANDARDS

CROSSING SEPARATION STANDARDS



NOTES:

1. POTABLE AND RECYCLED PIPES SHALL NOT BE INSTALLED IN THE SAME TRENCH.
2. PARALLEL CONSTRUCTION
 - A. THE HORIZONTAL SEPARATION BETWEEN POTABLE AND RECYCLED PIPES SHALL BE A MINIMUM OF TEN (10) FEET MEASURED BETWEEN OUTSIDE DIAMETERS FOR INSTALLATION IN PUBLIC RIGHT OF WAY, AND A MINIMUM OF FOUR (4) FEET ON-SITE.
 - B. RECYCLED PIPES SHALL BE INSTALLED ONE (1) FOOT BELOW THE POTABLE PIPES WHERE THE TWO PIPES RUN PARALLEL TO EACH OTHER. WHERE THIS IS NOT POSSIBLE, THE PROPOSED DESIGN SHALL BE APPROVED BY THE CITY ENGINEER. DETAILS OF THIS INSTALLATION SHALL BE CLEARLY SHOWN ON THE PLANS.
3. CROSSING CONSTRUCTION
 - A. RECYCLED WATER PIPES SHALL BE INSTALLED BELOW POTABLE WATER PIPES, WITH A MINIMUM VERTICAL SEPARATION OF ONE (1) FOOT, MEASURED BETWEEN OUTSIDE DIAMETERS.
 - B. WHEN A RECYCLED WATER PIPE CROSSES A POTABLE WATER PIPE THE CROSSING SHALL BE AS CLOSE TO THE PERPENDICULAR AS PRACTICAL AND NO LESS THAN 45 DEGREES.
 - C. PIPE JOINTS SHALL BE A MINIMUM OF EIGHT (8) FEET FROM POTABLE AND RECYCLED WATER PIPE CROSSINGS.
4. RECYCLED WATER SYSTEMS SHALL MEET THE MINIMUM TOP OF PIPE DEPTH REQUIREMENTS:
 - A. INTERMITTENT PRESSURE LINES: TWELVE (12) INCHES.
 - B. CONSTANT PRESSURE LINES 2½ INCHES AND SMALLER: EIGHTEEN (18) INCHES.
 - C. CONSTANT PRESSURE LINES THREE (3) INCHES AND LARGER: TWENTY-FOUR (24) INCHES.

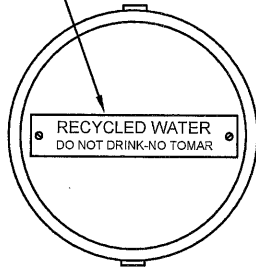
Revision		Date	Approved
Drawn: IL		Date: 6/30/15	
Checked: A		Scale: NTS	
APPROVED BY: <i>Jacqueline C. Solomon</i>		No. 57093	
DATE: 7/1/15	EXP: 12/31/15	57093	
		R.C.E. NO.	

CITY OF MOUNTAIN VIEW
PUBLIC WORKS DEPARTMENT
STANDARD DETAIL

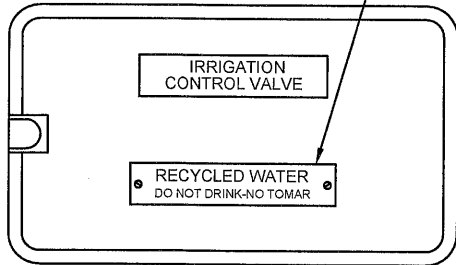
RECYCLED WATER
SEPARATION STANDARDS

FILE NO. RW-6

VALVE BOX
NAMEPLATE OR IMPRINT



VALVE BOX
NAMEPLATE OR IMPRINT



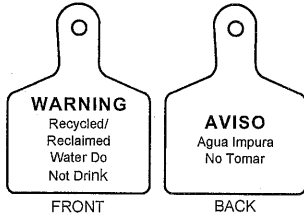
NOTE:

1. T. CHRISTY ENTERPRISES, INC. P/N: 3800 (OR EQUAL)

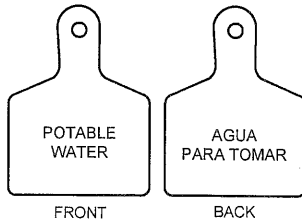
Revision		Date	Approved	CITY OF MOUNTAIN VIEW PUBLIC WORKS DEPARTMENT STANDARD DETAIL
Drawn: IL		Date: 6/30/15		
Checked: A		Scale: NTS		RECYCLED WATER IRRIGATION BOX LID IDENTIFICATION
APPROVED BY: <i>Maqueline C. Andrews</i> No. 57093 REGISTERED PROFESSIONAL ENGINEER CIVIL STATE OF CALIFORNIA				
DATE: 7/1/15	EXP: 2/3/15	57093 R.C.E. NO.		FILE NO. <u>RW-7</u>

WARNING TAG DETAILS

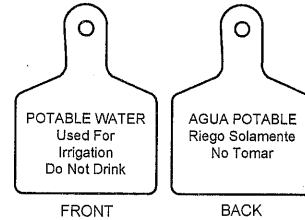
RECYCLED WATER



POTABLE WATER



POTABLE WATER
(USED FOR DUAL
IRRIGATION SITES)



NOTES:

- | | | |
|---|--|---|
| 1. RECYCLED WATER TAG SHALL HAVE PURPLE BACKGROUND WITH BLACK LETTERING | 3. POTABLE WATER TAG SHALL HAVE BLUE BACKGROUND WITH BLACK LETTERING | 5. POTABLE WATER IRRIGATION TAG SHALL HAVE YELLOW BACKGROUND WITH BLACK LETTERING |
| 2. T. CHRISTY ENTERPRISES INC. P/N: ID-MAX-P2-RC006 (OR EQUAL) | 4. T. CHRISTY ENTERPRISES INC. P/N: ID-MAX-B2-PW015 (OR EQUAL) | 6. T. CHRISTY ENTERPRISES INC. P/N: ID-MAX-Y2-PW017 (OR EQUAL) |

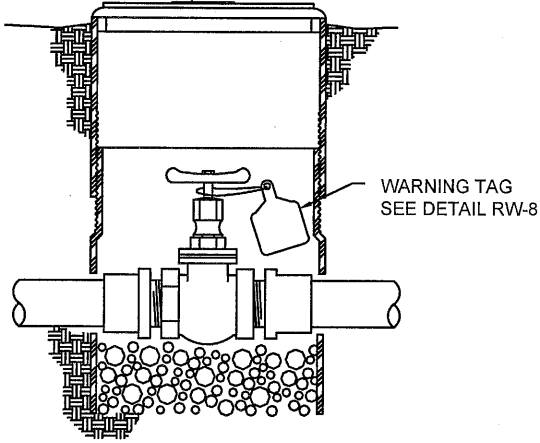
RECYCLED WATER PIPE IDENTIFICATION

1. BURIED PIPES AND SLEEVES SHALL BE IDENTIFIED BY ONE OF THE FOLLOWING METHODS:
 - A. PURPLE PVC PIPE CONTINUOUSLY LABELED "CAUTION: RECYCLED WATER - DO NOT DRINK." PIPE SHALL BE LAID WITH WORDS FACING UPWARDS.
 - B. PURPLE IDENTIFICATION TAPE OR DECALS LABELED "CAUTION: RECYCLED WATER - DO NOT DRINK"; ADHESIVE, PERMANENT, AND RESISTANT TO COLOR FADING AND ENVIRONMENTAL CONDITIONS; IDENTIFICATION SHALL BE AFFIXED ALONG TWO (2) SIDES OF THE PIPE AT TEN (10) FEET INTERVALS AND WHERE THE PIPE CHANGES DIRECTIONS. PURPLE BANDS MAY ALSO BE PAINTED AROUND THE PIPE.
2. ABOVE GROUND PIPES SHALL BE PAINTED PURPLE (PANTONE #512) AND IDENTIFIED USING PURPLE IDENTIFICATION TAPE OR DECALS LABELED "CAUTION: RECYCLED WATER - DO NOT DRINK" ALONG TWO (2) SIDES OF THE PIPE AT TEN (10) FEET INTERVALS.

Revision		Date	Approved
Drawn: IV	Date: 6/30/15		
Checked: A	Scale: NTS		
APPROVED BY: No. 57093 <i>Jacqueline A. Solomon</i>			CITY OF MOUNTAIN VIEW PUBLIC WORKS DEPARTMENT STANDARD DETAIL RECYCLED WATER WARNING TAG DETAIL AND PIPE IDENTIFICATION
DATE: 7/1/15	EXP: 12/31/15	57093 R.C.E. NO.	
			FILE NO. RW-8

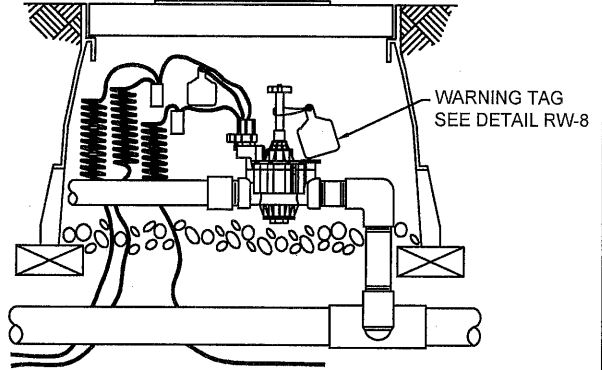
GATE VALVE

LID IDENTIFICATION
SEE DETAIL RW-7



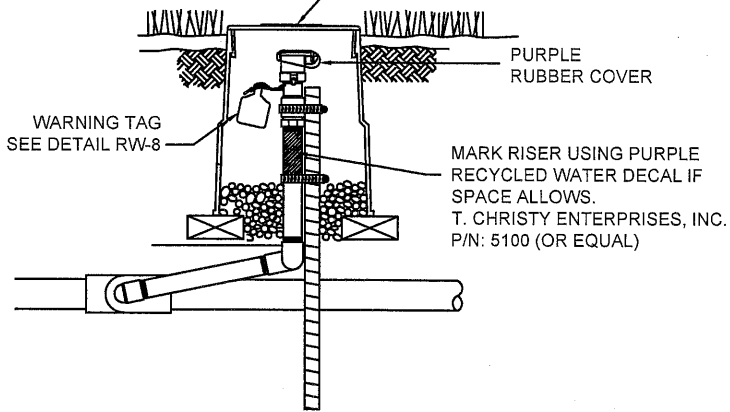
REMOTE CONTROL VALVE

LID IDENTIFICATION
SEE DETAIL RW-7



QUICK COUPLING VALVE

LID IDENTIFICATION
SEE DETAIL RW-7



Revision	Date	Approved
Drawn: IL	Date: 6/30/15	
Checked: A	Scale: NTS	
APPROVED BY: No. 57093		
<i>Jacqueline A. Solomon</i>		
DATE: 7/1/15	EXP: 12/31/15	57093 R.C.E. NO.

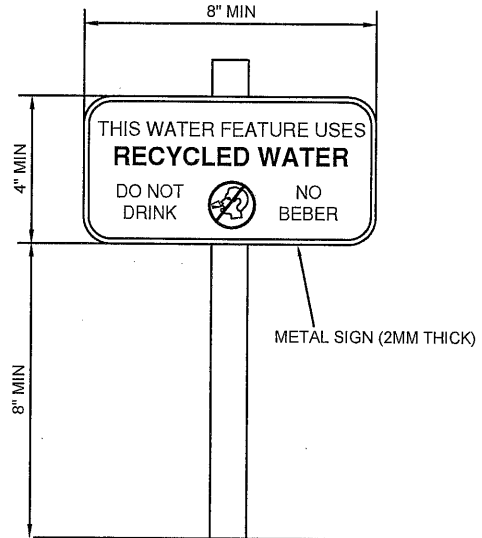
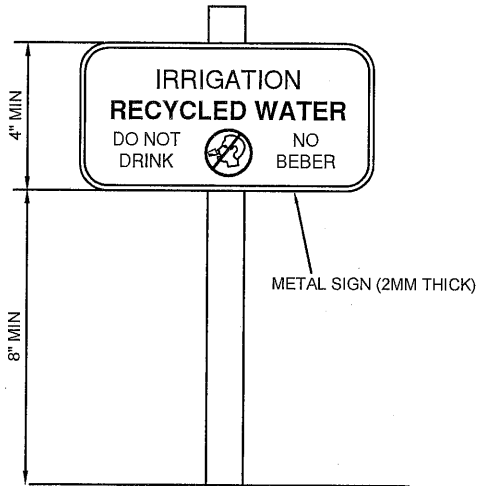
CITY OF MOUNTAIN VIEW
PUBLIC WORKS DEPARTMENT
STANDARD DETAIL

RECYCLED WATER
VALVE LABELING

FILE NO. RW-9

IRRIGATION ADVISORY SIGN

WATER FEATURE ADVISORY SIGN



NOTES:

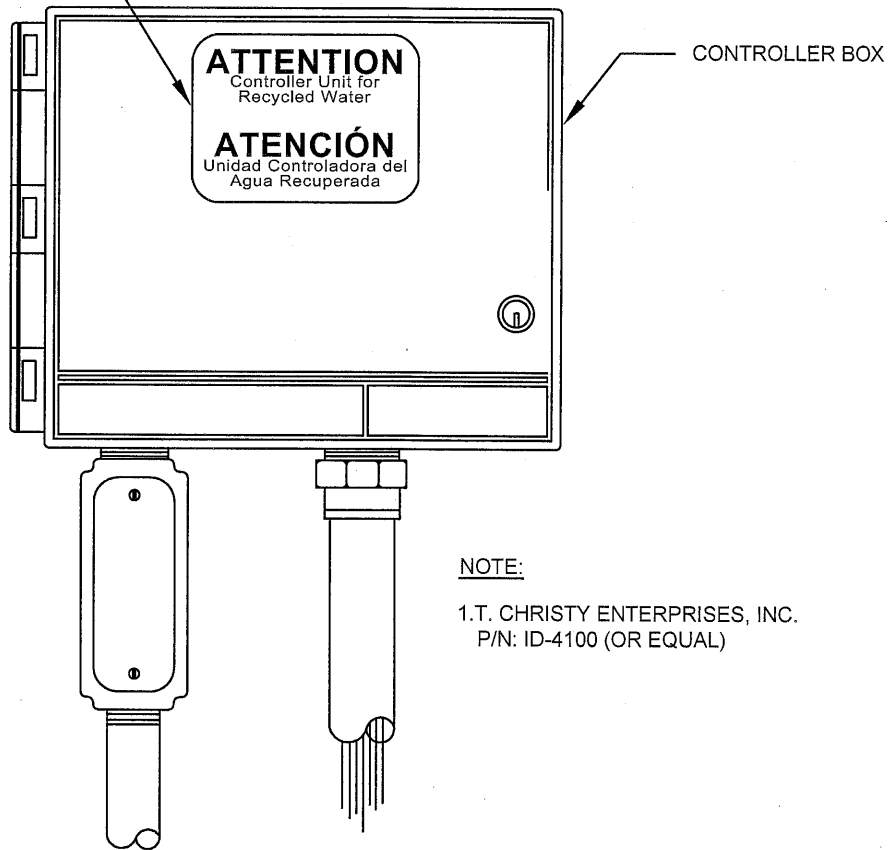
1. MOUNT SIGNS ON 4" X 4" REDWOOD POSTS OR AFFIX TO OTHER PERMANENT STRUCTURES.
2. MOUNT SIGNS SO THEY ARE CLEARLY VISIBLE AND NOT OBSCURED BY MATURE PLANTS.
3. LETTERING MUST BE LEGIBLY PRINTED ON A CONTRASTING BACKGROUND.
4. T. CHRISTY ENTERPRISES, INC. P/N: ID-SGN9X12WRW (OR EQUAL)

Revision		Date	Approved
Drawn: IL	Date: 6/30/15		
Checked: A	Scale: NTS		
APPROVED BY: <i>Jacqueline C. Salomon</i>			
DATE: 7/1/15	EXP: 2/28/15	57093	R.C.E. NO.

CITY OF MOUNTAIN VIEW
PUBLIC WORKS DEPARTMENT
STANDARD DETAIL
RECYCLED WATER
ADVISORY SIGNS

FILE NO. RW-10

MARKING DECAL SHOWN
AFFIXED TO BOX EXTERIOR
(ALSO AFFIX TO INTERIOR OF
BOX IF POSSIBLE)

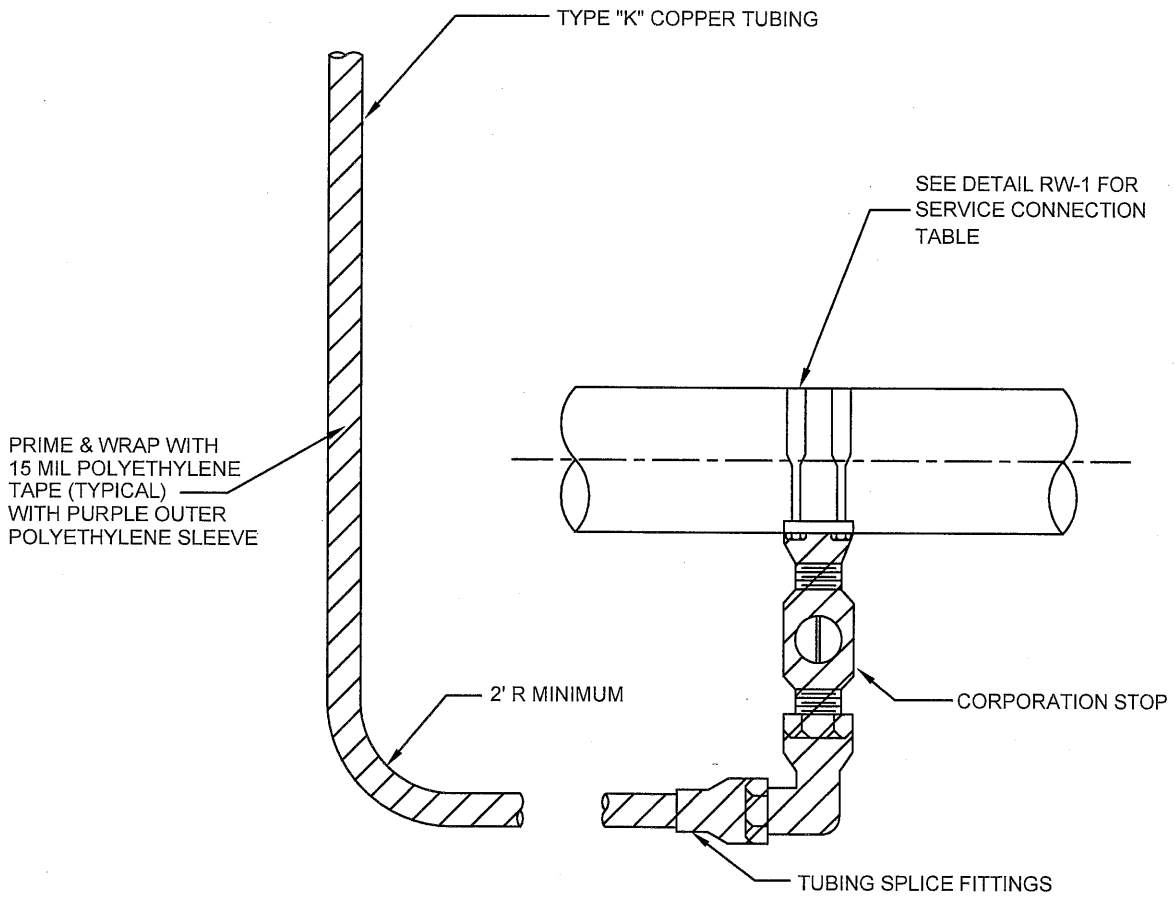
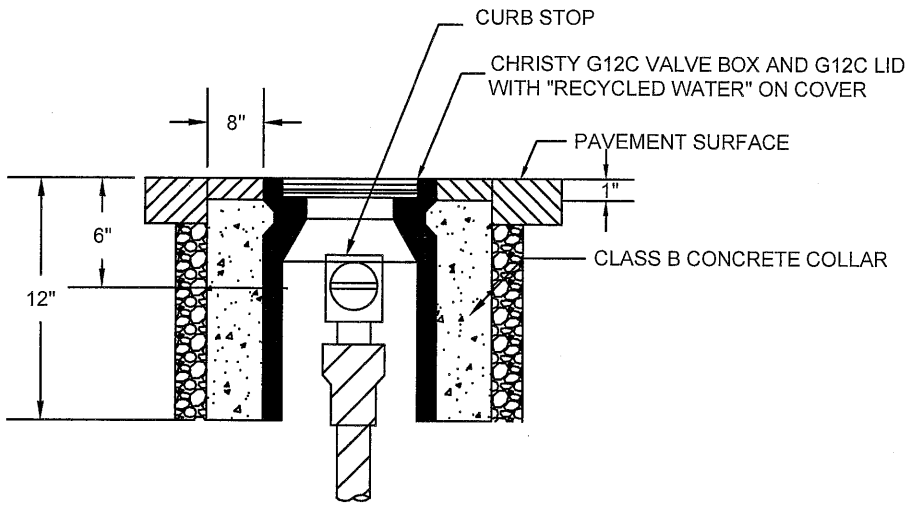


NOTE:

1.T. CHRISTY ENTERPRISES, INC.
P/N: ID-4100 (OR EQUAL)

Revision	Date	Approved
Drawn: 11	Date: 6/30/15	
Checked: A	Scale: NTS	
APPROVED BY: <i>Jacqueline Casolomon</i> No. 57093 7/1/15 DATE: 7/1/15 EXP: 12/31/15		
57093 R.C.E. NO.		

CITY OF MOUNTAIN VIEW
PUBLIC WORKS DEPARTMENT
STANDARD DETAIL
RECYCLED WATER
CONTROLLER BOX IDENTIFICATION
FILE NO. RW-11

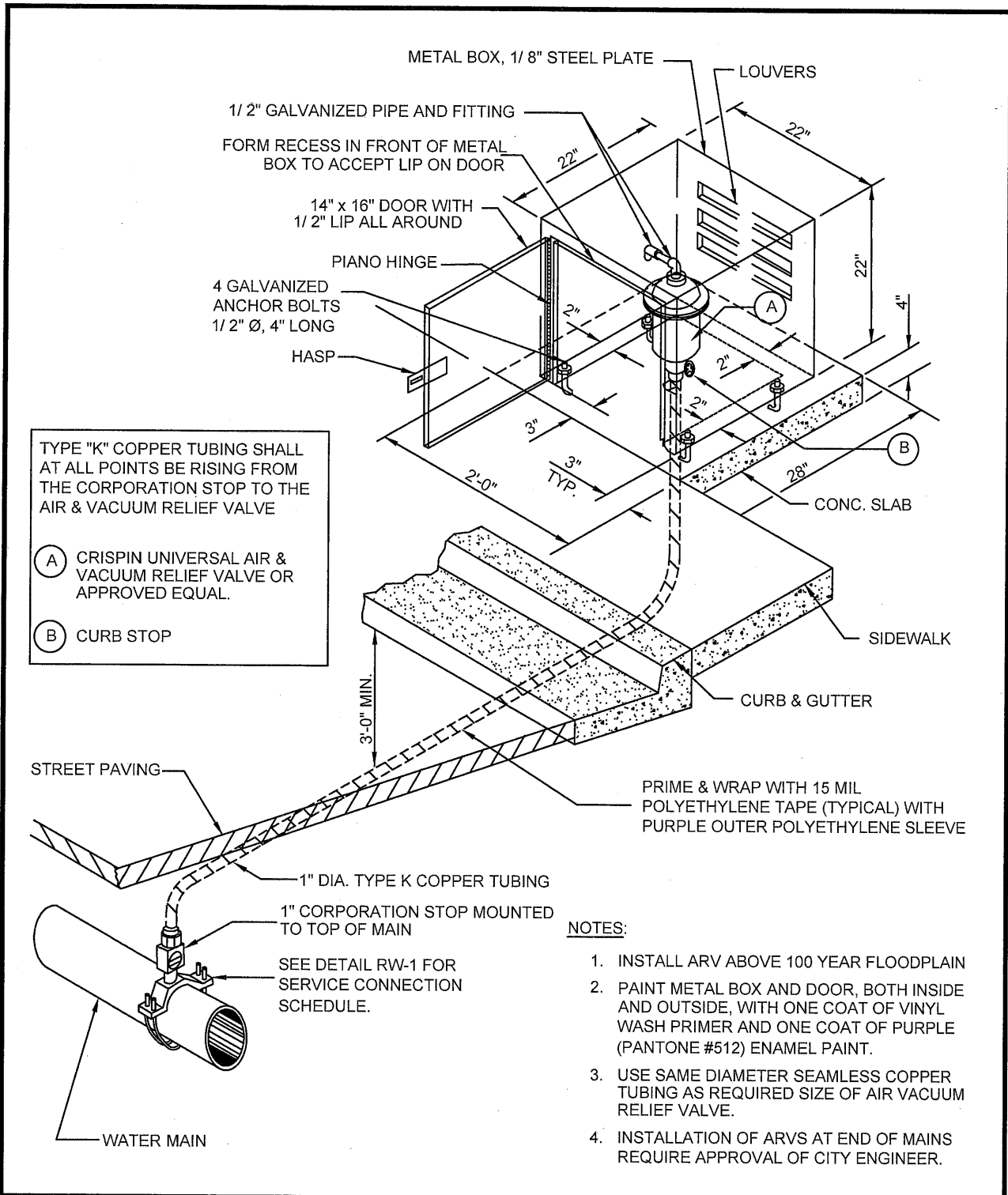


Revision	Date	Approved
Drawn: <i>IV</i>	Date: 6/30/15	
Checked: <i>WM</i>	Scale: NTS	
APPROVED BY: <i>Jacqueline C. Solomon</i> No. 57093 REGISTERED PROFESSIONAL ENGINEER CIVIL STATE OF CALIFORNIA DATE: 7/1/15 EXP: 12/31/15 R.C.E. NO. 57093		

CITY OF MOUNTAIN VIEW
 PUBLIC WORKS DEPARTMENT
 STANDARD DETAIL

RECYCLED WATER
 2" BLOW-OFF VALVE

FILE NO. RW-12



TYPE "K" COPPER TUBING SHALL AT ALL POINTS BE RISING FROM THE CORPORATION STOP TO THE AIR & VACUUM RELIEF VALVE

(A) CRISPIN UNIVERSAL AIR & VACUUM RELIEF VALVE OR APPROVED EQUAL.

(B) CURB STOP

- NOTES:**
1. INSTALL ARV ABOVE 100 YEAR FLOODPLAIN
 2. PAINT METAL BOX AND DOOR, BOTH INSIDE AND OUTSIDE, WITH ONE COAT OF VINYL WASH PRIMER AND ONE COAT OF PURPLE (PANTONE #512) ENAMEL PAINT.
 3. USE SAME DIAMETER SEAMLESS COPPER TUBING AS REQUIRED SIZE OF AIR VACUUM RELIEF VALVE.
 4. INSTALLATION OF ARVS AT END OF MAINS REQUIRE APPROVAL OF CITY ENGINEER.

Revision	Date	Approved
Drawn: <i>WV</i>	Date: 6/30/15	
Checked: <i>WV</i>	Scale: NTS	
APPROVED BY: <i>Jacqueline A. Solomon</i>		
DATE: 7/1/15	EXP: 12/31/15	57093 R.C.E. NO.

CITY OF MOUNTAIN VIEW
 PUBLIC WORKS DEPARTMENT
 STANDARD DETAIL
 RECYCLED WATER
 AIR RELIEF VALVE

FILE NO. RW-13

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APPENDIX F

Recycled Water Plan Review Checklist

- Conceptual Level Checklist
- Building Permit Level Checklist

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PLAN REVIEW CHECKLIST FOR RECYCLED WATER

Customer Name: _____ Review Date: _____

Property Service Address: _____

Recycled Meter Account No.: _____ Recycled Meter No.: _____

Recycled Water Plan Requirements - **CONCEPTUAL PLAN LEVEL**

Requirements	Comments	Completed
Identifies the location of adjacent streets		<input type="checkbox"/>
Identifies boundaries of intended recycled water use areas		<input type="checkbox"/>
Identifies recycled and potable water mainline connection to water meters		<input type="checkbox"/>
Identifies size and location of recycled and potable water meters		<input type="checkbox"/>
Identifies location of backflow prevention device		<input type="checkbox"/>
Identifies location of all drinking fountains, outdoor eating areas, and other public facilities with recycled or potable services		<input type="checkbox"/>
For locations proposing recycled water for indoor use: Identifies location of backup water supply storage (if applicable)		<input type="checkbox"/>



PLAN REVIEW CHECKLIST FOR RECYCLED WATER

Customer Name: _____ Review Date: _____

Property Service Address: _____

Recycled Meter Account No.: _____ Recycled Meter No.: _____

Recycled Water Plan Requirements – BUILDING PERMIT LEVEL

• Stamped by Civil Engineer or Landscape Architect licensed to perform work in the State of California? (Yes / No)

Parameter	Requirements	Completed
Basemap	Shows the boundaries of intended recycled water use area	<input type="checkbox"/>
	Identifies the location of adjacent streets, and of all major improvements	<input type="checkbox"/>
	Shows a clear delineation of existing versus proposed facilities	<input type="checkbox"/>
Utilities	Identifies location and size of all recycled and potable water meters, and how they are connected to the water infrastructure	<input type="checkbox"/>
	Identifies location and type of backflow prevention devices	<input type="checkbox"/>
	Identifies location of all existing potable and recycled pipelines (if available)	<input type="checkbox"/>
	Identifies location of all new potable and recycled pipelines	<input type="checkbox"/>
	Identifies the following locations of on-site recycled water system elements:	<input type="checkbox"/>
	• Constant pressure (main) lines	<input type="checkbox"/>
	• Irrigation controllers	<input type="checkbox"/>
	• Strainers	<input type="checkbox"/>
• Valves <ul style="list-style-type: none"> ○ Master ○ Pressure Regulating ○ Remote Control ○ Quick Coupling ○ Gate 	<input type="checkbox"/>	
Signs	Note: <i>Signs conforming to City of Mountain View details are typically located at i. Property entrances (vehicular and pedestrian); ii. Water features supplied with recycled water; iii. Ends of streetscapes (no further than 1000' apart) and medians; iv. Indoor rooms using recycled water (e.g., for toilet flushing)</i>	
	Identifies locations of recycled water advisory signs and tags	<input type="checkbox"/>
	○ Indoor	<input type="checkbox"/>
	○ Outdoor irrigation	<input type="checkbox"/>
	○ Water feature	<input type="checkbox"/>
Special Cases	Retrofit sites: Shows location and method of providing separation of potable and recycled water pipelines	<input type="checkbox"/>
	On-site fire lines: Shows if fire lines are connected to other water sources	<input type="checkbox"/>
	Multiple separated irrigation systems: Shows the extents served by each recycled water point of connection	<input type="checkbox"/>



Parameter	Requirements	Completed
LEGEND, AND STANDARD SPECIFICATION NOTES AND DETAILS (APPENDIX E)		
Legend Information	Irrigation system legend specifying all materials for construction, including pipelines, appurtenances and the type of water conveyed in that facility	<input type="checkbox"/>
Pipeline materials	PVC-Constant pressure lines (2 inch or larger): Class 315 or C900 Class 200 DR 14	<input type="checkbox"/>
	PVC-Constant pressure lines (1 ½ inch or smaller): Schedule 40	<input type="checkbox"/>
	PVC-Intermittent pressure lines: Schedule 40 or Class 200	<input type="checkbox"/>
	Copper: Type “K”	<input type="checkbox"/>
	Thrust blocks used for new buried piping that is not PVC with solvent welded joints	<input type="checkbox"/>
Minimum depths	Intermittent pressure lines: 12 inches	<input type="checkbox"/>
	Constant pressure lines (2 ½ inch or smaller): 18 inches	<input type="checkbox"/>
	Constant pressure lines (3 inch or larger): 24 inches	<input type="checkbox"/>
Horizontal separation (Parallel pipelines)	Minimum 4-foot separation between pressurized potable and recycled lines	<input type="checkbox"/>
Vertical separation (Crossing pipelines)	New pressurized recycled lines are routed at least 12" below potable water lines OR	<input type="checkbox"/>
	New pressurized recycled lines are routed at least 12" above potable water lines and is installed in a PVC pipe sleeve extending at least 10' on either side of the potable lines	<input type="checkbox"/>
	Intermittent pressure recycled lines are routed at least 12" above or below potable water lines (no sleeving required)	<input type="checkbox"/>
Recycled pipeline identification	Note: Existing pipelines not exposed during construction do not require markings	
	New pipelines and existing pipelines that become exposed during construction: Purple-colored PVC reading “CAUTION – RECYCLED WATER” OR	<input type="checkbox"/>
	Purple tape reading “CAUTION – RECYCLED WATER”. Minimum width of 3" with Black or White lettering. Runs continuously on top of piping	<input type="checkbox"/>
	Sprinkler risers marked with tape	<input type="checkbox"/>
Tags, Nameplates and Decals.	Tags, nameplates and decals conforming to the City details are located:	
	○ Tags: On all recycled and potable water appurtenances (control valves, isolation valves, quick couplers, meters)	<input type="checkbox"/>
	○ Purple for recycled water, Blue for potable water, and Yellow for potable water irrigation	<input type="checkbox"/>
	○ Nameplates: On irrigation valve box covers / lids	<input type="checkbox"/>
	○ Decals: On irrigation controllers	<input type="checkbox"/>
SITE BOX (GUIDELINES SECTION 3.2, PAGE 15)		
Site Box	Includes site box in plans	<input type="checkbox"/>
	Identifies all water sources, including groundwater wells. If none, state "none" on the plan	<input type="checkbox"/>
	Identifies location of water impoundments within 100' of the property (lakes, ponds, pools, reservoirs and decorative fountains). If none, state "none" on the plan	<input type="checkbox"/>
	Identifies location of potable water outlets (e.g., drinking fountains, hose bibs) within recycled water use area. If none, state "none" on the plan	<input type="checkbox"/>



RECYCLED WATER PROHIBITIONS

The following is a list of prohibitions. Please check that the following instances are not shown in the plans.	Completed
NO Cross-connection between recycled and potable systems	<input type="checkbox"/>
NO Hose bibs supplied with recycled water	<input type="checkbox"/>
NO Injection of chemical fertilizers or pesticides to the recycled water system	<input type="checkbox"/>
NO Excessive overspray or runoff of recycled water outside of the approved use area	<input type="checkbox"/>
NO Drinking fountains or outdoor eating areas in the recycled water use area, unless adequately protected from overspray	<input type="checkbox"/>
NO Above-grade pressurized recycled line stub outs	<input type="checkbox"/>
NO Potable and recycled lines installed in the same trench	<input type="checkbox"/>
NO Blue-colored PVC for recycled lines, unless the blue is completely obscured by purple polyethylene wrap	<input type="checkbox"/>
NO Above-grade purple PVC pipelines, unless wrapped with marking tape	<input type="checkbox"/>

 Reviewer Name Date

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

Signature

Please mail or fax completed report to the address below:

City of Mountain View - Public Services Division
 231 North Whisman Road
 Mountain View, CA 94043
 Attention: Recycled Water Program
 Phone: (650) 903-6329
 Fax: (650) 962-8079

APPENDIX G

Cross-Connection Control Test Procedure and Certification Form

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Appendix G. Cross Connection Control Test Procedure for On-Site Recycled Water Systems

The following method is used for conducting a cross-connection control test on all sites where both recycled water and potable water are intended to be used in separate piping systems. A certified AWWA cross-connection specialist must perform the test.

Cross-Connection Control Test—Part One:

The potable water system shall be activated and pressurized. The on-site recycled water system shall be shut down at its point of connection and depressurized—this is usually done by manually bleeding an irrigation control valve and/or quick-coupling valve that is located at the lowest point of elevation in the irrigation system.

1. The potable water system shall remain pressurized for a minimum period of time specified by the cross-connection specialist while the irrigation system is depressurized. The minimum period of time the recycled water irrigation system is to remain depressurized shall be determined on a case-by-case basis, taking into account the size and complexity of the potable water and recycled water irrigation systems.
2. All recycled water irrigation control valves and quick-coupling valves, and any site features that are approved to be supplied with recycled water from the on-site system (such as decorative fountains) shall be tested and inspected for flow. If the on-site recycled water system has been truly shut down at its point of connection, then continuous flow from any part of the on-site recycled water system— irrigation system or decorative fountains, etc.—indicates a cross-connection.
3. All potable water fixtures (interior and exterior)—faucets, hose bibs, drinking fountains, toilets and urinals, supply lines to decorative fountains, etc.—shall be tested and inspected for flow. No flow from any potable water outlet indicates that it may be connected to the recycled water irrigation system.
4. If no cross-connections are discovered, proceed to the second part of the test. If any cross-connections are found, they must be disconnected and the site must be retested by an AWWA cross-connection specialist per these procedures.

Cross-Connection Control Test—Part Two:

1. The potable water system shall be shut down at its point of connection (usually the meter) and depressurized. In the case of a potable water system in a multi-story building, the potable water system pressure may be reduced by the amount deemed necessary by the cross-connection specialist and monitored with a gauge installed at a low point of elevation in the potable water system.
2. The on-site recycled water system shall then be activated and pressurized using a temporary supply of potable water.



3. The on-site recycled water system shall remain pressurized for a minimum period of time specified by the cross-connection control specialist while the potable water system is depressurized (or, in the case of a multi-story building potable water system, remains in a state of reduced pressure). The minimum period of time the potable water system is to remain depressurized shall be determined on a case-by-case basis.
4. All potable water fixtures (interior and exterior)—faucets, hose bibs, drinking fountains, toilets and urinals, supply lines to decorative fountains, etc.—shall be tested and inspected for flow. Some flow may occur from water breaking loose from an air lock in an overhead water line. The amount of flow to cause a concern is a judgment call by the cross-connection specialist. If the potable water system has been truly shut down at its point of connection, then continuous flow from any part of the potable water system (that is beyond the drainage generated by an air lock breaking free) indicates a cross-connection. In the case of a potable water system in a multi-story building, the testing of all fixtures may be used in combination with a pressure gauge (mentioned in No. 1 above), or the pressure gauge may be used instead of the testing of all fixtures. If the potable water system has been truly shut down at its point of connection, then an increase in the potable water system pressure viewed at the gauge over a period of time specified by the cross-connection specialist indicates a cross-connection.
5. All recycled water irrigation control valves and quick-coupling valves, and any other site features that are approved to be supplied with recycled water from the on-site irrigation system (such as supply lines to decorative fountains) shall be tested and inspected for flow. No flow from a recycled water irrigation control valve, quick-coupling valve or any other recycled water fixture indicates that it may be connected to the potable water system.
6. If no cross-connections are discovered, then the temporary supply of potable water shall be disconnected and the recycled water system shall be pressurized using recycled water. The potable water system shall be repressurized. If any cross-connections are found, they must be disconnected and the site must be retested by an AWWA cross-connection specialist per these procedures.



RECYCLED WATER CROSS-CONNECTION TEST CERTIFICATION

Site/Business Name: _____

Property Service Address: _____

Recycled Water Account No.: _____

Recycled Meter No.: _____

Date Test Conducted: _____

Other Attendees at the Test:

Name	Organization	Phone Number
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

I, _____, AWWA Cross-Connection Specialist _____
(print name) (No.)

after carefully reviewing the system and conducting the test as per California Plumbing Code Chapter 16A, and City of Mountain View Rules and Regulations, find no indication of a cross-connection between the recycled water system and potable system at the above indicated location.

Signed: _____ Date: _____ Time: _____

Organization: _____ Phone: _____

Address: _____

Excavation Permit No.: _____ **Building Permit No.:** _____

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APPENDIX H
Coverage Test Form

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COVERAGE TEST FORM

Site Name: _____

Service Address: _____

Recycled Water Account No.(s): _____

Inspected by: _____

Date Test Conducted: _____

Excavation Permit No.: _____ **Building Permit No.:** _____

Please check for the following items during the coverage test:

- No evidence of recycled water overspray outside of the approved use area.
- No evidence of recycled water runoff from the site.
- No odor of wastewater origin at the irrigation site.
- No evidence of ponding of recycled water.
- No evidence of leaks or breaks in the irrigation system pipelines or tubing.
- No evidence of broken or faulty drip irrigation system emitters or spray irrigation sprinklers.
- Warning signs, tags, stickers, and above ground pipe markings are posted to inform the public that the irrigation water is recycled and is not suitable for drinking.

If any of the above conditions have not been satisfied, please repair the recycled water irrigation system before submitting this form to the Building Division.

Signature _____

Site Supervisor

Date _____

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APPENDIX I

Annual Self-Inspection Report Form

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ANNUAL SELF-INSPECTION REPORT FOR RECYCLED WATER

Site/Business Name: _____

Property Service Address: _____

Recycled Meter Account No.: _____

Recycled Meter No.: _____

Date Self-Inspection Conducted: _____

- Yes
 No 1. Are advisory signs and tags in good condition and posted consistent with approved plans to inform public that water is recycled? If not, describe actions taken to correct:

- Yes
 No 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. Also, describe actions taken to correct:

- Yes
 No 3. Is there an odor of wastewater origin within the irrigation site? If yes, describe apparent source, characterization, direction of travel and any public use areas or off-site facilities affected by the odor. Describe actions to correct:

- Yes
 No 4. Is there evidence of ponding of recycled water and/or evidence of mosquitoes breeding within the irrigation (and/or industrial/dual plumbed) area due to ponded water? If yes, describe actions taken to correct:

- Yes
 No 5. Is there evidence of leaks or breaks in the irrigation (and/or industrial/dual plumbed) system pipelines or tubing? If yes, describe actions taken to correct:

- Yes
 No 6. Is there evidence of plugged, broken or otherwise faulty drip irrigation system emitters or spray irrigation sprinklers on the site? Describe actions taken to correct:

- Yes
 No 7. In the past year or since the last annual site inspection report, have there been any modifications to the on-site recycled or potable water systems? If so, describe the modifications:

- Yes
 No 8. Do you use a conductivity meter to test the water?

Additional Inspection Items 9 and 10 are for Dual Plumbed Facilities:

- Yes
 No
 N/A 9. Are tamper-evident valve seals intact and exposed piping for the recycled water system labeled? If not, describe actions taken to correct:

- Visual
 Physical
 N/A 10. All dual plumbed facilities must have a certified cross-connection specialist visually inspect the system annually and conduct a physical cross-connection test every four years. Please provide the following information:



SITE SUPERVISOR

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

Certified Site Supervisor Signature

Print Name

Mailing Address City State ZIP

Office Phone-Extension Cell Phone E-mail

CITY OF MOUNTAIN VIEW WATER CUSTOMER

City of Mountain View Water Customer Name (e.g., property owner, tenant or property management firm)

Address City State ZIP

Office Phone-Extension Cell Phone E-mail

PROPERTY OWNER

Property Owner Name (if different from above)

Address City State ZIP

Office Phone-Extension Cell Phone E-mail

CROSS-CONNECTION SPECIALIST

Cross-Connection Specialist Name Date of Inspection AWWA No.

Date of Last Physical Cross-Connection Test Results of Test

Please Mail or fax completed report to:
City of Mountain View - Public Services Division • Attn: Recycled Water Program
231 North Whisman Road • Mountain View, CA 94043 • FAX 650-962-8079

APPENDIX J

Design Requirements for Dual Plumbed Buildings – CPC Chapter 16A

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CHAPTER 16A

NON-POTABLE WATER REUSE SYSTEMS

Part II [DWR]

1613A.0 Recycled Water Systems – General.

- (A) The provisions of Part II of this chapter shall apply to the installation, construction, alteration, and repair of recycled water systems intended to supply water closets, urinals, trap primers for floor drains, floor sinks and other allowed uses. The recycled water system shall not have any connections to the potable water system except via an air gap approved by the Authority Having Jurisdiction or via a temporary connection to the potable system for initial testing of the recycled water system piping.
- (B) No permit for any recycled water system shall be issued until complete plumbing plans, with appropriate data satisfactory to the Authority Having Jurisdiction, have been submitted and approved. No changes or connections shall be made to either the recycled water system or the potable water system within any site containing a recycled water system without approval by the Authority Having Jurisdiction. See Section 1620A.0 for further details.
- (C) Before the building is occupied, the installer shall perform an initial cross-connection test in the presence of the Authority Having Jurisdiction or other authorities having jurisdiction. The test shall be ruled successful before final approval is granted.
- (D) A recycled water system shall be designed by a person registered or licensed to perform plumbing design work.

1614A.0 Definitions.

Recycled Water. Non-potable water that meets California Department of Public Health statewide uniform criteria for disinfected tertiary recycled water. Recycled water is also known as reclaimed water.

1615A.0 Permit.

It shall be unlawful for any person to construct, install, alter, or cause to be constructed, installed, or altered any recycled water system within a building or on a premises without first obtaining a permit to do such work from the Authority Having Jurisdiction. Section 13553 of the Water Code specifies structures where indoor use of recycled water is allowed. These structures include commercial, retail and office buildings, theaters, auditoriums, condominium projects, schools, hotels, apartments, barracks, dormitories, jails, prisons, reformatories, and other structures as determined by the State Department of Public Health.

1616A.0 Drawings and Specifications.

- (A) Drawings and specifications for recycled water systems shall be in accordance with the requirements identified in Chapter 1, General Code Provisions, of the California Plumbing Code.
- (B) The drawings and specifications shall provide sufficient detail to determine compliance with the requirements of this chapter and the California Plumbing Code.

1617A.0 Pipe Material/Pipe Identification.

Recycled water pipe shall comply with Sections 1617A.1 and 1617A.2.

1617A.1 Pipe Materials. Recycled water pipe, valves and fittings shall conform to the requirements of Sections 604.0, and 606.0.

1617A.2 Color and Information. Recycled water systems shall have a purple background with black uppercase lettering with the words “CAUTION: RECYCLED WATER, DO NOT DRINK.”

All recycled water pipe shall be permanently marked to identify that it contains recycled water. This may be accomplished by labeling piping using purple-colored (Pantone color #512) adhesive Mylar PVC tape along the entire length of the pipe or using non-metallic pipe manufactured with purple integral to the material. For either material, the identification system shall be installed so the wording above is clearly visible.

1618A.0 Installation.

- (A) The recycled water piping system shall not include any hose bibbs. Only quick couplers that differ from those used on the potable water system shall be used on the recycled water piping system.
- (B) The recycled water system and the potable water system within the building shall be provided with the required appurtenances (valves, air/vacuum relief valves, etc.) to allow for testing as required for cross connection test in Section 1620A.0.
- (C) Recycled water pipes laid in the same trench or crossing building sewer or drainage piping shall be installed in compliance with Sections 609.0 and 720.0 of this code. Recycled water pipes shall be protected similar to potable water pipes.

1619A.0 Signs.

- (A) **Commercial, Industrial and Institutional Room Entrance Signs.** All rooms in commercial, industrial, and institutional occupancies using recycled water for water closets and/or urinals shall be identified with signs. Each sign shall contain one-half (½) inch (12.7

mm) letters of a highly visible color on a contrasting background. The location of the sign(s) shall be such that the sign(s) shall be visible to all users. The signs shall contain the following text:

**TO CONSERVE WATER,
THIS BUILDING USES RECYCLED
WATER TO FLUSH TOILETS AND URINALS.**

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

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

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

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

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

RECYCLED WATER – DO NOT DRINK

- (D) **Valve Access Door Signs.** Each recycled water valve within a wall shall have its access door into the wall equipped with a warning sign approximately six (6) inches by six (6) inches (152 mm x 152 mm) with wording in one-half (½) inch (12.7 mm) letters on a purple background. The size, shape, and format of the sign shall be substantially the same as that specified in subsection (B) above. The signs shall be attached inside the access door frame and shall hang in the center of the access door frame. This sign requirement shall be applicable to any and all access doors, hatches, etc., leading to recycled water piping and appurtenances.
- (E) **Valve Seals.** The master recycled water shut-off valve and/or the recycled water meter curb cock and each valve within a wall shall be sealed after the recycled water system has been approved and placed into operation. These seals shall be either crimped lead wire seal or plastic break away seal which, if broken after system approval, shall be deemed conclusive evidence that the recycled water system has been accessed. The

seals shall be purple, numbered, and contain the words “RECYCLED WATER”, and shall be supplied by the recycled water purveyor, or by other arrangements acceptable to the Authority Having Jurisdiction.

1620A.0 Inspection and Testing.

- (A) Recycled water piping shall be inspected and tested as outlined in this code for testing of potable water piping.
- (B) The recycled water system shall be inspected and tested in accordance to the following: (a) an initial cross-connection test before the initial operation of the recycled water system; (b) an annual visual system inspection; (c) a cross-connection test as required pursuant to Section 60316(a), Title 22, California Code of Regulations; (d) a cross-connection test when there is material reason to believe that the potable water and/or recycled water system separation has been compromised; and (e) a cross-connection test following remediation of a discovered cross-connection. A material reason to believe that the system has been compromised may be based on, but is not limited to, evidence gathered: (a) during a visual inspection performed pursuant to Section 1620A.0, or (b) as a result of an inspection performed following complaints of water quality or flow conditions consistent with a compromised system.

An initial Cross-Connection test and subsequent Annual Visual System Inspection shall be performed as follows:

- (1) **Annual Visual System Inspection.** A visual system inspection shall be conducted annually by the Authority Having Jurisdiction or other authorities having jurisdiction.
- (i) Meter locations of the recycled water and potable water lines shall be checked to verify that no modifications were made, and that no cross-connections are visible.
 - (ii) All pumps and equipment, equipment room signs, and exposed piping in the equipment room shall be checked.
 - (iii) All valves shall be checked to ensure that valve lock seals are still in place and intact. All valve control door signs shall be checked to verify that no signs have been removed.
 - (iv) If the visual inspection indicates that the recycled water plumbing has been modified, a Cross-Connection Test is required.
- (2) **Cross-Connection Test.** The applicant shall perform the Cross-Connection Test as required pursuant to the first paragraph in Section 1620A.0(B).

The test shall be conducted in the presence of the Authority Having Jurisdiction or other authorities having jurisdiction to determine whether a cross-connection occurred.

Alternate inspection and testing requirements may be allowed by the Authority Having Jurisdiction for residential, institutional or industrial buildings where shutting off the water is not practical. The recycled water purveyor or other designated appointee may substitute for the Authority Having Jurisdiction in the above mentioned inspection and tests.

- (i) The potable water system shall be activated and pressurized. The *recycled* water system shall be shut down and completely *depressurized*.
- (ii) The potable water system shall remain pressurized *while the recycled water system is depressurized*. The minimum period the *recycled* water system is to remain depressurized shall be determined on a case-by-case basis, taking into account the size and complexity of the potable and *recycled* water distribution systems.
- (iii) *All* fixtures, potable and *recycled*, shall be tested and inspected for flow. Flow from any *recycled* water system outlet shall indicate a cross-connection. No flow from a potable water outlet would indicate that it may be connected to the *recycled* water system.
- (iv) The drain on the *recycled* water system shall be checked for flow during the test and at the end of the period.
- (v) The potable water system shall then be completely *depressurized*.
- (vi) The *recycled* water system shall then be activated and pressurized. *For the initial test, a temporary connection to a potable water supply will be required to test the recycled water system plumbing. At the conclusion of the test, the temporary connection to the potable water supply shall be disconnected.*
- (vii) The *recycled* water system shall remain pressurized while the potable water system is *depressurized*. The minimum period the potable water system is to remain depressurized shall be determined on a case-by-case basis.
- (viii) *All* fixtures, potable and *recycled*, shall be tested and inspected for flow. Flow from any potable water system outlet shall indicate a cross-connection. No flow from a *recycled* water outlet would indicate that it is connected to the potable water system.
- (ix) The drain on the potable water system shall be checked for flow during the test and at the end of the period.
- (x) If there is no flow detected in any of the fixtures that would have indicated a cross-connection, the potable water system shall be repressurized.

(3) Cross-Connection Discovered. In the event that a cross-connection is discovered, the following procedure shall be activated immediately:

- (i) *Recycled* water piping to the building shall be shut down at the meter, and the *recycled* water riser shall be drained.
- (ii) Potable water piping to the building shall be shut down at the meter.
- (iii) The cross-connection shall be uncovered and disconnected.
- (iv) The building shall be retested following procedures listed in Sections 1620A.0 (B)(1) and (B)(2) above.
- (v) The potable water system shall be chlorinated with fifty (50) ppm chlorine for twenty-four (24) hours.
- (vi) The potable water system shall be flushed after twenty-four (24) hours, and a standard bacteriological test shall be performed. If test results are acceptable, the potable water system shall be permitted to be recharged.

Alternate testing requirements shall be permitted by the Authority Having Jurisdiction.

1621A.0 Sizing.

Recycled water piping shall be sized as outlined in this code for sizing potable water piping.

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APPENDIX K

Engineering Report for Dual Plumbed Buildings –Title 22 CCR

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§ 60311. Pasture for Milking Animals.

HISTORY

1. Repealer filed 11-2-2000; operative 12-2-2000 (Register 2000, No. 44).

Article 5. Dual Plumbed Recycled Water Systems

§ 60313. General Requirements.

(a) No person other than a recycled water agency shall deliver recycled water to a dual-plumbed facility.

(b) No recycled water agency shall deliver recycled water for any internal use to any individually-owned residential units including free-standing structures, multiplexes, or condominiums.

(c) No recycled water agency shall deliver recycled water for internal use except for fire suppression systems, to any facility that produces or processes food products or beverages. For purposes of this Subsection, cafeterias or snack bars in a facility whose primary function does not involve the production or processing of foods or beverages are not considered facilities that produce or process foods or beverages.

(d) No recycled water agency shall deliver recycled water to a facility using a dual plumbed system unless the report required pursuant to section 13522.5 of the Water Code, and which meets the requirements set forth in section 60314, has been submitted to, and approved by, the regulatory agency.

NOTE: Authority cited: Section 13521, Water Code. Reference: Sections 13521, 13522.5, 13523.1, 13553 and 13554, Water Code.

HISTORY

1. Amendment filed 9-22-78; effective thirtieth day thereafter (Register 78, No. 38).
2. Repealer of former article 4 (section 60313) and new article 5 (sections 60313-60316) and section filed 11-2-2000; operative 12-2-2000 (Register 2000, No. 44).

§ 60314. Report Submittal.

(a) For dual-plumbed recycled water systems, the report submitted pursuant to section 13522.5 of the Water Code shall contain the following information in addition to the information required by section 60323:

(1) A detailed description of the intended use area identifying the following:

(A) The number, location, and type of facilities within the use area proposing to use dual plumbed systems,

(B) The average number of persons estimated to be served by each facility on a daily basis,

(C) The specific boundaries of the proposed use area including a map showing the location of each facility to be served,

(D) The person or persons responsible for operation of the dual plumbed system at each facility, and

(E) The specific use to be made of the recycled water at each facility.

(2) Plans and specifications describing the following:

(A) Proposed piping system to be used,

(B) Pipe locations of both the recycled and potable systems,

(C) Type and location of the outlets and plumbing fixtures that will be accessible to the public, and

(D) The methods and devices to be used to prevent backflow of recycled water into the public water system.

(3) The methods to be used by the recycled water agency to assure that the installation and operation of the dual plumbed system will not result in cross connections between the recycled water piping system and the potable water piping system. This shall include a description of pressure, dye or other test methods to be used to test the system every four years.

(b) A master plan report that covers more than one facility or use site may be submitted provided the report includes the information required by this section. Plans and specifications for individual facilities covered by the report may be submitted at any time prior to the delivery of recycled water to the facility.

NOTE: Authority cited: Sections 13521 and 13522.5, Water Code. Reference: Sections 13521, 13522.5, 13523.1, 13553 and 13554, Water Code.

HISTORY

1. New section filed 11-2-2000; operative 12-2-2000 (Register 2000, No. 44).

§ 60315. Design Requirements.

The public water supply shall not be used as a backup or supplemental source of water for a dual-plumbed recycled water system unless the connection between the two systems is protected by an air gap separation which complies with the requirements of sections 7602(a) and 7603(a) of title 17, California Code of Regulations, and the approval of the public water system has been obtained.

NOTE: Authority cited: Section 13521, Water Code. Reference: Sections 13521, 13523.1, 13553 and 13554, Water Code.

HISTORY

1. Repealer of former article 5 (sections 60315-60319) and repealer and new section filed 11-2-2000; operative 12-2-2000 (Register 2000, No. 44).

§ 60316. Operation Requirements.

(a) Prior to the initial operation of the dual-plumbed recycled water system and annually thereafter, the Recycled Water Agency shall ensure that the dual plumbed system within each facility and use area is inspected for possible cross connections with the potable water system. The recycled water system shall also be tested for possible cross connections at least once every four years. The testing shall be conducted in accordance with the method described in the report submitted pursuant to section 60314. The inspections and the testing shall be performed by a cross connection control specialist certified by the California-Nevada section of the American Water Works Association or an organization with equivalent certification requirements. A written report documenting the result of the inspection or testing for the prior year shall be submitted to the department within 30 days following completion of the inspection or testing.

(b) The recycled water agency shall notify the department of any incidence of backflow from the dual-plumbed recycled water system into the potable water system within 24 hours of the discovery of the incident.

(c) Any backflow prevention device installed to protect the public water system serving the dual-plumbed recycled water system shall be inspected and maintained in accordance with section 7605 of Title 17, California Code of Regulations.

NOTE: Authority cited: Section 13521, Water Code. Reference: Sections 13521, 13553 and 13554, Water Code.

HISTORY

1. New section filed 11-2-2000; operative 12-2-2000 (Register 2000, No. 44).

§ 60317. Restricted Recreational Impoundment.

HISTORY

1. Repealer filed 11-2-2000; operative 12-2-2000 (Register 2000, No. 44).

§ 60319. Landscape Impoundment.

HISTORY

1. Repealer filed 11-2-2000; operative 12-2-2000 (Register 2000, No. 44).

Article 5.1. Groundwater Recharge

§ 60320. Groundwater Recharge.

(a) Reclaimed water used for groundwater recharge of domestic water supply aquifers by surface spreading shall be at all times of a quality that fully protects public health. The State Department of Health Services' recommendations to the Regional Water Quality Control Boards for proposed groundwater recharge projects and for expansion of existing projects will be made on an individual case basis where the use of reclaimed water involves a potential risk to public health.

(b) The State Department of Health Services' recommendations will be based on all relevant aspects of each project, including the following factors: treatment provided; effluent quality and quantity; spreading area operations; soil characteristics; hydrogeology; residence time; and distance to withdrawal.

(c) The State Department of Health Services will hold a public hearing prior to making the final determination regarding the public health aspects of each groundwater recharge project. Final recommendations will

be submitted to the Regional Water Quality Control Board in an expeditious manner.

NOTE: Authority cited: Section 208, Health and Safety Code; and Section 13521, Water Code. Reference: Sections 13520 and 13521, Water Code.

HISTORY

1. New Article 5.1 (Section 60320) filed 9-22-78; effective thirtieth day thereafter (Register 78, No. 38).
2. Editorial correction of NOTE filed 12-3-84 (Register 84, No. 49).

Article 5.5. Other Methods of Treatment

§ 60320.5. Other Methods of Treatment.

Methods of treatment other than those included in this chapter and their reliability features may be accepted if the applicant demonstrates to the satisfaction of the State Department of Health that the methods of treatment and reliability features will assure an equal degree of treatment and reliability.

NOTE: Authority cited: Section 208, Health and Safety Code; and Section 13521, Water Code. Reference: Section 13520, Water Code.

HISTORY

1. Renumbering of Article 11 (Section 60357) to Article 5.5 (Section 60320.5) filed 9-22-78; effective thirtieth day thereafter (Register 78, No. 38).

Article 6. Sampling and Analysis

§ 60321. Sampling and Analysis.

(a) Disinfected secondary-23, disinfected secondary-2.2, and disinfected tertiary recycled water shall be sampled at least once daily for total coliform bacteria. The samples shall be taken from the disinfected effluent and shall be analyzed by an approved laboratory.

(b) Disinfected tertiary recycled water shall be continuously sampled for turbidity using a continuous turbidity meter and recorder following

filtration. Compliance with the daily average operating filter effluent turbidity shall be determined by averaging the levels of recorded turbidity taken at four-hour intervals over a 24-hour period. Compliance with turbidity pursuant to section 60301.320(a)(2)(B) and (b)(1) shall be determined using the levels of recorded turbidity taken at intervals of no more than 1.2-hours over a 24-hour period. Should the continuous turbidity meter and recorder fail, grab sampling at a minimum frequency of 1.2-hours may be substituted for a period of up to 24-hours. The results of the daily average turbidity determinations shall be reported quarterly to the regulatory agency.

(c) The producer or supplier of the recycled water shall conduct the sampling required in subsections (a) and (b).

NOTE: Authority cited: Section 13521, Water Code. Reference: Sections 13520 and 13521, Water Code.

HISTORY

1. Repealer and new section filed 11-2-2000; operative 12-2-2000 (Register 2000, No. 44).

Article 7. Engineering Report and Operational Requirements

§ 60323. Engineering Report.

(a) No person shall produce or supply reclaimed water for direct reuse from a proposed water reclamation plant unless he files an engineering report.

(b) The report shall be prepared by a properly qualified engineer registered in California and experienced in the field of wastewater treatment, and shall contain a description of the design of the proposed reclamation system. The report shall clearly indicate the means for compliance with these regulations and any other features specified by the regulatory agency.

[The next page is 603.]