

WATER USERS HANDBOOK

Revised April 2011

TERMS AND CONDITIONS FOR USE OF RECYCLED WATER AND RECEIVING AGRICULTURAL WATER SERVICE

**HARKINS SLOUGH 2000/COASTAL DISTRIBUTION 2000/
ACCELERATED 2002/COASTAL DISTRIBUTION SYSTEM 2006-08**



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PREFACE

This Users Handbook (Handbook) is designed to be a permanent reference for Pajaro Valley Water Management PVWMA (PVWMA) Customers receiving Recycled Water (also known as Project Water) from PVWMA Coastal Distribution Systems (CDS). The Recycled Water is for agricultural irrigation related uses and other on-site agricultural related uses as listed in Section 4.2.

This Handbook becomes effective as of the first use of any Recycled Water delivered to private property whether for testing or for regularly scheduled irrigation.

This version of the User Handbook supersedes the earlier versions known as the “Interim Users Handbook” which were in effect from 2002 to 2008. Key changes have been triggered by the use of Recycled Water scheduled to begin March 2009.

This Users Handbook incorporates the PVWMA *Rules and Regulations for Recycled Water Customers (Rules and Regulations)*, adopted by Ordinance No. 2008-02 in June 2008, and PVWMA guidelines and procedures as contained in the Recycled Water Program.

As changes occur to the water delivery facilities, water supplies or regulations, supplemental and updated information may be incorporated into this Handbook. The next major update of this handbook is not anticipated until subsequent BMP projects have been completed (e.g., until construction of the Import Pipeline system and/or Stage 1 of the Inland Pipeline System). Minor modifications to this Handbook may be needed as the users and PVWMA gain experience during operation of the expanded system during the 2008 and 2009 irrigation seasons.

The draft versions of this Handbook were reviewed by the Water Quality and Project Operations Committee of PVWMA from September 2007 to July 2008.

Questions about this Handbook, regulations for Recycled Water and water system operating procedures can be answered by contacting PVWMA located at 36 Brennan Street, Watsonville, California 95076. The office hours are 8:00 AM to 5:00 PM, Monday through Friday. You also may reach the PVWMA by telephone at (831) 722-9292, fax (831) 722-3139 or by sending e-mail to info@pvwma.dst.ca.us.

For distribution system emergencies, PVWMA’s on-call System Operator can be reached by telephone at (831) 750-6265 seven days a week twenty-four hours a day (24/7).

For cross-connection emergencies, in addition to calling PVWMA’s on-call System Operator, contact the California Department of Public Health (CDPH) District Engineer, (as of 2008, Jan Sweigert) at (831) 655-6934. If during off hours, contact the CA Office of Emergency Services – Warning Center (ask for CDPH Duty Officer-Drinking Water Program) at (800) 852-7550, available 24/7. See Section 4.12 for more details.

SECTION 1 - INTRODUCTION AND PURPOSE

1.1 INTRODUCTION

PVWMA is committed to the implementation of an effective, flexible water system management program designed to provide efficient water delivery service to meet the needs of PVWMA water system customers. In order to provide fair and equitable service, it is essential that customers follow the *Rules and Regulations for Recycled Water Customers* and the related guidelines set forth in this Handbook. Compliance with the operating guidelines and cooperation with PVWMA staff will assist PVWMA in providing the high level of customer service that is expected.

Agronomic irrigation scheduling relies on the application of the correct amount of irrigation water at the proper times to maximize crop yield while also promoting the efficient use of irrigation water. It is the goal of PVWMA to develop rules and guidelines that facilitate this agronomic approach to water management while maintaining public health and maximizing water system flexibility, reliability and convenience for the user.

Promoting the long-term efficient use of on-farm irrigation water supplies requires that any water delivery project adopt a “service concept,” from which the program can then be built upon. The service concept used here begins with providing a high degree of reliability; sharing responsibility between PVWMA and Customer in arranging and scheduling of water deliveries; establishing accurate and appropriate flow rates; and promoting the efficient use of water resources. The responsibility of PVWMA is to provide flexible, reliable water service. With reliability, customers will have confidence in the ability of the water system to provide irrigation water deliveries to meet the agronomic demands of on-farm irrigation scheduling and efficient irrigation.

Additionally, the use of Recycled Water necessarily invokes a number of Federal, State, County and PVWMA regulations with which both the PVWMA and each user must comply.

Therefore, in order to effectively implement this service concept, the key considerations for water system operation include:

- Public health and safety regulations must be met at all times.
- The customer should be able to operate the turnout without assistance from PVWMA water system operations staff.
- The operating rules should provide for ordering water with 48 hours advance notice. Customers that have set irrigation schedules should be able to order water on a long-term basis (weekly or longer), with only periodic updates to PVWMA water system operations staff.
- The customer should be able to terminate irrigation water deliveries at any time with adequate advance notice to PVWMA water system operations staff.
- The customer should be able to change the flow rate and duration of irrigation from

one irrigation event to another.

- PVWMA and each customer develop a partnership and share the responsibility to operate the system in a manner that minimizes disruptions in system pressures and allows the maximum amount of Project Water to be delivered on a daily and seasonal basis.

1.2 PURPOSE

The purpose of this handbook is to provide additional information to aid compliance with the *Rules and Regulations for Recycled Water Customers*.

This Handbook promulgates procedures for requesting and receiving water deliveries for irrigated parcels in the Water Service Area, defined as the area designated by PVWMA for deliveries of Project Water. The projects covered by this handbook include:

- 1) Harkins Slough Project
- 2) Recycled Water Project
- 3) Coastal Distribution System pipeline projects.

The procedures set forth herein may be revised periodically based on experience gained from project operations or construction of future projects. The procedures allow for irrigation water to be delivered to a customer based on water orders made to PVWMA water system operations staff in accordance with the terms and conditions specified herein. It is the intent to allow customers within the Water Service Area to take deliveries of project irrigation water based on an honor system. This approach requires the customer to operate their turnout in accordance with approved delivery schedules and not disrupt the operating conditions of the system for other users.

1.3 GLOSSARY OF TERMS AND DEFINITIONS

Acre-Foot (AF) - The volume of water required to cover one acre to a depth of one foot (43,560 cubic feet). An acre-foot equals 325,851 gallons.

PVWMA Pressure and Flow Control Valve - PVWMA valve located downstream of the PVWMA meter that controls water delivery pressure and flow. PVWMA water system operations staff adjusts this valve. Adjustment by anyone else is prohibited.

PVWMA Valve - PVWMA butterfly valve located at each turnout that directly controls flow to the customer valve.

Agricultural Water – a general term for Project Water used for irrigation and other agricultural purposes, such as dust control. Agricultural Water may include any combination of Recycled Water, groundwater or municipal water blended into the system.

Backflow Device – a device installed between a potable water system and a nonpotable water system that prevents cross contamination of the potable system with non potable water.

Board of Directors or Board - the Board of Directors of the Pajaro Valley Water Management PVWMA.

Customer - a user of Project Water which may include the landowner, grower, or any other person or entity who is authorized to order and accept water deliveries and receives Project Water from a turnout for irrigation or other agricultural purposes.

Customer Valve - the above ground valve located at each turnout downstream of the PVWMA valve.

Design Flow or Design Flow Rate - the maximum rate of water flow to be delivered to a turnout during normal Project operation.

General Manager - General Manager or designated representative of the Pajaro Valley Water Management PVWMA.

Honor System - a procedure where the Customer is allowed to control water deliveries using either the PVWMA or customer valve only after receiving training by Agency Staff.

On-Farm Storage Pond - any pond located on lands irrigated with Project Water used by the customer for water storage, flow regulation, or to receive Project Water deliveries.

On-Site Distribution System – all components of the on-farm distribution system owned or operated by the user on the user’s side (“downstream”) of the PVWMA’s turn-out. Water within the On-site Distribution System is no longer considered Project Water since changes in the water quality may be made via chemigation, on-site blending, etc.

On-Site Supervisor– the individual employed by the Customer who is responsible for ensuring that the use of Project Water (including Recycled Water) meets all applicable laws and policies. The On-site Supervisor may be the owner or customer.

Potable Water Use – the use of water for drinking, cooking, bathing, showering, dish washing, and maintaining oral hygiene, or for purposes of commerce, trade or industry. Project Water is not potable water.

Program Area – All parcels where Project Water is being delivered or used and the Rules and Regulations are in effect. See *Water Service Area*.

Project - the network of pipelines, irrigation water wells and appurtenances through which irrigation water is delivered to the turnouts. The Project includes the Harkins Slough System, the Coastal Distribution System, the Accelerated 2002 Distribution System and future project phases that may be constructed/operational prior to the import pipeline.

Project Water – Any combination of recycled water, surface water and/or groundwater delivered to customers through PVWMA Project facilities for irrigation and other agricultural uses.

PVWMA - the Pajaro Valley Water Management Agency that owns and operates the Project defined herein.

Responsible Party - the landowner or authorized person(s), as designated in writing by the landowner, authorized to order, accept and pay for water deliveries.

Recycled Water – highly treated wastewater which meets all the “Title 22” public health and safety standards as found in State of California’s Code of Regulations. Also known as Reclaimed water.

Standby Well - an agricultural well owned and operated by a customer or other entity that can be used to provide an irrigation water supply under limited circumstances as defined in PVWMA Ordinance No. 2000-02.

Supplemental Well - any well maintained and/or operated by PVWMA as part of the Project.

Turnout - the Project's above ground piping to which the customer's on-farm irrigation system is physically connected for receipt of Project Water (see Attachment 4).

User – See *Customer*.

Water Conservation - care and protection of water as a natural resource, including planned management to prevent unnecessary losses and waste.

Water System Operations Staff or System Operator - PVWMA personnel or contractor personnel authorized by PVWMA to operate the Project.

Water Service Area - the area designated by PVWMA for deliveries of Project Water.

Water Year – a 12-month period used to track seasonal rainfall and water use (beginning October 1 and ending September 30 of each year).

SECTION 2 - RECEIVING AGRICULTURAL WATER SERVICE

2.1 PURPOSE

This Section describes the general terms and conditions for receiving agricultural water service from PVWMA.

PVWMA customers agree to the following terms and conditions of receiving agricultural water service by applying for and/or taking delivery of Project Water from the PVWMA. PVWMA may modify or terminate these terms and conditions, provided that 30 days written notice thereof is given prior to the effective date.

The General Manager will take all necessary actions to implement and effectuate the terms and conditions for receiving agricultural water service described herein. Further, the General Manager may lock the delivery facilities of, or discontinue water service to, any customer who violates the terms and conditions for receiving agricultural water service.

In addition to the information in this section, Customers are subject to the terms listed in the *Rules and Regulations*.

2.2 TERMS AND CONDITIONS

- 2.2.1** The customer shall not transfer PVWMA waters to other water districts or agencies. Project Water shall not be applied to lands that are outside the Program Area.
- 2.2.2** The water distribution system is sized based on an estimate of peak crop water demand. The sizing criteria relies on an operational approach that provides for active management of the system by PVWMA. To reduce the cost of the water delivery facilities, the turnouts are operated using a water order approach that allows the System Operator to efficiently manage the system while providing water deliveries to meet demand.
- 2.2.3** The delivery of water is subject to all regulations, ordinances and resolutions of PVWMA Board of Directors as they may exist now or hereafter be amended or adopted. In the event of a conflict between the provisions of this Handbook and the regulations, ordinances and resolutions, the more restrictive or of higher authority (e.g., state is higher than county) shall be controlling.
- 2.2.4** The water distribution system operates under the control of PVWMA's System Operator. Deliveries of Project Water to turnouts/meters will be accomplished using the honor system. The honor system is a management procedure where the customer is allowed to control water deliveries using the customer valve. The customer is required to order water deliveries identifying the start and stop times, and flow. The customer must follow the water delivery schedule approved by the System Operator otherwise the system will not be capable of providing water flow and pressure to other customers. The honor system allows for the most efficient use of the water system and use of staff resources. If the honor system is repeatedly violated, the System Operator may place controls on the

PVWMA valve. Significant fines and penalties, as described herein, may be imposed for abuse of the honor system operating procedure.

- 2.2.5** Project turnouts are constructed to provide maximum water flows based on criteria developed during the project design phase. The maximum water delivery flows cannot be exceeded, but lower flow amounts can be delivered. Adjusting either the PVWMA or customer valve can regulate water flow, but the flow delivered must correspond to the amount requested by the water order. Taking flows in excess of the amount requested constitutes a violation of the terms and conditions for water service and may subject the customer to fines and penalties as set forth herein. Each turnout is designed to provide up to 80-psi water delivery pressure. Upon start up of each turnout, the System Operator will adjust the turnout pressure to 80-psi or some lower pressure as requested by the customer. Subsequent pressure adjustments will be made by the System Operator as requested by the customer and may be subject to an administrative fee for each adjustment. Customer adjustment of delivery pressure using the PVWMA pressure and flow control valve is not permitted and constitutes a violation of the terms and conditions for water service, which may subject the customer to fines and penalties as set forth herein.
- 2.2.6** PVWMA will only provide water deliveries pursuant to a request from the customer for delivery at a specific flow rate to a specified turnout. It is the responsibility of the customer to make the request in accordance with the terms and conditions as prescribed by this Handbook. The System Operator will refer customer violations to the General Manager for review and recommendations regarding appropriate remedial actions.
- 2.2.7** The Project Water furnished by PVWMA is not potable and use of Project Water for potable purposes is specifically prohibited. The PVWMA cannot warrant the suitability of the water for any particular agricultural use at all times. While PVWMA will make a reasonable effort to deliver the highest quality water possible given the limits of the available water supply, Project Water quality may vary substantially because of variances in the water supplies and the need to periodically flush the water system. While PVWMA will make a reasonable effort to make information about the quality of Project Water available (salinity, turbidity, etc.), the customer is responsible for determining whether the water is suitable for the user's proposed application (Refer to Section 7.0, Conditions of Service, of the *Rules and Regulations*).

SECTION 3 - STEPS TO OBTAIN RECYCLED WATER SERVICE

The following is a list of general steps for a Customer to connect to the PVWMA's Coastal Distribution System (Project) within the PVWMA's Water Service Area.

1. Applicant completes *Recycled Water Permit Application* and *On-Site Recycled Water Service Plan*.
2. PVWMA reviews the *Recycled Water Permit Application* and *On-Site Recycled Water Service Plan*.
3. PVWMA staff visits Applicant's site to verify information in the *Recycled Water Permit Application* and *On-Site Recycled Water Service Plan*, to identify site improvements or modifications needed to comply with the *Rules and Regulations*, and to assess preliminary cross-connection potential.
4. PVWMA approves Applicant's application conditional upon improvements identified in site visit, as necessary.
5. Applicant completes on-site modifications, as necessary, and has cross-connection and backflow testing performed by a specialist.
6. Applicant identified On-Site Recycled Water Supervisor attends training workshop.
7. PVWMA staff visits site to confirm all site specific requirements have been met, proper signage and equipment labeling has been completed, and to conduct final cross-connection system test.
8. PVWMA issues *Recycled Water Use Permit*, connects recycled water meter, and activates turnout.

SECTION 4 - INTERPRETATION OF RULES AND REGULATIONS (ORDINANCE NO. 2008-02)

4.1 PURPOSE

The purpose of this section is to provide additional information to aid Customers in implementing specific sections of the *Rules and Regulations for Recycled Water Customers*. This section is organized by section names and number from the *Rules and Regulations*.

4.2 GUIDELINES ON SECTION 4.1 – AUTHORIZED USES OF RECYCLED WATER

The primary uses of Recycled Water are limited to the following on-site agricultural related uses: 1) agricultural irrigation, 2) dust control and 3) on-site construction and earthwork related to agriculture. The priority usage is for agricultural irrigation. Permission to use for dust control and on-site construction will be considered on a case-by-case basis. The State's list of approved uses of Recycled (Title 22) Water includes additional uses, however they fall outside of the processes described in this document and are not approved for use in the PVWMA service area .

4.3 GUIDANCE ON SECTION 6.2 – ALLOCATION OF WATER TO RECYCLED WATER CUSTOMERS

4.3.1 Water Delivery Priority and Scheduling

Customers within any given category above will be scheduled based on a first request received, first served basis based on date of receipt of the signed water delivery order form. During periods of high demand, water requests may need to be re-scheduled in order to optimize water deliveries. The following priority system will be used when filling water delivery requests based on system capacity:

1. Users who have requested water 48 to 72 hours in advance will have priority, with the exception to protect crops in critical stages such as transplanting and germination stages. Notification will be required at least 24 hours in advance so that the operator can arrange the schedule accordingly, and for about 7 days from when activity starts taking place.
2. Water users that have leased, sold or donated their well to the PVWMA or have leased, sold or donated real property that enabled the PVWMA to acquire additional sources or to drill a new well. Additionally they must have agreed to abandon their existing supply well(s) and follow the Water Ordering Procedure 48 to 72 hours in advance.
3. Users who have excessively abused the flexibility of the system for non-emergency situations (for example, repeated same-day verbal requests, making excessive or last minute changes to approved schedules, flow rates and times, etc.)

4.4 GUIDANCE ON SECTION 8.0 – RECYCLED WATER USE PERMITS

The RWQCB requires that a *Recycled Water Use Permit* be issued by the PVWMA to all Project Water Customers within the Water Service area. The PVWMA's *Recycled Water Use Permit* indicates any special site-specific requirements in addition to the general requirements specified in the *Rules and Regulations*. The *Recycled Water Use Permit Application* is submitted to the PVWMA with the *On-Site Recycled Water Service Plan*. The PVWMA processes the

application and issues a *Recycled Water Use Permit* with final approval for the use of Recycled Water at the site. The Applicant is responsible to obtain all necessary permits and pay all associated fees. The Applicant should contact the PVWMA for information on permit costs.

4.5 GUIDANCE ON SECTION 8.1 – PERMIT APPLICATION PROCESS

4.5.1 Application

The *Recycled Water Permit Application* is included in Appendix B. The application includes the following information:

- Site address, assessor's block and lot numbers, or property metes and bounds.
- Applicant's name and address, owner's name and address (if different). Applicant's relationship to the subject property as legal owner, tenant, or lessee.
- Description of planned recycled water use on the property.
- Total irrigated area, expressed in appropriate units (square feet, acres).
- Estimated annual flow and peak flow at point of connection, gallon per minute.
- Designation of Customer's On-site Recycled Water Supervisor, including address and 24-hr phone number.
- Other items that could be of concern when using recycled water.
- Type of land use on the property
- Identification of other governmental entities that may have regulatory jurisdiction over the re-use site related to on-site water use, drinking water, food handling or public health issues, such as USDA, State Food and Drug, State Licensing and Certification, etc.

4.5.2 On-Site Recycled Water Service Plan

The *On-Site Recycled Water Service Plan* form is included in Appendix B.

The *On-Site Recycled Water Service Plan* must clearly show the following information on the site plan:

- All residences and other buildings on the site.
- The boundaries of the intended use area.
- Adjacent streets.
- Locations of all major improvements on the site.
- All facilities supplied with recycled or potable water service. Facilities include, but are not limited to, drinking fountains, restrooms, outdoor eating areas, decorative fountains and showers.
- If there are no facilities located in the defined use area, then a note on the plans must indicate that no facilities exist.
- Any wells, lakes, ponds, reservoirs, storage tanks or other water impoundments located on-site or within 100 feet of the site must be shown on the site plan.
- Proposed location and type of signage.
- Description of what will be irrigated (e.g., landscape, specific food crop, etc.).
- Method of irrigation (e.g., spray, flood, or drip).
- Location of potable water pipelines and domestic water supply wells in or adjacent to the

use area.

- A description of site containment measures.
- Direction of drainage and description of the area to which the drainage will flow.
- Protection measures of drinking water fountains and designated outdoor eating areas, if applicable.
- Proposed irrigation schedule (if public access is included).
- Measures to be taken to exclude or minimize public contact.
- Any other relevant items.

In addition, proposed uses that include impoundment must include:

- Purpose of the impoundment.
- Description of the degree of public access.
- Conditions under which the impoundment can be expected to overflow and the expected frequency.
- Direction of drainage and description of the area to which the drainage will flow.

The *On-Site Recycled Water Service Plan* must also show the following information on the pipng plan (or on the site plan if space permits):

- The complete recycled water systems
- The potable system in the vicinity of the recycled water connection
- Horizontal and vertical distance between the recycled and potable system in locations where they cross
- All sources of recycled water and potable water
- The location and type of all existing and new backflow prevention devices and water meters (recycled water and potable water)
- The location of outdoor hose bibs, quick couplers and other points of ready access to recycled or potable water systems
- The location of irrigation controllers, timers, valve and fixtures (sprinklers, bubblers, etc.)

For existing facilities converting to recycled water use pipng plan must indicate:

- Which piping and other devices are existing
- Which piping and other devices will be installed as part of the retrofit work
- The proper separation requirements between potable and recycled water lines (for new piping). Where practical this means a separation of ten (10) horizontal feet when lines run parallel, and where lines cross, the potable service shall be no less than one foot above the recycled service. The Agency may approve reduced separation distances if these preferred separation distances cannot be achieved.
- How potential cross-connections will be avoided
- Detail drawings of areas where special installation or retrofit procedures are required, such as cutting and capping to separate potable and recycled systems, installation of backflow prevention devices, special construction where pipe separation criteria cannot be met, etc.

PVWMA may offer assistance with many of the steps in the application process. This assistance will include coordination with applicable State and local agencies, and may include assistance

with design of modifications, preparation of the On-Site Recycled Water Service Packages, construction and testing. Contact PVWMA for more information on assistance that may be available.

4.6 GUIDANCE ON SECTION 9.3 – PROTECTIVE MEASURES

4.6.1 On-Site Recycled Water User Supervisor

It is the responsibility of the customer to provide surveillance and supervision of the Project Water system to ensure compliance at all times with current regulations. In order to accomplish this, the customer shall designate, with the approval of PVWMA, an On-Site Supervisor to provide liaison with PVWMA. This person must represent the customer; however, the supervisor must be a full-time employee responsible for the On-Site Distribution system at the site who is available at all times and has the authority to carry out any requirements of PVWMA. The On-Site Supervisor should be available at all times during operation and make frequent visits to the use site as specified in the Recycled Water Use Permit. Installation, operation, maintenance and prevention of potential hazards on the project and potable water systems are the responsibility of the customer via their On-Site Supervisor. The On-Site Supervisor's primary three responsibilities are to ensure that:

- No cross-connections are made between the potable and Recycled Water systems;
- Backflow devices are installed and operating properly, and tested as referenced in Section 4.11 (below); and
- Project Water is being properly used and other requirements (signage, training of workers, prohibited uses, etc) are being implemented.

In selecting the On-Site Recycled Water Supervisor, the Recycled Water Customer shall ensure that the On-Site Recycled Water Supervisor satisfies these following minimum requirements:

- The Customer's On-Site Recycled Water Supervisor must be knowledgeable of the provisions contained in these *Rules and Regulations*, Customer's specific *Recycled Water Use Permit*, Title 17 and Title 22 relating to the safe use of recycled water and the maintenance of accurate records.
- The Customer's On-Site Recycled Water Supervisor must be familiar with and trained in the basic concepts of backflow and cross-connection prevention, system testing, and related emergency procedures.
- The Customer's On-Site Recycled Water Supervisor should be permanently stationed at the use site, or at a minimum, make frequent visits to the use site as specified in the Recycled Water Use Permit
- The Customer's On-Site Recycled Water Supervisor shall attend a training workshop given by the Agency before delivery of recycled water and attend a refresher training workshop at a minimum of every two (2) years.

The Customer must notify the PVWMA immediately of any change in personnel for the On-Site Supervisor position.

4.6.2 Backflow Prevention Requirements

Connections to supplement or backup the recycled water system with water from a public potable water system shall be made only through an air-gap separation which complies with the requirements of Sections 7602(a) and 7603(a) of Title 17, California Code of Regulations. The approval of the public water system shall be obtained. See Section 5 (Helpful Documents) for a link to California Code of Regulations - Title 17 website.

Connections to supplement or backup the recycled water system with water from a private potable water system (e.g. an on-site domestic well) shall be made through an air-gap separation (see appendix D, Figure 1 for details).

Connections to supplement or backup the recycled water system with water from a private irrigation water well shall be made through an AWWA-approved Reduced Pressure Principal (R.P) Assembly (see Appendix D, Figure 2 for details).

4.7 GUIDANCE ON SECTION 9.4 – FACILITIES DESIGN AND CONSTRUCTION

4.7.1 Examples of Identification Devices and Language

Identification devices shall be used to identify various components of the recycled water system. Some examples of identification devices are:

- Tags (e.g. for valves)
- Tape (e.g. for piping)
- Stickers (e.g. for piping)
- Signs (e.g. for impoundments)

The language for identification devices should read, “RECYCLED WATER – DO NOT DRINK” or, if abbreviations are required, “RW – DO NOT DRINK.”

4.7.2 Buffer Zones

- **No impoundment** of recycled water shall occur within **100 feet** of any **potable (domestic) water supply well**
- **No irrigation** with recycled water shall occur within **50 feet of any potable (domestic) water supply well** unless **ALL** conditions listed here have been met:
 1. Geological investigation shows an aquitard exists at the well between the ground surface and the uppermost aquifer being drawn from;
 2. Well contains an annual seal from the ground surface into the aquitard;
 3. Well is housed to protect wellhead facilities from spray irrigation;
 4. Ground surface around well is contoured to drain surface water away from the well;
 5. The owner of the well approves the elimination of the buffer zone requirement.
- If a customer wishes to eliminate the 50 foot buffer zone for irrigation around a potable water supply well, the customer shall submit appropriate documentation to demonstrate to PVWMA that the conditions above have been met (e.g. geological reports, well drilling records, etc.). This documentation should accompany the *On-Site Recycled Water Service Plan*.

4.7.3 Vehicle Identification

Any vehicle used to transport Project Water shall be clearly marked with labels or signs. These labels or signs shall contain the words "RECYCLED WATER - DO NOT DRINK" in black two-inch high minimum letters on a purple background. The label shall also include any other appropriate languages to accommodate the Customer's irrigation personnel who do not read English. One label or sign shall be placed on the tank closest to both the driver and passenger

doors. One label or sign shall be placed on the rear surface of the tank. All labels and signs shall be placed where they can easily be seen by the personnel using the vehicle.

4.8 GUIDANCE ON SECTION 10.4 – CROSS-CONNECTION AND BACKFLOW PREVENTION DEVICE TESTS [IN ORDER TO RECEIVE RECYCLED WATER]

4.8.1 Cross-Connection Testing

This requirement is applicable to use sites with 1) a connection to a potable water system, 2) a private potable water well, or 3) a private irrigation/non-potable water well. Prior to delivery of recycled water, Customers must have a cross-connection test performed by an AWWA-certified Cross-Connection Control Specialist.

4.8.2 Backflow Prevention Device Testing

This requirement is applicable to use sites with installed backflow prevention devices. Prior to delivery of recycled water, Customers must have backflow prevention devices tested, and it is the responsibility of the Customer to ensure the device is functioning properly.

Customers shall submit test results to the Agency.

4.9 GUIDANCE FOR SECTION 11.3 – ON-SITE FACILITIES

4.9.1 Allowed Modifications of On-Site Secondary Distribution Piping

PVWMA approval is not required for typical daily or seasonal relocation of secondary distribution piping only if the secondary distribution piping is located between the PVWMA turn-out and the backflow device at the well head(s) and/or on-site potable system. The backflow device shall not be by-passed.

4.9.2 Disallowed Modifications of On-Site Secondary Distribution Piping

PVWMA approval is required for modifications that include:

- Adding, deleting or switching on-site wells,
- Modifications to piping located between the backflow device and the well, and
- Modifications to any PVWMA required backflow device,
- Interconnection of piping intended to serve any other property not specifically listed in the permit.

4.10 GUIDANCE ON SECTION 11.7 – MONITORING AND INSPECTION

Self-monitoring shall take place while recycled water is being used, and shall include observations of the following:

- Evidence of runoff of recycled water from the site.
- Evidence of direct spraying of recycled water on potable water fixtures or food handling facilities.
- Evidence of prolonged ponding of recycled water as a result of excessive irrigation, and evidence of mosquitoes breeding as a result of ponding.
- Adequate posting of warning signs or notices to inform the public of the use of recycled water for irrigation.

- Maintenance of the required buffer distance from wells and other areas to be protected.
- Odor of wastewater origin at or near the site; leaks or breaks in the irrigation system, broken or defective sprinklers or emitters; and overflows or leaks from storage facilities or impoundments.

The PVWMA may conduct periodic inspections of Recycled Water use sites. These inspections shall include, at a minimum, the visual inspection of all backflow prevention devices, pump rooms, exposed piping, valves, pressure reducing stations, points of connection, sprinklers, drip system emitters, controllers, lakes, storage facilities, signs, labeling, tags, etc. The On-Site Supervisor's maintenance records shall be inspected to review all maintenance since the last inspection.

4.11 GUIDANCE ON SECTION 11.8 – PERIODIC CROSS-CONNECTION AND BACKFLOW PREVENTION DEVICE TESTING

The Customer shall be responsible for conducting a periodic cross-connection test and backflow prevention device tests as required in the *Rules and Regulations* unless visual inspections reveal a requirement for more frequent testing. Results shall be submitted to the PVWMA. The On-Site Supervisor must be present during the test.

4.11.1 On-going Cross-Connection Tests

Customers with 1) a connection to a potable water system, 2) a private potable water well, or 3) a private irrigation/non-potable water well must perform a cross-connection test at least annually. These tests do not need to be completed by an AWWA certified cross-connection specialist. Customers shall submit results of cross-connection tests to the Agency.

4.11.2 On-going Backflow Prevention Device Tests

Customers must have backflow prevention devices tested annually to verify functionality. Customers shall submit results of backflow prevention device tests to the Agency.

The Agency may require more frequent Cross-Connection or Backflow Prevention Device testing, if conditions dictate.

4.12 GUIDANCE ON SECTION 11.10 – SCHEDULED DELIVERIES

4.12.1 Water Ordering Procedures

It is important that all water users follow the PVWMA's water ordering procedures in order to maximize the use of the limited water supply. The procedures must be followed to ensure prompt response to emergencies, continued deliveries to all water users and efficient operation of the PVWMA's distribution system. The guidelines to be followed for placing water orders are:

1. Signed Water orders may be either hand delivered to the PVWMA office at 36 Brennan Street, Watsonville, placed by facsimile to 831-851-3745, emailed to operations@pvwma.dst.ca.us, or delivered to PVWMA drop box near Turnout 13 at 2268 West Beach Road Monday through Friday between the hours of 8:00 AM and 5:00 PM. *Water Orders are not valid until approved by the System Operator for delivery.*

2. Water orders are normally to be placed a minimum of 48 hours in advance. Water orders for Monday delivery must be placed prior to 3:00 PM on the previous Friday. The System Operator may elect to require additional notice for placing water orders (up to 72 hours in advance) during high water demand periods.
3. The person placing the order must be the applicant or the designated on site irrigation supervisor. The following information must be provided on the Water Order Form provided by the PVWMA:
 4. Customer Name
 5. Turnout number
 6. Date
 7. Organization.
 8. Fax Number
 9. Contact Number(s)
10. Flow rate in gallons per minute.
11. Dates and Time of requested water deliveries
12. All water deliveries must start and stop as close to the approved times as possible in order to avoid adversely impacting the distribution system, which may reduce water pressure and flow to other water users. Water deliveries must start and stop within ten minutes before or after the approved times unless the System Operator on duty is notified otherwise by phone. Flow adjustments should only be made at the beginning of the scheduled delivery and should not be changed without notifying the System Operator on duty by phone. Actual flows, as indicated by the turnout meter, must be set within 25 gpm below or above the approved flow rate.

The failure of water users to follow PVWMA guidelines when ordering water and operating turnouts can be harmful to the distribution system and can create problems for other water users. It is very important that irrigators notify the System operator by phone if there are any on site changes from the approved water delivery.

Requested flow rates will be a minimum of 200 gallons per minute (gpm) with additions in multiples of 50 gpm. Maximum flow rates at each turnout are limited by the design capacity of the turnout. Requested delivery duration will be a minimum of 2 hours with additions in multiples of 1 hour. Orders will not be accepted more than 14 days in advance of the requested delivery date.

4.12.2 Rescheduling and Emergency Procedures

Requests for changes in delivery will be made in writing and will specify the turnout number, the requested change (time and/or flow rate) and a contact telephone number for confirmation and notification purposes. The on site irrigation supervisor will sign requests for changes in delivery. Notification of emergency requests for pipeline breaks and leaks should be phoned in to the System Operator on duty as soon as possible.

Change requests, *other than for emergencies*, must be received by the System Operator at least twelve (12) hours prior to the requested change. The System Operator will accommodate change requests using the following priorities:

1. Emergency changes necessary to protect life and property.
2. Requests for early delivery terminations.
3. Requests for reduced delivery flow rates.
4. Delivery orders delayed from the previous day.
5. Current delivery orders.
6. Requests for increased delivery flow rates.

The System Operator will confirm the initiation time with the water user at least 4 hours in advance of the rescheduled starting time, either by telephone or facsimile.

The System Operator will take available actions to modify project operations in response to conditions threatening human life, property damage or damage to Project facilities. In all cases, preservation of human life and prevention of personal injury will be the highest priority. The System Operator also will take available actions to modify Project operations to accommodate water orders needed to protect property, such as for crop stand establishment.

4.13 GUIDANCE ON SECTION 11.16 – EMERGENCY CROSS-CONNECTION RESPONSE

In the event that a backflow incident or cross-connection is suspected or occurs, the following procedures shall be implemented immediately:

1. Notify the PVWMA and the CDPH by phone. This notification is to be followed by a written notice to PVWMA and CDPH within 24 hours. The written notice is to include an explanation of the nature of the cross-connection, date and time discovered, and the steps taken to mitigate the cross-connection(s).

| Organization | Name | Contact Numbers / Addresses |
|---|--|---|
| CDPH District Engineer | District Engineer (DE) (As of 2008 - Jan Sweigert – DE) If can't get a hold of DE, call the CA Warning Center's 24/7 phone number and ask for the CDHS Duty Officer. A CDHS manager will be contacted and call the PVWMA | (831) 655-6934 Office Attn: District Engineer Department of Public Health Drinking Water Field Operations Branch 1 Lower Ragsdale, Bldg. 1, Suite 120 Monterey, CA 93940 |
| CA OES (State Office of Emergency Services) | Warning Center (Ask for CDPH Duty Officer-Drinking Water Program) | (800) 852-7550 24/7 (916) 845-8911 24/7 |
| Police, Fire, HAZMAT | | Call – 911 (831) 471-1170 Direct |

| Organization | Name | Contact Numbers / Addresses |
|---------------------------------------|------------------|--|
| Pajaro Valley Water Management Agency | On-Call Operator | (831) 750-6265 36 Brennan Street Watsonville, CA 95076 |

From: <http://ww2.cdph.ca.gov/certlic/drinkingwater/Pages/Security.aspx>

2. Keep the potable water system pressurized and post "Do Not Drink" signs at all potable water fixtures and outlets in both English and Spanish.
3. Immediately shut down the Project Water supply to the facility at the meter.
4. Provide bottled water for employees until the potable water system is deemed safe to drink.
5. Collect water samples from the potable water system and perform a 24-hour bacteriological analysis. Water samples should be collected from the closest acceptable point to the cross-connection. The PVWMA may supply the appropriate sample bottles, obtain the samples and arrange for laboratory analysis.
6. Identify the cause and location of backflow and eliminate the cross-connections.
7. Conduct a cross-connection test verifying that all cross-connections were eliminated.
8. If the bacteriological analysis conducted in Step 5 is positive, chlorinate the potable water system maintaining a chlorine residual of at least 50 mg/l for 24 hours. If the bacteriological analysis is negative, proceed to Step 11.
9. Flush the potable water system after 24 hours (without discharging flushed non-dechlorinated water to surface waters), and perform standard bacteriological analysis.
10. If the results from Step 9 are acceptable to the PVWMA and to the DPH, proceed to Step 11. Otherwise, repeat Steps 8-9.
11. Obtain final approval from the PVWMA and the DPH before removing signs or bringing the Project or potable water systems back into service.

SECTION 5 - HELPFUL DOCUMENTS

The following is a list of documents to aid users in complying with the *Rules and Regulations for Recycled Water Use*. These documents should be used as a tool and do not relieve the Customer of requirements of the *Rules and Regulations*.

| AGENCY/ORGANIZATION | DOCUMENT TITLE |
|---|--|
| Central Coast Regional Water Quality Control Board (Region 3) | Order No. R3-2004-0117, Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands |
| California-Nevada Section, American Water Works Association | Guidelines for Distribution of Non-Potable Water |
| California-Nevada Section, American Water Works Association | Guidelines for the On-Site Retrofit of Facilities Using Disinfected Tertiary Recycled Water |
| Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California | Manual of Cross-Connection Control |
| International Association of Plumbing and Mechanical Officials | Uniform Plumbing Code, Appendix J |
| California Department of Public Health | California Code of Regulations, Title 22, Division 4, Wastewater Recycling Criteria |
| California Department of Public Health | California Code of Regulations, Title 17, Regulations Relating to Cross-Connections http://www.cdph.ca.gov/HealthInfo/environhealth/water/Pages/Waterrecycling.aspx |
| Master Reclamation Permit for Distribution of Recycled Water (Order # R3-2008-0039) | Central Coast Regional Water Quality Control Board (Region 3) |

SECTION 6 - APPENDICES

Appendix A Rules and Regulations for Recycled Water Customers

Appendix B Forms for Agency Use

- Form A1: Recycled Water Use Permit Application and On-Site Recycled Water Service Plan Checklist
- Form A2: Recycled Water Use Field Verification Checklist
- Form A3: Inspector's Monitoring Report

Appendix C Forms for Customer Use

- Form B1: Recycled Water Use Permit Application and Permit
- Form B2: On-Site Recycled Water Service Plan

Appendix D Backflow Prevention Device Detail