

Recycled Water User's Guide

Recycled Water Program





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TOWN OF WINDSOR

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1.0 INTRODUCTION

1.1 Purpose

The purpose of this document is to provide Town of Windsor (Town) recycled water customers with use guidelines for designing, operating and maintaining an on-site recycled water system. This document covers the requirements for both new and existing sites using recycled water but does not supersede any of the codes, laws, statutes or regulations governing recycled water use. A list of definitions to aid in understanding the terminology used in this Guide is provided in Appendix A.

1.2 Recycled Water Regulations

The Town manages the recycled water treatment and distribution system and complies with regulatory requirements by issuing, reviewing, and enforcing Recycled Water Use Permits and User Agreements. The permit process ensures that recycled water is used in accordance with the regulatory guidelines for recycled water use. Rules and regulations for the Town's recycled water use are defined in the following documents:

- Town of Windsor Municipal Code Title XII, Chapter 7 "Recycled Water Service" (Ordinance No. 2001-150)
- Windsor Water District's wastewater National Pollution Discharge Elimination System (NPDES) Permit (No. CA0038482) issued by the North Coast Regional Water Quality Control Board (NCRWQCB)
- State Water Resources Control Board General Order for Water Reclamation Requirements for Recycled Water Use (WQ 2016-0068-DDW)Monitoring and Reporting Program (MRP) (Order R1-2020-0031), issued by the NCRWQCB

The California State Water Resources Control Board (SWRCB), Division of Drinking Water (DDW) has general regulations for the use of recycled water, which are contained in the California Code of Regulations (CCR) Title 22, "Water Recycling Criteria" (Title 22) and in the CCR Title 17, "Drinking Water Supply – Backflow Prevention" (Title 17). The American Water Works Association (AWWA) California-Nevada Section publishes a guide for planning, designing, constructing, and operating recycled water systems entitled, "Guidelines for Distribution of Non-potable Water." A list of important recycled water regulations and guidelines are provided in Appendix I.

The rules and regulations in the Town's Municipal Code and in the Town's Water Reclamation Plant NPDES Permit, Recycled Water Use permit and MRP have been compiled specifically for the Town's recycled water program and Users, and take precedence over information provided in this Guide where differences are noted. Since codes, laws, statutes and regulations can change, the Town does not assume any liability for errors or omissions in this Recycled Water User's Guide document. Within the Town's service area, various individual facilities may have site-specific requirements which differ from those discussed in this Guide, and which are usually set forth in the User's Recycled Water Use Permit or User Agreement.

1.3 Program Organization and Staffing

The responsibilities for administering the Town's Recycled Water Program are as follows:

- The Town Manager has overall responsibility for both the Water Reclamation Plant and the Recycled Water Program.
- The Administrative Services Department performs account management, billing, and financing functions.
- The Public Works Department (PWD) and Land Development staffs are responsible for plan checking and user permitting, and assisting with new user inspections and site assessments.
- The PWD Operations and Maintenance staff is responsible for overall operations and maintenance of both the treatment and distribution of recycled water, and conduct meter reading, site assessments, monitoring; and emergency response, as well as new project evaluations, use site inspections, and cross-connection testing.

An agreement between the Town of Windsor and Sonoma Water (January 2021) allows coordinated operation of the Town's recycled water facilities and the Airport-Larkfield Wikiup Sanitation Zone (ALWSZ) recycled water systems. The water transfer agreement coordinated operation for the purposes of increasing operating efficiencies, reducing operational costs, increasing beneficial use of recycled water, and decreasing discharges of recycled water to Mark West Creek. Sonoma Water and the Town are able to share available storage during periods of low recycled water demand and maximize recycled water use when seasonal demands increase.

2.0 PLANNING FOR RECYCLED WATER SERVICE

2.1 Determination to Use Recycled Water

According to the Town of Windsor's Municipal Code, recycled water shall be used for residential and non-residential irrigation within the Town's recycled water sphere of influence, whenever feasible and consistent with legal requirements, preservation of public health, safety, and welfare, and the environment. Where the use of recycled water is feasible, appropriate, and acceptable to the Town and applicable regulatory agencies for the purposes of landscape irrigation or other permitted uses, it is the policy of the Town to require the use of recycled water in lieu of potable water. For new projects in the Town's current and planned future recycled water service area, the Town may require that separate irrigation systems be installed so that the conversion to recycled water may be initiated when recycled water service becomes available. Such irrigation systems with an approved backflow prevention device may be connected to a separate potable water irrigation service until the recycled water service becomes available. All recycled water irrigation systems must be metered separately from the potable water supply system and cannot have any on-site cross-connections to the potable water supply system.

2.2 Protection of Public Health

The Town reserves the right to take any action necessary, with respect to the operation of the User's recycled water system, to safeguard the public health. If real or potential hazards are evidenced any time during construction or operation of the recycled water system, the Town reserves the right and has the authority to terminate recycled water service immediately, without notice. These hazards include, but are not limited to, cross-connections with the potable system; improper tagging, signing or marking; or unapproved/prohibited uses. The Town may elect to temporarily replace the recycled water supply water with potable water only after the User's recycled water system has been disinfected and approval has been granted by the Town. All modifications required to replace the recycled water supply with potable water must be approved by the Town and will be at the User's expense.

2.3 Approved Uses of Recycled Water

The State of California regulates the use of recycled water, as directed under Title 22. The Town and other local agencies, at their discretion, can require or specify what sites and/or uses of recycled water are allowed in their service area, so long as that direction complies with State requirements. In Windsor, the majority of recycled water is used for agricultural and landscape irrigation, though other approved uses are also part of the existing recycled water program. Each user of recycled water is required to apply for and maintain an approved permit to use recycled water from the Town. Customers may use recycled water for a variety of uses if approved by the Town and regulatory agencies.

Certain recycled water user's sites are considered "Dual Plumbed Sites". Any site using separate piping systems for recycled water and potable water within a building, or where recycled water is used to serve plumbing outlets, such as toilet flushing, within the building is considered a "dual plumbed" use site. In addition, State health laws also designate that single family residences using recycled water for irrigation are also considered dual plumbed use sites. As required by Title 22 (Section 60316), dual plumbed sites shall be inspected prior to initial operation and annually thereafter, and shall be tested for cross-connections with the potable water systems at least once every four years.

In addition to sites with fixed plumbing that receive recycled water, the Town operates a recycled water fill station. Visitors must be granted permission to use the recycled water filling station and Town staff are available to assist with filling procedures. Town staff provide "Site Supervisor Training" and each of the drivers/fill station users are issued a permit to obtain access to the fill station and recycled water. The training includes proper use of recycled water, the no runoff rule, safety precautions, notice to Town should a spill occur, and recycled water hygiene. As authorized by the Town, recycled water can be used to protect vineyards during frost events. The Town provides recycled water to vineyard users for frost control to help reduce diversions from nearby surface waters and prevent changes in streamflow that can potentially impact salmonids. Appendix J lists Best Management Practices (BMPs) for recycled water use for frost protection.

Recycled water may be used at construction sites for controlling dust on roads and for controlling dust from uncovered trucks that are transporting materials around construction sites. The Town's Urban/ Commercial Recycled Water Use Permit includes language to document the selected/ approved recycled water uses for each user. Appendix J list BMPs for recycled water use at construction site. Recycled water may be used at industrial sites for dust control and washing trucks, recycled materials, and equipment. Containment is a mandatory requirement. At no time will recycled water be allowed to enter any storm drain or waterway. Appendix J list BMPs for recycled water use at industrial site.

Authorized Town contactors may use recycled water for street sweeping to clean streets and rights of way to reduce the amount of trash, debris, and particulates picked up by stormwater before it flows into creeks during rain events. Street sweeping vehicles are equipped with dust suppression and vacuum systems. Spraying small volumes of water before the street is swept prevents dust formation. Water is then picked up by the vacuum system, and any remaining water evaporates from the ground. No runoff is expected during street sweeping. Appendix J list BMPs for recycled water use for street sweeping.

Recycled water will be used periodically to clean sewer lines to prevent clogging and/or odor buildup. The recycled water is anticipated to be used in jetting and flushing activities. Jetting is the process in which highly pressurized water is directed against the inner pipe walls to break-up and remove debris and grease. Flushing, which is typically used with other sewer cleaning methods, is the process in which a heavy flow of water is introduced into the sewer line to remove debris. Appendix J lists BMPs for sanitary sewer cleaning.

As regulations evolve BMP requirements for various user types may be amended or new requirements added. Refer to the Town's website at: Recycled Water | Windsor, CA - Official Website (townofwindsor.com). for the most current BMP list for each user type.

2.4 Permitting Process for Recycled Water Customers

The Town is the local authority having the responsibility for implementation and enforcement of the regulations for the end use of recycled water in the Town of Windsor recycled water service area. The Town's permit process for recycled water use ensures that all regulatory requirements are met and properly documented. The Permit also provides the enforcement mechanism for the Town. The Town has the authority to terminate recycled water service to users who do not comply with recycled water regulations. The Town's PWD is responsible for administering the Permit process.

2.5 Recycled Water Use Permit

Every recycled water User is required to apply for and maintain a Recycled Water Use Permit or "User Agreement" from the Town PWD to receive recycled water service. The recycled water User needs to maintain and update their Use Permit and keep records of site plans and permit documents. Users shall submit a written application for a Recycled Water Use Permit on the appropriate permit application form available from the Town. Permits will be approved only after the proposed site and User has met all of the permit conditions.

Typically, the permitting process for new recycled water Users includes completing a permit application, submitting construction drawings for the recycled water system, construction verification by inspection, cross-connection testing and certification, and recycled water Site Supervisor training, if applicable. Recycled water applicants proposing projects to install both potable and recycled water piping for dual-plumbed sites will also be required to prepare and submit an Engineering Report for approval to the Town. The Town will submit the Engineering Report to the State Water Resources Control Board, Division of Drinking Water for approval.

Construction permits, when applicable, for site development or for other construction activities are required in addition to a Recycled Water Use Permit and are subject to the Town construction inspection and approval processes. Following Use Permit issuance, a site may receive recycled water, if and when it becomes available, in accordance with the requirements of the Use Permit and with recycled water rules and regulations.

If the on-site recycled water system or the use of recycled water is found to be in violation of the recycled water regulations, the Town will notify the User of record to correct these violations. A site inspection may be scheduled after a reasonable period of time to ensure compliance. Failure to comply with recycled water regulations can result in termination of recycled water service. The Town may revoke a Recycled Water Use Permit at any time.

2.6 Procedures for Obtaining Recycled Water Service

The normal steps in the permitting process for recycled water service are listed in Appendix B. Figure B-1 illustrates the typical permitting process. Guidance is also provided about the information that should be included in an Engineering Report, if required, such as for projects that have dual-plumbed buildings. Sample Recycled Water Use Permit forms and permit application forms are included in Appendix C. The permit application procedures for recycled water service differ depending on the use site, and whether the application is for a new facility, a retrofit of a potable system, or for an existing use site.

2.7 Recycled Water Use Monitoring

The Recycled Water Use Permit and this Guide identify the monitoring required for recycled water user sites. The monitoring program will be consistent with regulatory requirements. Use site inspections will be conducted by the Town. The Town may also require the Recycled Water User to conduct self-monitoring inspections. Inspectors will be looking for the following potential problems:

- Excessive runoff and/or overspray
- Ponding
- Odor of wastewater origin at or near the site
- Evidence of leaks or breakage in the irrigation system or on-site piping
- Broken or defective irrigation sprinklers or emitters
- Evidence of vandalism, or unauthorized modifications to recycled water piping that may indicate cross connection
- Consistent use of purple pipe for recycled water piping
- Improperly posted recycled water advisory signs, and identification tags and labels
- Any overflow or leaks from distribution facilities or impoundments

All identified problems must be corrected immediately. Recycled water service may be interrupted or discontinued until issues with recycled water are remedied, as determined by authorized Town staff.

2.8 Compliance Violation Procedures

Noncompliance with provisions set forth in the users Recycled Water Use Permit will result in actions by the Town. Normally minor violations, such as overspray, runoff, missing identification tags, or improper signage are handled informally and the customer is given a warning by phone or in person by a Town employee, with the appropriate follow-up by Town staff. More serious violations, or minor violations that continue or are repeated after the initial warning, may result in a formal notice of non-compliance in a letter mailed to the User of record on the recycled water account. If the violation continues or is not corrected in the specified time period, the Public Works Director may order disconnection of the service and removal of the meter where the violation occurs.

Recycled water users are required to immediately report any emergencies, such as a broken pipeline, or any other serious violations of the recycled water use criteria to the Town. System operation, emergency procedures, and an emergency cross-connection response plan are discussed in Section 4. Serious violations of the recycled water regulations that impact or threaten to impact public health or water quality may require immediate action by Town staff, and will be reported by the Town to the regulatory agencies. Enforcement will normally be handled by the Town's staff.

3.0 DESIGN, INSTALLATION, AND INSPECTION

Designers of recycled water facilities should confirm that their utilities design meet the requirements of the Town of Windsor Design and Construction Standards (Windsor Standards) and specifically the Standards for recycled water systems. The Town of Windsor Standards are intended to impose minimum acceptable design criteria for the design and installation of utilities. More stringent requirements may be imposed at the discretion of the Public Works Director based on specific project and site conditions.

The purpose of this section is to provide guidelines for the design, installation and inspection of new recycled water irrigation systems, and systems that are being converted from a potable irrigation system to a recycled water supply, and recycled water systems for other approved uses.

3.1 Design Requirements at the Service Connection

3.1.1 Exceptions for Existing Irrigation Systems

With the exception of pipe identification and pipe separation, facilities where the existing buried piping system is converted from potable to recycled water must meet the same requirements as new facilities. However, any new buried piping added to existing piping at a retrofitted site must meet the identification and piping separation requirements for new systems. Approval is required from the DDW and Town for any exceptions to buried piping separation requirements. In addition, any existing piping uncovered for any reason during construction must be marked according to pipe identification requirements to the extent feasible.

3.1.2 Pressure

The Town of Windsor potable water distribution system currently provides potable water to Users at pressures that range from 35 pounds per square inch (psi) to 90 psi (average day basis). The recycled water systems will typically operate at a lower pressure (e.g., 5-10 psi lower) than the potable water system. Designers should contact the Town of Windsor to determine the pressure available at their specific point of connection.

3.1.3 Point of Connection Location

Designers must contact the Town or consult development plans and utility base maps to verify the recycled water distribution main location, and to determine the size and location of the service lateral and meter that may be available to serve their facility.

3.1.4 Point of Connection Separation Requirements

All recycled water service laterals and meters must have at least four feet horizontal separation, and one foot vertical separation from the nearest potable water facility, including pipelines, meters and hydrants. Designers should consult the Town Standards for specific design requirements. In no case is horizontal separation of less than four feet or construction in the same trench as potable facilities allowed.

Reference: Title 22, Section 64572; Town of Windsor Design Standards, AWWA Guidelines, Section 5.6.

3.1.5 Backflow Prevention on Public Drinking Water Supply

In order to protect the public drinking water system from accidental cross-connections, at a minimum a reduced pressure (RP) principal backflow prevention device is required on all potable meters on premises where recycled water is present. The device must be installed as close as practicable to the downstream side of each potable water meter. Backflow prevention devices at the service connection are monitored through the Town's backflow prevention device monitoring and testing program. All RP devices are to be inspected and tested at least annually. The Town will have an AWWA certified inspector perform the testing. The User is responsible for coordinating with the Town to schedule the testing.

Reference: Ordinance No. 2001-150; Title 17 CCR, Section 7584; AWWA Guidelines, Section 5.3.

3.1.6 Backflow Prevention on Recycled Water Supply

Since recycled water is not used for drinking purposes, backflow protection devices are not normally installed on recycled water lines for irrigation systems. However, the Town must ensure that Users do not compromise the quality of the recycled water in the distribution system. Therefore, the Town will require backflow protection on the User's recycled water system if it is determined that there is a backflow hazard on-site which threatens the integrity of the distribution system. Examples of sites that may be required to install backflow protection devices are sites with booster pumping to increase water pressure or industrial process sites that increase pressure on part of the system or introduce chemicals into the water.

In such cases, backflow prevention devices may be required at the recycled water service connection or at specific, on-site locations as appropriate to the situation. Backflow prevention assemblies must be shown on plans and be of a type approved by the Town and the DDW. All RP devices are to be inspected and tested at least annually in accordance with the Town Backflow Prevention Program. The Town will have an AWWA certified inspector perform the testing. The User is responsible for coordinating with the Town to schedule the testing

Backflow prevention devices, when required on recycled water systems, must be conspicuously labeled. Backflow testing equipment must be dedicated for use with recycled water. Backflow testing equipment used for recycled water must not be reused on potable water systems.

3.2 Design Requirements for On-site Facilities

3.2.1 No Cross-Connections

A **cross-connection** is any physical connection between any part of a water system 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. No cross-connections are allowed between the recycled water system and any other water system.

Reference: Ordinance No. 2001-150, Title 22 CCR, Article 4, Section 60310(h); AWWA Guidelines, Section 5.9.6

3.2.2 Pipe Separation

Horizontal Separation from Potable Water. Pipeline conveying disinfected tertiary recycled water should not be installed in the same trench as, and should be at least 4 feet horizontally from and one foot vertically below, any parallel pipeline conveying potable water. Vertical separation is required between parallel pipelines when horizontal separation is less than 10 feet. If the separation requirements are not

feasible, approval is required from the Town Engineer and DDW to use special construction methods that are intended to minimize the potential for contamination of the potable water supply including, but not limited to, sleeving the newly installed main in a casing, or utilizing upgraded piping material. (Designers should also consult the Town for specific design requirements.). A horizontal separation of less than four feet or construction in the same trench as potable water facilities is not allowed without special permission from the Town Engineer and DDW.

Reference: Title 22, Section 64572

Horizontal Separation from Other Utilities. Pipeline conveying disinfected tertiary recycled water should not be installed in the same trench as, and should be at least 4 feet horizontally from sanitary sewers, storm drains, and other underground utilities such as gas, electrical conduit, telephone, and communications lines, except at crossings.

Vertical Separation from Potable Water at Crossings. Where a buried constant pressure recycled water pipeline crosses a buried potable water pipeline, the recycled water main shall be constructed at no less than 45-degrees to and located a minimum of one foot below the potable water pipeline. If the separation requirements are not feasible, approval is required to use special construction methods intended to minimize the potential for contamination. Constant pressure recycled water pipelines may be allowed over potable water pipelines with a minimum of one foot vertical separation if a minimum 20-foot pipe length is centered over the crossing, or the recycled water pipeline is installed in a pipe sleeve which extends a minimum of ten feet on either side of the potable water piping.

Reference: Title 22, Section 64572

Vertical Separation from Other Utilities. Where a buried constant pressure recycled water pipeline crosses a sanitary sewer, storm drain pipeline, or other underground utility, the recycled water main should have a minimum of one foot vertical separation from storm drains or other underground utilities such as gas, electrical conduit, telephone, and communications lines.

3.2.3 Thrust Blocking

Thrust blocking prevents a main line from moving when the pressure load is **applied. Thrust blocks** are anchors placed between pipe or fittings and the undisturbed soil in the trench wall. All recycled water piping other than Polyvinylchloride (PVC) piping with solvent-welded joints must be protected against movement with thrust blocks or restrained joints or other approved methods conforming to the California Plumbing Code.

3.2.4 Irrigation System Design

Irrigation System and Landscape Design. Irrigation systems must be designed to minimize overspray and ponding and prohibit runoff. Designers must specify appropriate irrigation devices to prevent overspray in narrow areas. New landscape sites are subject to the Town's "Water Efficient Landscape Ordinance" (Ordinance 2009-259) which includes provisions that assure that irrigation design will not result in significant overspray, runoff and ponding. For recycled water use sites, the irrigation system design standards must be met to provide this assurance, including, but not limited to, the following provisions:

- Separate irrigation stations will be provided for different water requirements, solar exposures, microclimates and slopes
- Sprinklers will be adjusted or systems modified to minimize overspray on to adjacent pavement, sidewalks, and other non-landscaped areas

- Pressure regulation will be installed to assure operation at the manufacturers' optimal operating pressure
- Sprinkler heads will have matched precipitation rates within each valve circuit
- Rain shut-off devices will be installed on each irrigation controller
- Check valves will be installed, where applicable, to prevent low head drainage

In the event that, during an irrigation system Coverage Test, noticeable overspray, runoff and/or ponding is observed, irrigation system components shall be adjusted or removed and relocated as required to comply with recycled water use requirements.

Reference: Ordinance No. 2009-259, Section B; AWWA Guidelines, Section 5.10.

Protection of Dwellings, Drinking Fountains, or Outdoor Eating Areas. Spray, mist, or runoff from recycled water irrigation shall not enter dwellings, designated eating areas, or food handling facilities. Drinking fountains, outdoor eating areas and other similar facilities (e.g., snack bars) located within the approved use area must be protected from overspray or contact with recycled water. Protection may be achieved by relocating the irrigation system or relocating or modifying the protected facilities.

Reference: Title 22 CCR, Section 60310; Ordinance No. 2001-150.

Protection of Aquifers and Surface Waters. Irrigation of surface water bodies is prohibited. Installation of new irrigation systems in close proximity to surface waters shall incorporate additional design features such as setbacks and berms as appropriate to eliminate the potential for runoff to surface water bodies. Existing irrigation systems in close proximity to surface waters shall be inspected and adjusted to eliminate the potential for runoff prior to retrofit. Additional runoff protection measures such as setbacks will be incorporated as needed and as required by the Town. No impoundment of recycled water shall occur within 100 feet of any domestic water supply well. Irrigation systems must be designed to prevent irrigation of recycled water within 50 feet of any domestic water supply well unless all of the following conditions have been met:

- A geological investigation demonstrates that an aquitard exists at the well between the uppermost aquifer being drawn from and the ground surface
- The well contains an annular seal that extends from the surface into the aquitard
- The well is housed to prevent any recycled water spray from coming into contact with the wellhead facilities
- The ground surface immediately around the wellhead is contoured to allow surface water to drain away from the well
- The owner of the well approves of the elimination of the buffer zone requirement

Reference: Title 22 CCR, Section 60310.

3.2.5 Hose Bibs

Hose bibs are not allowed on any recycled water system.

Reference: Title 22 CCR, Section 60310; AWWA Guidelines, Section 5.9.7.

3.3 Design Approval

Before any new recycled water system is constructed, or any existing potable water system is retrofitted for use with recycled water, or any existing recycled water system is modified, on-site recycled water system plans prepared by the Customer must be approved by the Town. Approval will be contingent upon evidence that all applicable design requirements for a recycled water system are satisfied and that the system as designed can be operated in accordance with the Town's recycled water use requirements. The Customer is responsible for meeting all requirements, even those requirements not shown on the approved plans.

Reference: Ordinance No. 2001-150.

3.4 Information Required on Site Maps and Development Plans

The following is a list of the basic information required on the maps and plans for every on-site recycled water system. Note that compliance with every item on this list does not guarantee that the plans will be approved. Regulations and policies may change and some sites may require additional provisions. A design review checklist is provided in Appendix D. Include crop spacing information for vineyards.

Plans must include the following:

- Index maps and site plans or construction drawings drawn to scale which clearly show the boundaries of the intended use area, adjacent properties, Assessor's parcel numbers, streets, locations of all building and major improvements on the site, all sources of water, water meters (recycled water and potable water), drinking fountains, and all public facilities supplied with recycled or potable water service. Public facilities including, but are not limited to, rest rooms, outdoor eating areas, snack bars, swimming pools, wading pools, decorative fountains and showers. Additionally, any wells, lakes, ponds, reservoirs or other water impoundments located on site or within 100 feet of the site must be identified on the site plan.
- Piping plan which shows the complete potable and recycled water systems. All sources of potable water, recycled water, and any other water must be indicated on the plan. The location and type of all existing and new backflow prevention devices, strainers, pressure regulating valves, master valves, any other valves and water meters (including size) must be clearly marked on the piping plan. For existing facilities converting to recycled water use, the piping plan must indicate which piping and other devices are existing and which piping and other devices will be installed as part of the retrofit work. The proper separation requirements between potable and recycled water lines must be indicated. Pipe sleeves or full centered pipe lengths, required where recycled water pipelines cross over potable water pipelines, must be indicated. The piping plan can be combined with the site plan if space permits.
- Detailed 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 and any other special elements.
- Include an irrigation equipment legend which specifies all materials of construction for the system, including recycled water piping materials and a listing of valve types, including pressure control valves, quick-coupling valves, irrigation spray heads, drip control valves.

- All sites using recycled water must post clearly visible signs conforming to the Town of Windsor standards for Advisory Signs for recycled water use areas, irrigated plantings, and for decorative fountains and other water features. Show proposed sign locations on irrigation plans.
- Any other items required by the Town's recycled water regulations and all details necessary to properly construct the system, including the details conforming to the conditions of the Town's site development review and approval process.
- Provide a signature line on the first sheet of all construction plan sets that pertain to the recycled water irrigation system. The remaining sheets will have the Town title block in the lower right corner (no signature line). Submit plans to Town of Windsor Public Works Department for review and approval. Other improvement plans must still be submitted in accordance with standard procedures.
- Once the Application and site plans have been approved by the Town, any subsequent conceptual or major design changes must be submitted and approved by the Town before implementing the changes in the design or construction contract.

3.5 Installation Criteria

3.5.1 Pipe Identification

All new piping, whether for a new or retrofitted system, must be installed according to the approved plans and marked per these requirements to clearly distinguish between recycled water and potable water systems.

- **Identification of Buried Recycled Water Lines.** The use of purple-colored pipe with continuous wording "RECYCLED WATER—DO NOT DRINK" printed on opposite sides of the pipe is the preferred method for identification of new buried recycled water piping.

  As an acceptable alternative, all new buried recycled water lines (constant-pressure mainlines/intermittent-pressure irrigation laterals) must be identified by continuous lettering on three inch (3") minimum width, purple marking tape with one inch black or white contrasting lettering bearing the continuous wording "RECYCLED WATER – DO NOT DRINK." This tape must run continuously on top of all piping (mainlines and laterals) and must be attached to piping with plastic tape banded around the marking tape and the pipe every five feet on center. Marking tape must extend to all valve boxes and/or vaults and exposed piping.
- **Identification of Existing Buried Recycled Water Lines.** Existing buried piping that will be converted to recycled water use does not need to be marked unless the piping becomes exposed, such as during installation of new pipeline or maintenance of existing pipe. The exposed section must then be marked as indicated above for new piping.
- **Identification of Above Grade Recycled Water Lines.** All above-grade recycled water pipelines, whether new or existing, must be labeled with the words "RECYCLED WATER—DO NOT DRINK" and color-coded purple to differentiate recycled water pipelines from potable water pipelines. If purple identification tape is used to label the pipe and/or color-code the pipe, the tape must be adhesive, permanent and resistant to environmental conditions. Purple bands may also be painted around the circumference of the pipe at 10 feet intervals for color-coding. Purple PVC pipe is not an acceptable alternative for color-coding because the purple color will fade when exposed to sunlight.

- **Identification of Recycled Water Lines Inside Structures.** Exposed (not buried) recycled water pipelines, such as galvanized pipelines that might be used in a structure such as a parking garage to route recycled water, must be identified per the requirements of the California Plumbing Code. Labeling on the piping must read "RECYCLED WATER – DO NOT DRINK."

  Reference: California Health and Safety Code 116815; AWWA Guidelines, Section 5;. Title 24, Part 5

3.5.2 Irrigation System Valve Boxes

All remote control valves, isolation valves, pressure reducing valves, and strainers for on-site recycled water systems must be installed below grade in a valve box. Green, black, or purple valve boxes and lids are acceptable for existing recycled water Users. New Users are required to install purple valve boxes and lids.

Valve boxes must have an identification label permanently molded into or a "nameplate" affixed onto the lid with corrosion resistant rivets or bolts per Town of Windsor Standards. Nameplates must be constructed of a purple weatherproof material with the wording "RECYCLED WATER - DO NOT DRINK" in English and in Spanish permanently stamped or molded into the label.

3.5.3 Quick Coupling Valves

New quick coupling valves must be made specifically for recycled water use. The covers on all new quick coupling valves must be permanently attached and made of purple rubber or vinyl with the words "RECYCLED WATER" imprinted on the locking cover. To prevent unauthorized use, the valve must only be operated by a special coupler key for opening and closing the valve. Quick coupling valves used in the recycled water system must be installed in a valve box and a recycled water identification tag must be permanently attached to the quick coupling valve or the inside of the box so that it is clearly visible when the box lid is removed.

Any wands, sprinkler heads, hoses, fittings, or other attachments used in conjunction with the quick coupling valves must be labeled with the words, "RECYCLED WATER - DO NOT DRINK" in English and in Spanish. Attachments used in a recycled water system must not be used in a potable water system.

The installation of quick coupling valves on a potable water system in the vicinity of a recycled water irrigation system must be of a different type to prevent accidental cross-connection or contamination by accidentally interconnecting or interchanging attachments. Keys and attachments must not be interchangeable. Retrofitted sites with existing quick coupling valves must modify the quick coupling valves to meet the standards for new recycled water quick coupling valves.

3.5.4 Other Valves and Devices

New and existing isolation valves, remote-control valves, pressure-regulating valves, and strainers must be installed in a marked valve box with a recycled water identification tag on the valve operator or, if the valve operator is too deep to reach, at the top of the valve box extension.

New and existing water meters, pumps, pump control valves, air/vacuum relief valves and new and existing backflow prevention devices must be clearly marked with recycled water identification tags.

3.5.5 Identification Tags and Stickers

Recycled water equipment identification tags and stickers must be weatherproof and durable, such as plastic or plastic coated. Recycled water and potable water system identification tags and stickers must be permanently affixed to valves and equipment where they are clearly visible and contain the wording, "Recycled Water – Do Not Drink" in English and Spanish per the Town of Windsor Standards. See Appendix E for additional information about equipment identification tags.

3.5.6 Recycled Water Advisory Signs

All sites using recycled water that are accessible to the public must post clearly visible advisory signs conforming to the Town of Windsor Standards and installed at the locations indicated on the approved plans. The Town may require additional signing on a case-by-case basis.

- **Irrigation Systems at Fenced Facilities**. Advisory signs indicating the use of recycled water for irrigation must be installed at all entrances to the User's facility per the Town of Windsor Standards. The Town of Windsor may require additional signing on a case by case basis.
- **Irrigation Systems at Facilities Not Surrounded by Fences**. Advisory signs for irrigation at unfenced sites must be placed where they can be easily seen. To the extent necessary to advise passersby, signs must be posted at Town approved locations where recycled water is distributed. Signs must include a caution such as, "Irrigated with Recycled Water, Not for drinking. Signs should be posted in both English and Spanish. Signs should also display the international symbol for "Do Not Drink". The minimum size, placement, and wording of advisory signs must conform to Town of Windsor Standards and recycled water use requirements. Where required for aesthetic or corporate identity purposes, alternate color-coding schemes may be adopted subject to the approval of the Town of Windsor and provided that the applicant demonstrates to the DDW that the alternative approach will assure an equivalent degree of public notification.
- **Dual Plumbed Buildings**. Dual plumbed buildings using recycled water for toilet fixtures and other approved uses shall have recycled water advisory signs such as room entrance signs, equipment room signs, and valve access door signs that conform to the specific wording and requirements of the California Plumbing Code, Chapter 16A for Recycled Water Systems.

3.5.7 Advisory Signs for Decorative Fountains, Ponds, and Other Water Features

The following are the minimum requirements for water feature signs:

- Minimum wording: "This ____ [insert type of water feature here, such as Fountain, Pond, etc.] Uses Recycled Water –Not for Drinking– [No Tomar]"
- Minimum size: no less than 4 inches high by 8 inches wide
- Must be permanently, legibly printed and posted in conspicuous places
- Colors for lettering and background follow the same guidelines as for irrigation signs

The Town must be consulted for final approval of all signs, as well as, the number of signs required and the sign placement. See Appendix E for additional information about recycled water advisory signs.

Reference: Title 22 CCR, Section 60310(g); California Plumbing Code (CPC), Section 1619A.0.

3.6 Construction Inspection.

The Town of Windsor or designated representative will conduct on-site inspections during the construction phase to ensure that materials, installation and procedures are in accordance with the approved plans, specifications and applicable regulations. Accordingly, the User must notify the Town for all phases of planning, construction and start-up so that inspections can be scheduled. Points of inspection for recycled water systems normally include the following:

- Pre-construction materials inspection
- Irrigation system installation inspection
- Piping system pressure testing
- Cross-connection control inspection and testing
- Final construction inspection (may be conducted during cross-connection control inspection and testing)System Coverage Test, for irrigation systems

Dual-plumbed buildings with recycled water plumbing fixtures or industrial process systems may require additional inspections during construction.

3.6.1 Cross-Connection Inspection and Test

The Applicant/User's potable and recycled water system must pass an initial cross-connection inspection and test before connection of a User's recycled water system to the Town's recycled water system at sites served by both recycled and potable water. The inspection and test are necessary to ensure the absolute separation of the recycled and potable water systems. The Applicant/User shall be responsible for the cost of and coordination of the inspection and testing and must notify the Town Public Works Inspector Services at least five business days prior to the proposed date of the test so that the Town designated representative, and the DDW if applicable, can be present. The initial cross-connection inspection and test must be performed by a certified Cross-Connection Control Specialist approved by the Town. The site owner or their authorized representative at individual residences, or the User's Recycled Water Site Supervisor, at multi-unit residential or commercial sites, and the Town's designated representative must be present during the initial system inspection and testing. A certified report documenting the initial cross-connection inspection and test results and confirming that the site piping showed no evidence of cross connections must be submitted by the Cross-Connection Specialist to the owner or Site Supervisor and to the Town of Windsor within five business days of test completion. Cross-connection control inspection and testing procedures are described in Appendix F.

Reference: Title 22 CCR, Section 60316.

3.6.2 Final Inspection and Approval to Receive Recycled Water

A final inspection will be performed by the Town or its designated representatives before the recycled water system is connected to ensure all requirements have been met. This inspection may be coordinated with the cross-connection test. The Town's inspector will check that the proper equipment was used and that all required tags, labels and signs are in place.

The Town must issue a Recycled Water Use Permit before recycled water service can be provided to the site. The Permit will be issued on a conditional basis when construction has been completed in accordance with approved plans and specifications, initial cross-connection inspection and testing have been

performed, a final on-site inspection has been conducted, and the construction requirements and project conditions of approval have been met satisfactorily.

After receiving recycled water service, the User's Permit may require the User to coordinate with the Town to complete an irrigation system Coverage Test. In addition, the User's Site Supervisor may need to submit evidence to the Town for approval that they have received site Supervisor training. During the lifetime of the recycled water system, the Town will periodically inspect the recycled water system to ensure continued compliance with applicable use regulations.

3.6.3 Irrigation System Coverage Test

The User is responsible for preventing overspray, runoff and ponding from their recycled water irrigation systems—new or converted to recycled water. To ensure that any overspray, runoff or ponding is in accordance with the Town's recycled water regulations, the Town will conduct a Irrigation System Coverage Test of the on-site system. When possible, the final coverage test will be conducted immediately following the final inspection and connection of the recycled water service. After the on-site system begins receiving recycled water, the User or User's representative must contact the Town to schedule a coverage test and walk-through of the system. The User or User's representative must be in attendance and have persons in attendance capable of making system adjustments. If modifications to the system (other than minor adjustments) are required, the User will be notified in writing of the required changes. Any required modifications to the system must be made in a timely manner. All modifications to the system are the responsibility of the User, and the User must pay all costs associated with such modifications.

3.6.4 Record Drawings

The User is required to submit record drawings and site maps of the recycled water system to the Public Works Department for Town records. The User shall maintain a copy of the current system site maps/record drawings in their onsite files. The User must ensure that record drawings are prepared that show the recycled water system as constructed. These drawings must include all changes in the work constituting departures from the original contract drawings or site plans. The recycled water irrigation system record drawings must be submitted to the Town within ninety (90) days of the receiving recycled water service or as specified otherwise by the Town.

4.0 OPERATION AND MAINTENANCE

4.1 User Responsibilities

4.1.1 General User Responsibilities

Recycled water Users must agree to comply with and enforce the state and local rules and regulations for recycled water use, including the stipulations of the Town's Municipal Code and the Town's Recycled Water Use Permit or Agreement.

The User is responsible for maintaining and operating the on-site recycled water system downstream of the recycled water meter in compliance with the Town's recycled water rules and regulations, which includes the following:

- Obtain all permits required for the operation and maintenance of the on-site recycled water system and pay all fees and deposits required for the service.
- Assure that recycled water will be used only within the use area approved by the Permit or Agreement and that use will not extend to unapproved areas or uses.
- Assign a recycled water Site Supervisor, if applicable, and assure compliance with all Site Supervisor duties.
- Apply recycled water in accordance with the rules and regulations.
- Maintain the on-site recycled water system, including signs, markings and tags in public access areas in accordance with all Town rules and regulations.
- Ensure that all materials used during the installation, repair, and maintenance of the system are approved or recommended for recycled water use.
- Obtain prior authorization from the Town of Windsor before making any modifications to the approved on-site recycled water system.
- Report all violations and emergencies to the appropriate local authority. Respond to emergencies in order to protect the public health.
- Submit Annual Self-Inspection Report for each permitted use site, if applicable.
- For irrigation systems, apply water according to the Town of Windsor standards.

4.1.2 System Modifications

To ensure continued compliance with the Town Recycled Water Standards and all applicable rules and regulations, the User must submit to the Town plans for modifications to any recycled water system and receive authorization from the Town before making any modifications to the approved recycled water system. The Town of Windsor will assist the User to identify if any additional approval is required from other regulatory agencies and if any special procedures are required.

4.1.3 Site Supervisor Designation

Recycled water use sites with multi-family residences (2 units or more) or commercial, municipal, or agricultural use sites must have a designated, recycled water Site Supervisor, who has the authority to represent the owner, tenant or property manager as a liaison to the Town and carry out the requirements of the Town's recycled water use regulations. It is recommended that the designated Site Supervisor be

the owner or site manager who is permanently stationed at the use site. Consideration will be given to Site Supervisors under contract with the User, and Site Supervisors who are not permanently at the use site. In all cases, the Site Supervisor or their designee must be available at all times to respond to an emergency at the site. The Site Supervisor is responsible for achieving certified Site Supervisor training in accordance with the Town's requirements.

Reference: AWWA Guidelines, Section 6.2.2. Title 17 CCR, Section 7586. (Discretionary)

4.1.4 Site Supervisor Training

The designated recycled water Site Supervisor is responsible for attending recycled water Site Supervisor training and must review, understand, and be able to implement information regarding the effective and safe operation and management of the on-site potable and recycled water system according to recycled water rules and regulations.

4.1.5 Changing the Site Supervisor

The User must notify the Town immediately of any change in the personnel or contact information for their recycled water Site Supervisor position (within 30 days?). The User's designated Site Supervisor must have certified recycled water Site Supervisor training. If a new recycled water Site Supervisor or landscape company becomes responsible for system maintenance, the User must provide required information in writing in order to be in compliance with the Town's regulations.

4.2 Site Supervisor Responsibilities

4.2.1 General Site Supervisor Responsibilities

The Site Supervisor responsibilities include the following:

- Is responsible for the recycled water system at the site.
- Is responsible for the operation, maintenance and prevention of potential violations of the recycled water system.
- Must ensure that there are no cross-connections made between the potable and the recycled water systems.
- Must be present at all cross-connection inspections and tests.
- Must inform the Town of all failures, violations, and emergencies that occur involving the recycled or potable water systems.
- Is expected to know the provisions of California Code of Regulations Title 17 and Title 22, relating to the safe use of recycled water and the maintenance of accurate records.
- Is expected to know the basic concepts of backflow and cross-connection prevention, system testing and related emergency procedures.
- Is responsible for training personnel at the use site on the proper uses of recycled water.
- Is responsible for on-site recycled water system monitoring and reporting to the Town.
- Must conduct self-inspections of the use site and irrigation system annually, or more frequently, and provide a written report for each inspection to the Town, if requested or as required in the User's Permit.

4.2.2 Annual Self-inspection Report and Regular Monitoring

The Town may require that Users conduct a recycled water use site self-inspection at least once per year, or more frequently, while receiving recycled water service. The results of each inspection must be documented and submitted on a report form provided by the Town. See Appendix G for a sample Self-inspection Report form. The Site Supervisor must submit the results to the Town in the timeframe established by the Town. Upon completion, the Site Supervisor is required to keep a copy of the inspection report for the User's records.

To assure full compliance with the rules and regulations governing the use of recycled water, regular monitoring of all recycled water systems is necessary. For irrigation systems, weekly or twice-monthly inspections are recommended. Inspections should include site observation and system testing for the following types of situations:

- Is there evidence of recycled water runoff from the site? Show affected area on a sketch and estimate volume.
- Is there evidence of recycled water ponding and/or evidence of mosquitoes breeding within the irrigation area due to ponded water?
- Are advisory signs, identification tags, stickers and aboveground pipe markings properly posted to inform the public that irrigation water is recycled water, which is not suitable for drinking?
- Is there evidence of leaks or breaks in the irrigation system piping or tubing?
- Is there evidence of vandalism or unauthorized modifications to the system piping or components?
- Is there evidence of broken or otherwise faulty drip irrigation system emitters or spray irrigation sprinklers?

4.2.3 Preventing Unauthorized Discharge

An unauthorized discharge is any amount of recycled water that leaves the designated use site. The Site Supervisor must follow all preventative maintenance and monitoring procedures to assure unauthorized discharge does not take place. In the event of a break in the recycled water distribution system that is not detected immediately and repaired according to the Town's Standards and that causes, or threatens to cause, an unauthorized discharge of recycled water, the Site Supervisor must immediately turn off the recycled water system and contact the Town once the break is detected.

4.2.4 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 User 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 User must immediately contact the Town for further instruction.

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

4.2.5 Maintenance

The Site Supervisor is required to perform preventive maintenance to ensure that the recycled water system always remains in compliance with the Town's recycled water rules and regulations. As part of a preventive maintenance program, the recycled water Site Supervisor should:

- Perform regular inspections of the entire recycled water system, including sprinkler heads, drip irrigation system emitters, spray patterns, piping and valves, pumps, storage facilities, controllers, etc. Immediately initiate repairs of 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.
- Assure that any device (hose, pipe, meter, quick coupler, etc.) which has been used in contact with recycled water will not be used to convey potable water or be attached to the potable water system.

4.2.6 Personnel Training

The Site Supervisor is responsible for training all personnel involved in the operation of the on-site recycled water, so they are familiar with the regulations for recycled water use. At a minimum, the training program should convey the following:

- Town of Windsor recycled water, although highly treated, is nonpotable and must never be used for human consumption.
- Regulations prohibit ponding, windblown spray, and runoff of recycled water.
- Working with nonpotable recycled water is safe if common sense is used and appropriate regulations are followed.
- Cross-connection between the recycled water system and potable water system is strictly prohibited by State law. Training will include cross-connection recognition and how a backflow condition can occur.
- The Site Supervisor oversees the use of recycled water on site and is the liaison with the Town of Windsor.

Training should also instruct personnel in proper procedures for reporting unauthorized discharges, emergency procedures, identifying and correcting cross connections, and modifying the system in the event of an earthquake or other disaster.

4.2.7 Permit Updates

The Recycled Water Use Permit is issued to a designated person and is not transferable. If the owner of the property dies, or if the property is transferred to a new owner, leasee, or tenant, a new Recycled Water Permit is normally required. If the User designates a new recycled water Site Supervisor or landscape company to become responsible for system maintenance, the User must notify the Town immediately, and must provide the required Site Supervisor information in order to remain in compliance with the conditions of their Use Permit.

4.3 System Operations

4.3.1 System Responsibilities

The Town of Windsor is the Recycled Water Agency providing high quality recycled water to the User. The Town is responsible for the operation and maintenance of the recycled water system upstream of and including the recycled water meter, and for assuring compliance with all laws related to recycled water use. The Town is responsible for the following:

- At all times, have staff designated as the official contact for the Site Supervisor, including a 24-hour phone contact number for the Site Supervisor's use.
- Inspect the User's system as often as is necessary for compliance with State law and local rules and regulations.
- Provide initial and ongoing training to the Site Supervisor and the Site Supervisor's designee(s) on requirements of recycled water use, including regulations, standards for system installation and layout, maintenance, identifying and preventing cross-connections, emergency procedures and reporting.
- Be available to the Site Supervisor for training updates, if requested.
- Maintain record of Site Supervisor contact information, a copy of the use permit, and site-specific record of activities for each site served by recycled water.
- Take control of or disconnect the recycled water system if at any time operation of the system presents a threat to public health and safety.
- Confirm that, for sites that are regulated as dual-plumbed sites, a cross-connection inspection is performed at least annually, and a cross-connection test is conducted every four years by a certified Cross-Connection Control Specialist
- Notify the appropriate regulatory agencies in a timely manner if operation of the recycled water system results in violation of State law.
- Notify DDW and the Regional Water Quality Control Board (RWQCB) within 24 hours of any discovery of a backflow incident from a dual-plumbed recycled water system into the potable water system.

4.3.2 Recycled Water Service Categories

Town does not guarantee the continuity, sufficiency, or quantity of recycled water at all times. The recycled water supply can be temporarily reduced, interrupted, or curtailed in the event of projected or actual supply, distribution, maintenance tasks, and / or other operational constraints.

The Town designates a recycled water service category for each recycled water user in order to prioritize recycled water deliveries in the event Town has to reduce the supply of recycled water for any reason for any period of time. Users agree to cooperate with Town to reduce normal usage as much as possible in order to avoid having to interrupt or significantly curtail additional recycled water deliveries. If Town determines that, even after the cooperative efforts of all recycled water users, additional curtailments of deliveries are necessary, Town will curtail recycled water deliveries in the order of recycled water service categories (beginning with Priority #4), as listed below:

- **Priority # 1** - Users within this service category are classified as the highest delivery priority and will be the last to have their delivery of recycled water discontinued or curtailed. Agricultural users shall not be designated Priority #1, unless they provide under the terms of their Recycled Water User Agreement reservoir capacity determined by Town to be of significant benefit to Town.
- **Priority #2** - Users within this service category will not have their delivery of Recycled Water discontinued or curtailed until after Priority #3 and Priority #4 users have had their supply discontinued.
- **Priority #3** - Users within this service category will not have their delivery of recycled water discontinued or curtailed until after the Priority #4 users have had their supply discontinued.
- **Priority #4** - Users within this service category will receive recycled water only when surplus recycled water is available. The determination of if, when, and how much surplus recycled water is available at any time will be made solely by Town. The amount of surplus recycled water available may vary from year to year and in some years may be zero.

4.3.3 Notification of System Operating Problems

In the event of a break in the system, low pressure, low flow, or poor water quality, the User must notify a person at the Town immediately. Notification should be made directly to a responsible representative of the Town, 24 hours a day, seven days a week.

4.3.4 Regulations for Dual-Plumbed Sites

Special regulations exist for dual-plumbed sites. Dual-plumbed sites are sites where separate piping systems for recycled water and potable water are used within a facility and where the recycled water is used to serve plumbing outlets within a building. Individual residences that use recycled water for outdoor landscape irrigation are also considered to be dual-plumbed sites.

According to DDW regulations for dual-plumbed sites, an initial cross-connection inspection and test must be conducted to verify that there is not a cross-connection between the recycled water and potable water systems prior to connection to recycled water service. Once a recycled water system is in service, a cross connection visual inspection shall be conducted annually, and a periodic cross-connection test shall be conducted at least once every four years (quadrennial cross-connection test) unless visual inspections indicate a need for more frequent testing. The requirement for cross-connection testing applies to dual-plumb buildings and to individual single family residences with outdoor recycled water irrigation systems.

4.4 Cross-Connections Prevention and Response

A cross-connection is any physical connection between any part of a water system used or intended to supply water for drinking purposes and any source or system containing water or substance that is not or cannot be approved for human consumption, including recycled water. Cross connections will not be allowed. Any direct piping between the drinking water and recycled water systems, regardless of the presence of valves, backflow prevention devices or other appurtenances, is prohibited.

4.4.1 Visual Cross-Connection Inspection and Review

A visual self-inspection and thorough cross-connection review of the recycled water system should be conducted at least annually by the User, the recycled water Site Supervisor, and/or the Town staff.

4.4.2 Notification of a Cross-Connection

The User must notify the Town immediately of any failure of backflow device or plumbing system, or of any cross-connections between the recycled water and potable water system, whether or not he/she believes a violation has occurred. The User must also notify the Town of any violation that might occur because of any action the User'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 User must report each occurrence immediately to the Town, so that a decision can be made as to the need for further action and/or public notification.

4.4.3 Cross-Connection Test

Once every four years, or more frequently, if required, the User at a dual-plumbed use site must allow the Town's Cross-Connection Control Specialist, or approved designee, to conduct a periodic cross-connection inspection and test of the on-site recycled water system to verify that there is not a cross-connection between the recycled water and potable water systems. The User shall coordinate with Town staff when notified to schedule a cross-connection control test. The User for an individual residence use site, or the designated Site Supervisor at a multi-residential or commercial site, may be required to attend the test. The Specialist will submit a written report documenting the test results to the Town. For specific industrial and commercial recycled water uses, other regulations may also apply (Food and Drug Administration, OSHA, etc.).

The test method used for periodic cross-connection testing is based on the type of use site and site considerations. The periodic test used for dual plumed buildings is the Town's Cross-Connection Control Test Method 1, which is based on California Pluming Code procedures for testing dual plumbed buildings. The periodic cross-connection test used for single family residences with outside recycled water irrigation systems is the Town's Cross-Connection Control Test Method 2, which is the method developed to conduct testing at sites containing occupied residences. The Town's cross-connection control test methods are described in Appendix F.

4.4.4 Contamination of Potable Water

If, due to a cross-connection on the User's premises, contamination of the potable water system is suspected or known, the User must immediately notify the Town. The User must immediately invoke the "Emergency Cross-Connection Response Plan" as required by the Sonoma County Department of Health Services, Environmental Health Division and the Town described briefly, below.

4.4.5 Emergency Cross-Connection Response Plan

In the event that a cross-connection is suspected or occurs, the following emergency cross-connection response plan must be implemented immediately:

1. The User must notify the Town by telephone immediately and give an oral report:
    - During business hours at the Town of Windsor Public Works (707) 838-1006.
    - After regular business hours or on the weekend, the User must notify the Town Water Maintenance Department using the appropriate emergency contact number 24 hours a day, 7 days a week. Cell (707) 217-8626.
2. 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, the date and time the oral report was made, and the contact information of the person reporting the cross-connection.
3. The Town will notify the Sonoma County Department of Health Services, Environmental Health Division of the reported cross-connection.
4. The User must immediately shut down the recycled water supply to the residence or facility.
5. The User must keep the potable system pressurized and post "Do Not Drink" signs at all potable water fixtures and outlets.
6. The User must provide bottled water for facility occupants/employees until the potable water system is deemed safe to drink.
7. The User must follow the procedures outlined by the Sonoma County Department of Health Services, Environmental Health Division and the Town. See Appendix F for Cross–Connection Inspection and Testing Procedures.

After final approval has been obtained from the Sonoma County Department of Health Services, Environmental Health Division, the Town will bring the recycled water system back into service and inform the User that the "Do Not Drink" signs can be remove from all potable water fixtures and outlets.

APPENDIX A
Definitions and Abbreviations

APPENDIX A. DEFINITIONS AND ABBREVIATIONS

Definitions

Air-gap separation means a physical break between a supply pipe and a receiving vessel which shall be at least double the diameter of the supply pipe, measured vertically above the top rim of the vessel, and in no case less than one inch.

Approved backflow preventer means a device installed on on-site potable water systems to protect the potable water supply from contamination by recycled water. Also, a device installed on an on-site recycled water system to protect the recycled water supply from contamination.

Best Management Practices (BMPs) means methods that have been determined to be the most effective and practical means of preventing or reducing non-point source pollution to help achieve water quality goals. BMPs include both measures to prevent pollution and measures to mitigate pollution.

Cross-connection means any unprotected connection between any part of a water system used or intended to supply potable water and any service or system containing recycled or other water or substance that is not safe, wholesome and potable for human consumption.

Cross-connection Specialist means an American Water Works Association or University of Southern California certified Cross-Connection Control Specialist.

Dual-plumbed system means a system that utilizes separate piping systems for recycled water and potable water within a facility and where the recycled water is used for either of the following purposes:(a) To serve plumbing outlets (excluding fire suppression systems) within a Building, or (b Outdoor landscape irrigation at individual residences, and as set forth in the Recycling Criteria.

Non-potable water means water that has not been treated for human consumption in conformance with the drinking water standards referred to in the definition of potable water.

Off-site facilities or off-site system means normally, facilities under the control of the Town or other municipal agency, including, but not limited to, recycled water pipelines, reservoirs, pumping stations, manholes, valves, supply interties, and other appurtenances and property from the source of supply to the point of connection with the on-site facilities, including the service meter. For recycled water service, off-site facilities shall normally mean those upstream of the point of connection with the user's on-site facilities located and starting at the downstream end of the service meter tailpiece.

On-site facilities or on-site system means normally, facilities under the control of an applicant, property owner, or user intended for the delivery of recycled water only and which are separate from any potable water distribution system. For recycled water service, the on-site facilities shall be those downstream of the recycled service connection, which shall normally be the downstream end of the meter tailpiece.

Potable water means water that does not contain objectionable pollution, contamination, minerals or infective agents and is considered satisfactory for domestic consumption, and conforms to the latest edition of the United States Public Health Service Drinking Water Standards, the California Safe Drinking Water Act, and any other applicable standards.

Reclaimed water means the same as Recycled Water.

Recycled water means normally, disinfected tertiary recycled water as defined in Chapter 3 of Division 4 of Title 22 of the California Code of Regulations, as may be amended from time to time.

Recycled water facilities means facilities used by the Town for the storage, pumping and conveyance of recycled water. Recycled water facilities are intended to provide recycled water for uses such as landscape irrigation, agricultural irrigation, and construction or industrial process water, as set forth in the Recycling Criteria.

Recycled water service connection means the point of connection of the user's recycled water line with the recycled water service line of the town, which shall normally be the downstream end of the recycled water meter connection.

Recycled water mains means recycled water lines and appurtenances purchased or constructed and owned by the Town (or other municipal agency) or which the Town requires an applicant, owner or user to construct but which are owned by the Town. The Town shall determine what facilities are recycled water mains from time to time. The Town's determination in regard to these matters shall be final and conclusive.

Recycled water service area means the property, or portion of property, on which recycled water is available from the Town and is required for irrigation or other approved uses in lieu of potable water.

Recycled Water Use Permit means a permit issued by the Town of Windsor to the User which grants permission to use recycled water and requires the User to use recycled water in accordance with the Town's regulations and standards for the use of recycled water and all applicable state and local regulations.

Recycled Water User's Guide means the Town of Windsor's guidance document which describes the Town's recycled water program and identifies the local and state rules and regulations that apply to the design, installation, operation and maintenance of an on-site recycled water system.

Recycling Criteria means the regulations written by the DDW and promulgated pursuant to Water Code Section 13521, and set forth in CCR Title 22 Division 4 Chapter 3 Sections 60301 et seq., as may be amended from time to time.

Unauthorized discharge means any amount of recycled water that leaves the designated use area.

User means any user of recycled water provided by the Town.

User's recycled water site supervisor means a qualified person, normally designated by an agricultural, commercial, or municipal recycled water user, who shall be knowledgeable in the construction and operation of on-site recycled water facilities and irrigation systems, and in the applicable guidelines, criteria, standards, rules and regulations for the use of recycled water.

Abbreviations

ALWSZ	Airport-Larkfield Wikiup Sanitation Zone
AWWA	American Water Works Association
BMPs	Best Management Practices
CCR	California Code of Regulations
DDW	Division of Drinking Water
ft	Foot
MRP	Monitoring and Reporting Program
NCRWQCB	North Coast Regional Water Quality Control Board
NPDES	State Water Resources Control Board General Order
psi	Pounds Per Square Inch
PVC	Polyvinylchloride
PWD	Public Works Department
RP	Reduced Pressure
RWQCB	Regional Water Quality Control Board
SWRCB	California State Water Resources Control Board
Windsor Standards	Town of Windsor Design and Construction Standards

APPENDIX B

Process to Obtain a Recycled Water Use Permit

APPENDIX B. PROCESS TO OBTAIN A RECYCLED WATER USE PERMIT

1. Applicant contacts the Town Public Works Department (PWD) regarding the Recycled Water Program and requests to obtain a permit for recycled water service for a new use site, to retrofit an existing water system, or to update information in the recycled water service files.
2. PWD staff explains the recycled water permitting process and provides the Applicant with the Town's Recycled Water User's Guide and permit application forms.
3. If the project is a new development or system retrofit, the PWD may conduct a preliminary project evaluation to determine if recycled water use is feasible and appropriate for the project and to identify the general project requirements. (Typical issues to consider: availability of recycled water; adjacent parcel land use; potential for contact by the public; slope of irrigated areas; proximity of intended use area to potable water piping, drainage courses, creeks, or sensitive environmental areas such as wetlands, endangered plants or native oak trees.) PWD and applicant will coordinate a meeting to review project.
4. PWD informs Applicant of determination that recycled water project is appropriate and identifies the general project requirements. Applicant reviews recycled water use information and requirements, and prepares and submits Permit Application, site plans or improvement drawings, and any supplemental information to PWD. If the proposed project includes "Dual-plumbed" buildings or use sites, the Applicant prepares and submits a project Engineering Report to the PWD. PWD will review and submit to the Division of Drinking Water (DDW) and the Regional Water Quality Control board (RWQCB) for review and approval. See the Section in Appendix B entitled "Requirements for Engineering Reports for Recycled Water Use Sites."
5. DDW and the RWQCB review and approve the Applicant's project Engineering Report, if applicable. If required, Applicant makes any corrections or modification identified by DDW and the RWQCB and resubmits application information to the PWD. PWD will resubmit the updated Engineering Report to DDW and the RWQCB for approval.
6. For new construction, the Town's Building Department will conduct site visits, and checks Application and site plans for compliance with recycled water design standards. For a retrofit project, PWD and/or the Town's Building Department will conduct a site visit and evaluates existing facilities and proposed modifications. PWD may prepare a list of site-specific retrofit requirements for the project. PWD routes Application information to other PWD Sections for review.
7. Applicant makes any corrections or modification identified by PWD and resubmits application information to PWD for approval.
8. Town Approves Application and site plans for construction. For new construction, Applicant constructs facilities and notifies PWD and the Town Building Department at applicable stages during construction for purposes of construction inspection including piping materials, piping layouts and separation, pressure testing, and final system inspection. For a retrofit project, Applicant makes required modifications and notifies PWD for inspections. PWD and Town Building Department verifies all construction inspections and testing have been conducted.
9. Applicant schedules initial cross-connection inspection and test for new or retrofit systems at use sites that have both recycled and potable water service prior to initiating recycled water service. A certified Cross-Connection Specialist performs the initial cross-connection inspection and testing. Backflow testing should also be performed at this time, if necessary. The property owner or authorized representative, the Applicant's Site Supervisor, and a Town representative shall attend the cross-connection inspection and testing. The Cross-Connection Specialist submits test results in a

certified report to PWD. All deficiencies sited during testing are corrected by the Applicant and the system is inspected and retested, if required.

10. At the Applicant's request, PWD installs the service meter, or approved contractor, and initiates recycled water service. PWD ensures that the Town's Use Permit records are updated with applicant's account information, recycled water meter size, meter identification number, and installation date.
11. For irrigation systems, the Applicant notifies PWD and request an Irrigation System Coverage Test to verify that the recycled water irrigation system conforms to use requirements and does not spray on non-approved areas, or cause runoff or ponding. The PWD inspector and owner or Applicant's Site Supervisor conduct the inspection and test of irrigation system. Any deficiencies sited are corrected by the Applicant and system is retested, per Permit requirements.
12. PWD issues User a Recycled Water Use Permit. The Permit is finalized when the recycled water meter is installed and the Applicant completes any additional Permit requirements, such as submitting record drawings or performing an initial Irrigation System Coverage Test, if applicable.
13. Applicant submits updated record drawings of the site service plans or retrofit service plans for PWD review and Permit File. Applicant participates in and submits confirmation of recycled water Site Supervisor training.
14. Applicant/User conducts regular inspections and submits Self-Monitoring Reports to the Town if required by Use Permit, or when requested by the Town. Town identifies monitoring frequency and provides a Report form for observations. Applicant/User documents the condition and operation of the on-site recycled water system.

The Town or regulatory agencies may inspect a User's recycled water system at any time to ensure compliance with use rules and regulations or to protect the public's health. Additionally, the Town is required to perform regular inspections and testing of some User's recycled water systems (including cross-connections tests, if appropriate) depending on recycled water use, use site characteristics, and individual Use Permit requirements.

If the User wants to modify, extend, or remove any portion of the recycled water system, the User checks with the Town before initiating any changes to their recycled water system.

Requirements for Engineering Reports for Recycled Water Use Sites

California Regulations require that a special engineering report be submitted to the California Regional Water Quality Control Board (RWQCB) having jurisdiction for projects proposing facilities that have dual-plumbed systems, or when requested by RWQCB for other reasons. Facilities where both recycled water and potable water are present inside a building are referred to as "dual-plumbed" facilities. Examples include facilities that use recycled water for toilet flushing, fire suppression, or in industrial processes[1].

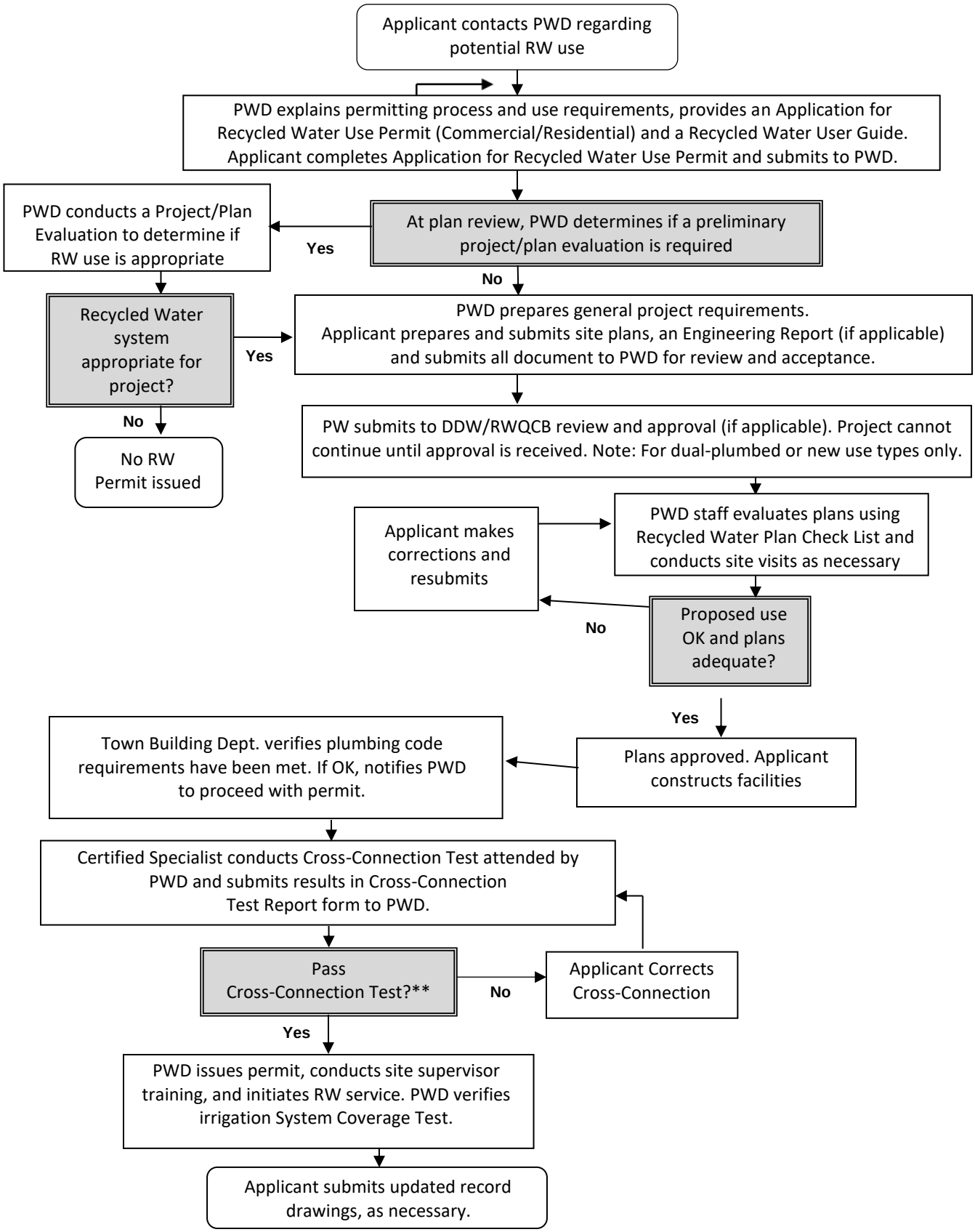
[1] Fire suppression and certain industrial uses may not technically constitute dual-plumbed systems according to the most recent draft Title 22 revision. However, the Town requires submission of an engineering report for all "in-building" uses of recycled water.

The applicant must submit the appropriate application and supporting documentation for the proposed recycled water use to the Town. The Town will review the application to ensure information is complete and accurate and will submit to RWQCB, SWRCB and DDW. The report must include the following formation:

- A detailed discussion of the facility[2] including the following:
  - The location and type of facility proposing to use a dual-plumbed system.
  - The average number of persons estimated to be served by the facility on a daily basis.
  - The specific boundaries of the facility. This is best delineated using a site map.
  - The person(s) responsible for operation of the dual-plumbed system. A facility must have a designated Recycled Water User Supervisor, who is familiar with and responsible for the proper use of recycled water. Requirements for proper use are described in the Recycled Water Program's Guidelines for the Use of Recycled Water.
  - The specific use of recycled water at the facility.
- Plans and specification which describe the following:
  - Proposed recycled water piping system(s) to be used.
  - Pipe locations for both the recycled and potable water systems.
  - Type and locations of outlets and plumbing fixtures that will be accessible to the public.
  - Methods and devices to prevent backflow of recycled water into potable system.
  - Recycled water signage locations.

  Only relevant construction plan sheets and specifications sections should be included in the report. The recycled and potable water systems should be clearly delineated (and differentiated from each other). Show points-of-connection to Town mains, meters, and backflow devices.
- The methods to be used shall assure that the installation and operation of the dual-plumbed system will not result in cross-connections between the recycled water system and the potable water system. This would typically include a description of "in-house" controls and procedures to prevent cross-connection, and a description of procedures for initial and periodic cross-connection testing. Cross-connection testing must be done by an AWWA-certified Cross-Connection Control Specialist, and shall be performed at a minimum of every four years, or more frequently if required by the Town.

[2] If the recycled water use area includes more than one facility with a dual-plumbed system, provide the required information for each facility.



Notes

* Engineering Report Required for Dual-plumbed Use Sites. Regulatory review may run parallel with PWD's evaluation.

** Cross-connection test may be conducted earlier in some cases (e.g., dual-plumbed buildings).

Figure B-1
Industrial/Commercial and New Residential Builds Permitting Process Flowchart

APPENDIX C
Forms for Recycled Water Use

APPENDIX C. LIST OF RECYCLED WATER USE FORMS

Introduction

The following information and sample forms are provided to assist Town of Windsor (Town) recycled water customers with required application forms and supporting documentation needed for the Town to authorize and monitor recycled water systems and use.

The following application forms and examples are provided:

1. Application for Recycled Water Use Permit (Commercial/Multi-Family Residential)
2. Application for Recycled Water Use Permit (Individual Residential User)
3. Sample Site Plan – Application for Recycled Water Use Permit
4. Sample Assessor's Parcel Map – Application for Recycled Water Use Permit
5. Urban Recycled Water Use Permit
6. Recycled Water Fill Station Program Application

The following forms are examples only and are subject to change. Current application forms are posted on the Town's website at: Recycled Water | Windsor, CA - Official Website (townofwindsor.com). Users are responsible for providing complete and accurate information prior to using recycled water.

TOWN OF WINDSOR

APPLICATION FOR RECYCLED WATER USE PERMIT (COMMERCIAL/MULTI-RESIDENTIAL USER)

SAMPLE

SERVICE NUMBER

LOCATION NUMBER

Site Information

PROPOSED USE SITE NAME OR DESCRIPTION | SITE FACILITIES MANAGER | ( ) PHONE

SITE ADDRESS | CITY | STATE | ZIP

ASSESSORS PARCEL NO. (LIST ALL APNs) | TOTAL PARCEL AREA(S) *(in acres)*

Applicant Information

APPLICANT'S RELATIONSHIP TO SUBJECT PROPERTY: ☐ LEGAL OWNER; ☐ TENANT; ☐ LESSEE; ☐ OTHER _____

OWNER/ENTITY NAME | OWNER/ENTITY CONTACT PERSON

MAILING ADDRESS *(if different from Site Address)* | CITY | STATE | ZIP

( ) PHONE | ( ) ALTERNATE PHONE | ( ) FAX | EMAIL

APPLICANT NAME *(if different from Property Owner)*

APPLICANT BILLING ADDRESS *(if different from Mailing Address)* | CITY | ZIP

( ) PHONE | ( ) ALTERNATE PHONE | ( ) FAX | EMAIL

Recycled Water User Supervisor

(Agricultural and Commercial Recycled Water Applicants to Complete this Section)

RECYCLED WATER SUPERVISOR NAME | TITLE | ORGANIZATION

MAILING ADDRESS | CITY | STATE | ZIP

( ) PHONE (WEEKDAY) | ( ) PHONE (EVENING) | ( ) PHONE(CELL/PAGER) | EMAIL

RECYCLED WATER USER SUPERVISOR TO PROVIDE SURVEILLANCE AND SUPERVISION OF THE RECYCLED WATER SYSTEM TO ASSURE COMPLIANCE WITH USE GUIDELINES. SUPERVISOR TO PROVIDE LIAISON WITH TOWN AND MUST BE REACHABLE AT ALL TIMES IN CASE OF EMERGENCY. NUMBERS FOR TOWN USE ONLY.

Usage Information

PRIMARY PROPERTY USE_____; EXISTING/ALTERNATE WATER SOURCE: ☐ POTABLE; ☐ PRIVATE WELL; ☐ NONE; ☐ OTHER;

RECYCLED WATER SYSTEM: ☐ RETROFIT ☐ NEW DEVELOPMENT ☐ DUAL-PLUMBED BUILDINGS WITH POTABLE AND RECYCLED WATER SERVICE

PUBLIC ACCESS: ☐ YES; ☐ NO; OUTDOOR EATING AREAS: ☐ YES; ☐ NO; DRINKING FOUNTAINS: ☐ YES; ☐ NO;

PARCEL APN NO.	TOTAL AREA *(ACRES OR SQ. FT.)*	IRRIGATED AREA *(ACRES OR SQ. FT.)*	PLANT/CROP TYPE OR USE(1)	ESTIMATED INCHES PER YEAR	ESTIMATED GALLONS PER YEAR	SUMMER ONLY OR YEAR ROUND

MAXIMUM FLOWRATE AT SERVICE: _____GPM

NOTE (1) – EXAMPLES INCLUDE VINEYARD; PASTURE, TURF, COMMERCIAL LANDSCAPE

ATTACH ADDITIONAL FORMS, SITE MAPS, PARCEL MAPS, PROJECT PLANS, AS REQUIRED.

Applicant's Statement: I am a principal owner of this site or a duly authorized representative and certify, under penalty of perjury, that the information contained therein is true and correct to the best of my knowledge.

APPLICANT SIGNATURE | APPLICANT PRINTED NAME | DATE (MM/DD/YYYY)

Town Use Only

SERVICE NUMBER | ISSUED BY

SERVICE NUMBER SENT TO RECORDS BY | DATE

☐ DUAL-PLUMBING REGULATIONS

SITE SUPERVISOR CERTIFICATION/ENROLLMENT VERIFIED BY | DATE

SITE INFORMATION CHECKED BY:

☐ PLAN REVIEW ☐ INSPECTION

RECORDS ENTRY COMPLETED/UPDATED BY | DATE

TOWN OF WINDSOR

APPLICATION FOR RECYCLED WATER USE PERMIT (INDIVIDUAL RESIDENTIAL USER)

SAMPLE

SERVICE NUMBER

LOCATION NUMBER

Site Information

SITE ADDRESS | CITY | STATE | ZIP

ASSESSORS PARCEL NO. (LIST ALL APNs) | TOTAL PARCEL AREA(S) *(in acres)*

Applicant Information

APPLICANT'S RELATIONSHIP TO SUBJECT PROPERTY: ☐ LEGAL OWNER; ☐ TENANT; ☐ LESSEE; ☐ OTHER _____

OWNER/ENTITY NAME | OWNER/ENTITY CONTACT PERSON

MAILING ADDRESS *(if different from Site Address)* | CITY | STATE | ZIP

( ) PHONE | ( ) FAX

APPLICANT NAME *(if different from Property Owner)*

APPLICANT BILLING ADDRESS *(if different from Mailing Address)* | CITY | ZIP

( ) PHONE | ( ) FAX

Usage Information

PRIMARY PROPERTY USE_____;

EXISTING/ALTERNATE WATER SOURCE: ☐ POTABLE; ☐ PRIVATE WELL; ☐ NONE; ☐ OTHER_____;

AREAS SERVED BY RECYCLED WATER IRRIGATION SYSTEM: ☐ FRONT YARD ☐ BACK YARD

RECYCLED WATER SYSTEM INSTALLATION: ☐ NEW DEVELOPMENT ☐ RETROFIT ☐ BOTH NEW AND RETROFIT COMPONENTS

PUBLIC ACCESS: ☐ YES; ☐ NO; OUTDOOR EATING AREAS: ☐ YES; ☐ NO; DRINKING FOUNTAINS: ☐ YES; ☐ NO;

ATTACH ADDITIONAL FORMS, SITE MAPS, PARCEL MAPS, PROJECT PLANS, AS REQUIRED. ☐ ADDITIONAL FORMS ATTACHED

Applicant's Statement: I am a principal owner of this site or a duly authorized representative and certify, under penalty of perjury, that the information contained therein is true and correct to the best of my knowledge.

APPLICANT SIGNATURE | APPLICANT PRINTED NAME | DATE (MM/DD/YYYY)

Town Use Only

SERVICE NUMBER | ISSUED BY

SERVICE NUMBER SENT TO RECORDS BY | DATE

☐ DUAL-PLUMBING REGULATIONS

SITE SUPERVISOR CERTIFICATION/ENROLLMENT VERIFIED BY | DATE

SITE INFORMATION CHECKED BY:

☐ PLAN REVIEW ☐ INSPECTION

RECORDS ENTRY COMPLETED/UPDATED BY | DATE

TOWN OF WINDSOR

URBAN RECYCLED WATER USE PERMIT

SAMPLE

TI[illegible]IN[illegible]UNT NUMBER

LOCATION NUMBER (RECLAMATION USE AREA)

Permit Date: _____ Delivery Priority Category _____
Property Location: _____
Type of Use(s): _____

This Permit is an agreement made between the Town of Windsor ("TOWN") and _____ ("CUSTOMER/USER") to grant permission for the use of recycled water on CUSTOMER'S/USER'S property located at _____ (PROPERTY), and to establish requirements that apply to the CUSTOMER/USER'S use of recycled water. The CUSTOMER/USER is the _____ (owner, tenant or property manager) of PROPERTY.

THE PARTIES AGREE:

1. CUSTOMER/USER desires to use recycled water at PROPERTY for these specific use(s):
   _____
2. TOWN desires to grant permission to CUSTOMER/USER to use recycled water at PROPERTY for these uses.
3. CUSTOMER/USER understands and agrees that in California the use of recycled water is regulated by the Regional Water Quality Control Board and State Department of Public Health; and that TOWN has the authority to enter into individual permit agreements with end users of recycled water.
4. CUSTOMER/USER agrees to comply with and enforce the TOWN and federal, state, and local rules, regulations and standards for recycled water use including but not limited to those that are established in the TOWN Municipal Code for Recycled Water Service.
5. CUSTOMER/USER further agrees to comply with all conditions of the Town of Windsor Municipal Code and specifically Title XII Chapter 7 Recycled Water Service, and as it may be revised during the period of time this Permit is in effect, and all applicable state and local rules and regulations.
6. CUSTOMER/USER further understands and agrees that the following site-specific requirements must be met by CUSTOMER/USER for recycled water service at PROPERTY: □ Additional Forms Attached
   _____
   _____
7. CUSTOMER/USER understands that, in accordance with the TOWN rules, regulations and standards for recycled water use, that a recycled water Site Supervisor must be designated for any PROPERTY recycled water use area other than an individual residence. The CUSTOMER/USER certifies that their designated recycled water Site Supervisor has or will obtain certified training in the rules, regulations and standards for recycled water use, and operation of the PROPERTY recycled and potable water systems as required by the TOWN. The Site Supervisor for PROPERTY is:
   Name: _____
   Contact Information: _____
8. CUSTOMER/USER further agrees to notify the TOWN within 30 days of any changed circumstances (permanent or temporary) on the PROPERTY receiving recycled water service that significantly changes the volume or methods of recycled water use, or should the PROPERTY change ownership, change tenants, or should a new Site Supervisor be designated for the PROPERTY.
9. TOWN may immediately terminate this PERMIT and recycled water service if CUSTOMER/ USER violates any of the provisions of this PERMIT.

TOWN OF WINDSOR PUBLIC WORKS DIRECTOR	CUSTOMER/USER
Signature:_____	Signature:_____
Name:_____	Name:_____
Title:_____	Title:_____
Date:_____	Date:_____

TOWN OF WINDSOR

RECYCLED WATER FILL STATION PROGRAM – APPLICATION

Name: _____

Address: _____

City/State/ZIP Code: _____

Phone: _____ Email: _____

Address where recycled water is to be applied (if different location from residence, above):

_____

What type and size of container will be used to collect, transport and store recycled water?

_____

Recycled Water Use Location and Description: Where and how do you plan to use the recycled water?

_____

_____

_____

Signature: _____ Date: _____

TOWN OF WINDSOR

Return to:

Veronica Siwy
Deputy Director of Water Environmental Management
Town of Windsor Public Works
8400 Windsor Road
Windsor, CA 95492
Or submit electronically to vsiwy@townofwindsor.com

SAMPLE

APPENDIX D

Plan Checklist for Recycled Water Projects

APPENDIX D. PLAN CHECKLIST FOR RECYCLED WATER PROJECTS

The following summary is provided to give a general idea of the major items which should be shown on the recycled water project site plans and maps and will be checked during plan review. The improvement plans and site maps should include and identify new distribution main facilities that are on the upstream side of the water meter, and are within public streets, public rights-of-way, or easements which will become property of the Town, and the onsite recycled water facilities, which typically consist of laterals, irrigation lines, and appurtenances downstream of the service meter. Although the Town performs plan review, the Applicant is responsible for meeting all applicable requirements including requirements not shown on the approved plans. Application submittal requirements may be different depending on whether the system is for new recycled water facilities, or for existing facilities being retrofitted for recycled water use.

1. Show site boundaries, assessor's parcel boundaries and number(s), adjacent parcel numbers, easements, adjacent streets, and locations of all major site improvements on the site.
2. Show boundaries of the onsite recycled water intended use area(s) and provide the total recycled water irrigation area to the nearest 100 square feet.
3. Indicate all sources of water on the plans and color code.
4. Show the location and size of all water meters on the piping plans.
5. Show location of all water and sewer pipelines (including potable and well water lines) crossing the site. If space does not permit this information to be placed on the plans, then provide a separate site or utility plan to show this information. For retrofit of an existing irrigation system for conversion to recycled water, all locations where piping will be modified and all locations where the future recycled water piping must be separated from the potable water piping must be clearly indicated on the plans.
6. Show location and type of all backflow prevention devices for potable water systems, and if applicable, on the recycled water system(s).
7. Show location and type of all strainers, pressure regulating valves, and master valves.
8. Show the location of all drinking fountains, outdoor eating areas, and any public facilities supplied with recycled or potable water service. Public facilities include, but are not limited to, restrooms, snack bars, swimming pools, wading pools, decorative fountains and showers. Show the size and location of pipelines serving all of these facilities.
9. Show the location of any wells, streams, lakes, ponds, reservoirs, wetlands, or other water features located on the site or within 100 feet of the site. Indicate the type of water source for all impoundments, ponds, or decorative water features.
10. Indicate that the horizontal and vertical separation between potable and recycled water lines meets minimum requirements. Show required special pipe construction or sleeving where recycled water pipelines cross over potable water pipelines.
11. When potable water piping is not present on the site, provide the following note on the plans, "Initial cross-connection testing required by the Town of Windsor for new recycled water systems is waived for sites where no potable water piping is present."

12. If the plans are to be used for construction, show all details necessary to properly construct and identify all of the components of the recycled water system, including the details conforming to the requirements of the Town of Windsor. The purpose of the details is to show the materials and methods necessary to clearly identify all water systems on the site.
13. For irrigation systems, include an irrigation equipment legend specifying all materials of construction for the system, including:
    - A pipe schedule listing pipe sizes, materials of construction, and type of water conveyed by the piping.
    - A listing of valve types, including quick coupling valves.
    - All pertinent information for each type of sprinkler head and/or emitter.
    - Indication of purple-colored pipe with recycled water stenciling and valve boxes with purple covers and identification labels where recycled water is used.
    - Specify that no hose bibs shall be installed on the recycled water system
14. All sites using recycled water must post clearly visible advisory signs conforming to the Town of Windsor signage standards. Show proposed sign locations on plans. For many sites, typical locations for advisory signs are at the property line near crosswalks, at driveway entrances, and at outdoor eating areas.
    - For streetscapes (parkways, frontage or backup landscaping), place signs at street corners and entranceways as appropriate to notify passersby and site users.
    - For medians, a sign should be placed at the beginning and end of every median, and another approximately equidistant from the ends of the median for longer median areas.
    - For decorative fountains, ponds, and other water features, see the Advisory Signs For Decorative Fountains, Ponds & Other Water Features section, of The Recycled Water User's Guide.
15. Include signature lines for the Town of Windsor – to all site plan sheets, detail sheets, and specification sheets that pertain to the recycled water system.

APPENDIX E

Signs and Tags for On-site Recycled Water Systems

APPENDIX E. SIGNS AND TAGS FOR ON-SITE RECYCLED WATER SYSTEMS

Recycled Water Advisory Signs

All sites using recycled water that are accessible to the public shall be posted with signs that are visible to the public that provide notification of recycled water use. Signs for sites using recycled water for landscape irrigation, decorative fountains, or water features shall conform to the Town of Windsor details and be installed per locations indicated on the approved plans. The sign shall have a purple background and a minimum size no less than 4 inches high by 8 inches wide with 1/2" minimum white lettering which warns, "RECYCLED WATER— NOT FOR DRINKING" in English and in Spanish. The signs shall also display the international symbol for "DO NOT DRINK". Figure 1 shows one configuration of recycled water irrigation advisory sign. Other approved configurations may be used.



Figure 1. Example of Recycled Water Irrigation Advisory Sign

The following are the minimum requirements for water feature advisory signs:

- Minimum wording shall be an advisory in English and in Spanish, such as: "This _____[insert type of water feature here, such as Fountain, Pond, etc.] Uses Recycled Water – Not for drinking – Agua reciclada, No tomar"
- Minimum size: no less than 4 inches high by 8 inches wide
- Must be permanently, legibly printed and posted in conspicuous places
- Colors for lettering and background follow the same guidelines as for irrigation signs

The Town of Windsor must be consulted for the final approval of all signs, as well as, the number of signs and the placement of those signs. Where required for aesthetic or corporate identity purposes, alternate color-coding schemes may be adopted subject to the approval of the Town of Windsor and provided that the applicant demonstrates to the DDW that the alternative approach will assure an equivalent degree of public notification.

Dual plumbed buildings using recycled water for toilet fixtures and other approved uses shall have signs such as room entrance signs, equipment room signs, and valve access door signs that conform to the requirements of the California Plumbing Code, Chapter 16A for Recycled Water Systems.

Recycled Water System Valve Identification Tags

1. Identification tags shall be manufactured from a weather resistant durable material, such as polyurethane. Tags shall have an integral neck and reinforced attachment hole and will be capable of withstanding 180 pounds pull-out resistance.
2. The identification tags shall be purple (Pantone 512) with maximum size, hot stamped black letters and shall read: "RECYCLED WATER, DO NOT DRINK" in English and in Spanish.
3. Identification tags shall be T. Christy Enterprises Model No. ID-Max-P2-RC006, or equal.



Figure 2. Example of a Recycled Water System Valve Identification Tag

APPENDIX F
Cross-Connection Inspection and Testing Methods

APPENDIX F. CROSS-CONNECTION INSPECTION AND TESTING METHODS

Introduction

The following methods are used to ensure that no cross-connections exist between potable and recycled water supplies at sites which are served by both. The methods are based on the requirements of section 1620A.0 Inspection and Testing, of the CPC in the California Code of Regulations Title 24 and are conducted to provide proof of separation and ensure that no cross-connections exist between the potable water and recycled water supplies at dual plumbed use sites. These methods also describe what to do in case cross-connection is discovered.

The recycled water system shall be inspected and tested in accordance to the following: (a) an initial cross-connection inspection and test before the initial operation of the recycled water system; (b) an annual visual system inspection; (c) for dual plumbed sites and at sites where a risk of cross connection exists, a periodic cross-connection test as required, pursuant to Section 60316(a), Title 22, California Code of Regulations.

Testing Frequency

The initial cross-connection test shall consist of the Pre-Test Requirements and Visual Inspection and the Cross-Connection Control Test Method 1. This initial test shall be performed and passed at all sites converting to recycled water use prior to the site receiving approval to use recycled water. Cross-connection inspections will be conducted annually thereafter. Cross-connection testing of dual plumbed sites will be conducted every four years thereafter. The Town may require cross-connection testing if there is material reason to believe that the potable water and/or recycled water system separation has been compromised or following remediation of a discovered cross-connection.

Cross-Connection Control Test

The Town uses several cross-connection control test methods based on the type of use site and site considerations. Cross-Connection Control Test Method 1 is used for initial cross-connection testing conducted on all new use sites and for the periodic testing of dual plumbed buildings. The periodic cross-connection test used for single family residences with outside recycled water irrigation systems is the Town's Cross-Connection Control Test Method 2, which is a modified test method developed to test at sites containing occupied residences.

Cross-connection control testing shall be conducted by the following methods by a certified AWWA Cross-Connection Control Specialist approved by the Town in the presence of the Town's inspector or other authority having jurisdiction, and the Customer, if an individual residence, or the Customer's designated Recycled Water User Supervisor, if applicable, and other personnel as required to determine whether a cross-connection occurred. Alternate inspection and testing requirements may be allowed by the Town for residential, institutional or industrial buildings where shutting off the water is not practical.

Cross-Connection Control Test Method 1

The basic concept employed in Cross-Connection Control Test Method 1 is to check for cross-connections between the potable water and recycled water systems is to pressurize one system at a time, and to then check the other system for flow, which would indicate that a cross-connection exists. A Cross-Connection Test Report Form should be completed in conjunction with the testing.

The following procedure shall be used to determine if a cross-connection exists.

Pre-Test Requirements and Visual Inspection

A visual inspection of the dual system shall be conducted annually, and prior to cross connection testing, by the Town's inspector, Cross-Connection Control Specialist, or other authority having jurisdiction, or the Customer's designated Recycled Water User Supervisor, if applicable. The visual inspection should include the following elements:

1. The Customer shall provide the Inspector with drawings of the recycled and potable water systems. The Inspector shall review the drawings.
2. Discuss any changes to recycled and potable water systems since the last cross-connection test, and verify that all changes have been recorded on the appropriate record drawing(s). If possible, visually inspect changes to verify that no cross-connection has been created.
3. Verify that appropriate backflow prevention devices are installed and have been tested annually in accordance with California Title 17, Protection of Water System. Devices are typically located on the potable water line, downstream of the meter.
4. Check meter locations of the recycled water and potable water lines to verify that no modifications have been made and no cross-connections are visible.
5. Discuss who has access to the recycled water system (e.g., gardeners, maintenance workers). Establish if they are employed by the Customer or by a contractor, if they can read and speak English, and what training they have had on the use of recycled water.
6. Verify that required advisory signs are in place and in good condition.
7. Verify all portable recycled water fixtures (e.g., hose, quick connect valves) are permanently marked for use only on the recycled water system.

Cross-Connection Control Test Method 1—Part One:

1. The potable water system shall be activated and pressurized. The recycled water irrigation 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.
2. The potable water system shall remain pressurized for a minimum period of time specified by the cross-connection specialist while the recycled water system is depressurized. The minimum period of time 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 water and recycled water distribution systems.
3. All recycled water fixtures, including irrigation control valves and quick-coupling valves, and any site features that are approved to be supplied with recycled water from that on-site recycled water system shall be tested and inspected for flow. If the recycled water system has been truly shut down at its point of connection, then continuous flow from any part of the recycled water system indicates a cross-connection.

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. No flow from any potable water outlet indicates that it may be connected to the recycled water system.
5. The drain on the recycled water system shall be checked for flow during the test and at the end of the period.
6. If no cross-connections are discovered, proceed to the second part of the test.

Cross-Connection Control Test Method 1—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 recycled water irrigation 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 piping. At the conclusion of the test, the temporary connection to the potable water supply shall be disconnected.
3. The 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 fixtures 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. The drain on the potable water system shall be checked for flow during the test and at the end of the period.

7. If no cross-connections are discovered, then the potable water system shall be repressurized.
8. The certified AWWA cross-connection specialist responsible for completing the above test shall provide a completed recycled water cross-connection test report and certification of the test results in a format approved by the Town to the User and the Town PWD.

Procedure if Cross-Connection is Discovered—Cross-Connection Control Test Method 1

The following procedure shall be activated immediately, in the presence of the Cross-Connection Control Specialist and the Town's inspector if cross-connection is discovered.

- Recycled water piping to the facility shall be shut down at the meter, and the recycled water system shall be depressurized and drained where feasible.
- Potable water service shall be shut down at the meter.
- The cross-connection shall be determined and disconnected.
- The systems shall be tested again as described above.
- If cross connected with recycled water, the potable water system shall be chlorinated with 50 ppm chlorine for 24 hours, per methods described in AWWA Standard for Disinfecting Water Mains (ANSI/AWWA 065 1- 92). A bacteriological test shall be performed. If test results are acceptable, the potable water system may be recharged. If not, repeat to step 5.
- The record drawings or retrofit plans must be revised to reflect any changes required to eliminate the cross connection and the revised plans must be resubmitted to Town for review.
- If, during the initial test and prior to connection with the recycled water service, 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 Method 2

The Town will employ the following test protocol for the periodic cross-connection testing conducted at least every four years (quadrennial cross-connection testing) at individual residential dual plumbed irrigation sites. A Cross-Connection Test Report Form should be completed in conjunction with the testing:

Pre-Test Visual Inspection

The pre-test visual inspection should include a check of the following elements:

1. Meter locations of the recycled water and potable water lines have not been changed and verifying that no modifications were made and no cross connections are visible.
2. All pumps and equipment, equipment room signs, and exposed piping in equipment rooms are operating properly.
3. Valve lock seals are still in place and intact. Valve control door signs have not been removed.
4. Recycled water warning signs are present and have not been removed.

The cross-connection test will include pressure testing of the potable and recycled water systems in accordance with the following procedure:

1. Homeowners shall be notified approximately one week in advance that cross-connection inspection and testing will be conducted.
2. Visual inspection shall be conducted immediately before cross-connection testing.
3. Pressure in the customer's potable and non-potable systems (immediately downstream of meters) shall be measured, using cross-calibrated pressure gauges, and recorded.
4. The recycled water supply shall be shut off and locked out, and meter checked for indication of flow. If there is indication of flow, the test shall be postponed until the valve can be made leak-free.
5. The recycled water system shall be depressurized, so that the pressure in the recycled water system is at least 40 psi (forty pounds per square inch) lower than in the potable system and is greater than 0 psig (zero pounds per square inch gauge). The pressure in the recycled water system shall be recorded.
6. The potable system shall remain in service and the recycled water system shall remain locked out for a minimum period of one hour.
7. After the minimum period, or longer, pressure in both systems shall be measured and recorded. If the pressure in the potable system remains in the normal operating range, and if there is no increase in pressure in the recycled water system, it shall be deemed that there is no evidence of cross-connection between the two systems.

Procedure if Cross-Connection is Discovered—Cross-Connection Control Test Method 2

The following procedure shall be activated immediately, in the presence of the Cross-Connection Control Specialist and the Town's inspector if cross-connection is discovered.

In the event that it is not possible to lower the pressure in the recycled water system or the pressure is found to increase during the waiting period, it shall be deemed that a cross-connection may exist. The following procedure shall be activated immediately:

1. Recycled water to the parcel shall remain locked out.
2. Potable water supply to the home shall be shut off and locked out.
3. The home-owner shall be contacted.
4. The cause of the increase in pressure shall be identified and resolved. Possible causes include:
    a. Leakage at the recycled water supply shut-off valve
    b. Cross-connection with the potable water system
    c. Cross-connection with an off-site system (potable or recycled water)
5. If the cause of the pressure increase turns out to have been leakage at the recycled water supply shut-off valve, the valve shall be repaired or replaced, and the cross-connection test shall be performed again according to the quadrennial test protocol described above.

6. If a cross-connection is found, once it has been dismantled, a cross-connection test shall be performed according to the procedure set forth in the California Plumbing Code (current edition), Section 16.
7. Following successful testing, the potable system shall be chlorinated with 50 ppm chlorine for 24 hours, flushed and a standard bacteriological test performed. If the results are acceptable, the potable and recycled water systems may be recharged.

APPENDIX G

Recycled Water Use Site Annual Self-Inspection Report

APPENDIX G. RECYCLED WATER USE SITE ANNUAL SELF-INSPECTION REPORT



SAMPLE

Recycled Water System Shut Down ☐

Monthly Recycled Water Use Site Inspection Report

Recycled Meter Account No._____ Date:_____

Site / Business Name: _____

Property Service Address: _____

Inspected By: _____ Title: _____

Purpose:

The purpose of the visual monitoring is to identify any indicators, such as runoff, ponding, broken sprinkler heads, sprinklers operating when the ground is saturated, that could result in permit noncompliance and to implement any needed corrective measures.

Note: This form must be completed **Monthly** for all recycled water use sites and **Daily** during periods of frost protection!

1. Is there evidence of recycled water overspray or runoff from the site? ☐ Yes ☐ No
   Show affected area on sketch and estimate volume.
2. Is there evidence of ponding of recycled water (that exceeds 24 hrs.), and/ or evidence of mosquitos breeding within the irrigation area due to ponding? ☐ Yes ☐ No
3. Is there evidence of leaks or breaks in the irrigation system piping or tubing? ☐ Yes ☐ No
4. Is there evidence of broken or faulty drip irrigation system emitters or spray irrigation sprinklers? ☐ Yes ☐ No
5. Is there evidence of vandalism or unauthorized modifications of recycled water piping, or piping modifications that may indicate cross connection? ☐ Yes ☐ No

6. Are advisory signs, identification tags, stickers and pipe markings properly posted to inform public that irrigation water is recycled water and is not suitable for drinking?
☐ Yes ☐ No

7. Is there evidence of overflow or leaks from distribution facilities or impounds?
☐ Yes ☐ No

8. Has repairs or improvements been completed for any problems found or identified?
☐ Yes ☐ No

Sketch Area of problems:

SAMPLE

APPENDIX H

Town of Windsor Municipal Code Recycled Water Service

APPENDIX H. TOWN OF WINDSOR MUNICIPAL CODE RECYCLED WATER SERVICE

Town of Windsor Municipal Code: Title XII, Chapter 7 "Recycled Water Service", from Town of Windsor Ordinance No. 2001-150. (For the complete Municipal Code, see the Town of Windsor, CA, official website: www.ci.windsor.ca.us under Municipal Code.)

TITLE XII, CHAPTER 7- RECYCLED WATER SERVICE

ARTICLE 1 – IN GENERAL

12-7-100 Definitions.

As used in this chapter:

Air-gap separation shall mean a physical break between a supply pipe and a receiving vessel which shall be at least double the diameter of the supply pipe, measured vertically above the top rim of the vessel, and in no case less than one inch.

Approved backflow preventer shall mean a device installed to protect the potable water supply from contamination by recycled water. The device must conform to the requirements of State of California, Health and Safety Code, Title 17, and Town of Windsor Design and Construction Standards. Makes and models of acceptable devices must appear on the State list of currently approved devices which is periodically published by the California Department of Health Services.

Connection fee shall mean a charge imposed by the Town for providing recycled water service, including construction and/or installation of off-site and on-site facilities.

Cross-connection shall mean any unprotected connection between any part of a water system used or intended to supply potable water and any service or system containing recycled or other water or substance that is not safe, wholesome and potable for human consumption.

Cross-connection Specialist shall mean an American Water Works Association or University of Southern California certified cross-connection specialist.

Department shall mean the Town's Department of Public Works.

Nonpotable water shall mean water that has not been treated for human consumption in conformance with the drinking water standards referred to in the definition of potable water.

Off-site facilities shall mean facilities under the control of the Town including, but not limited to, recycled water pipelines, reservoirs, pumping stations, manholes, valves, connections, supply interties, treatment facilities, and other appurtenances and property. For recycled water service, off-site facilities shall be those upstream of the point of connection with the user's on-site facilities located and starting at the downstream end of the meter tailpiece.

On-site facilities shall mean facilities under the control of an applicant, owner or user. For recycled water service, the on-site facilities shall be those downstream of the recycled service connection, which shall normally be the downstream end of the meter tailpiece.

Potable water means that water that does not contain objectionable pollution, contamination, minerals or infective agents and is considered satisfactory for domestic consumption, and conforms to the latest edition of the United States Public Health Service Drinking Water Standards, the California Safe Drinking Water Act, and any other applicable standards.

Recycled water shall mean disinfected tertiary recycled water as defined in Chapter 3 of Division 4 of Title 22 of the California Code of Regulations as may be amended from time to time.

Recycled water facilities shall mean facilities used in and by the Town for the storage, pumping and conveyance of recycled water. Recycled water facilities are intended to provide recycled water for uses such as landscape irrigation, agricultural irrigation, and construction or industrial process water, as set forth in the Recycling Criteria.

Recycled water service connection shall mean the point of connection of the user's recycled water line with the recycled water service line of the town, which shall normally be the downstream end of the recycled water meter connection.

Recycled water service line shall mean the Town's facility between its recycled water distribution system and the recycled water service connection.

Recycled water mains shall mean recycled water lines and appurtenances purchased or constructed and owned by the Town or which the Town requires an applicant, owner or user to construct but which are owned by the Town. The Town shall determine what facilities are recycled water mains from time to time. The Town's determination in regard to these matters shall be final and conclusive.

Recycled water service area shall mean the property, or portion of property, on which recycled water is available from the Town and is required for irrigation in lieu of potable water.

Recycling Criteria shall mean the regulations promulgated pursuant to Water Code Section 13521, and set forth in Chapter 3 of Division 4 of Title 22 of the California Code of Regulations Sections 60301 et seq., as may be amended from time to time.

User shall mean any user of recycled water provided by the Town.

User's recycled water supervisor shall mean a qualified person, designated by a non-residential recycled water user and approved by the Town, who shall be knowledgeable in the construction and operation of on-site facilities and irrigation systems, and in the application of the applicable guidelines, criteria, standards, rules and regulations for use of recycled water. (Ord. No. 2001-150 §1)

12-7-105 Policy

a. Recycled water shall be used for residential and non-residential irrigation within the Town's recycled water service area, whenever feasible and consistent with legal requirements, preservation of public health, safety and welfare, and the environment. This requirement is subject to any limitations set forth in this Chapter or otherwise established by local, state or federal law. Use of potable' water for irrigation when recycled water use is technically and economically feasible, is an unreasonable use of water as stated in California Water Code section 13550.

b. Where the use of recycled water is feasible, appropriate and acceptable to all applicable regulatory agencies for the purposes of landscape irrigation, or other uses permitted by the controlling regulatory agencies, it is the policy of the Town to require the applicant, owner or, user to use recycled water in lieu of potable water. The Town Manager or his/her designee shall determine in his or her discretion whether it is feasible or desirable to furnish an applicant, owner or user with potable water for non-residential irrigation either on a permanent basis or on an interim basis. Determinations on the specific uses to be allowed shall be in accordance with the requirements of all applicable regulatory agencies. Each such usage of recycled water shall, in addition, be subject to the availability of recycled water as well as recycled water facilities and the feasibility of making such facilities available now or in the foreseeable future.

c. The use of recycled water shall be limited to those uses permitted by federal and state law, and to those uses approved by the Town Manager or his/her designee for the recycled water service area. All uses of recycled water shall conform to the requirements of the Town's NPDES Waste Discharge Permit, and all other applicable regulatory requirements, including but not limited to the Recycling Criteria.

d. In development projects within the Town's potential recycled water service area, the Town may require that irrigation systems be designed and installed at the property owner's expense and in accordance with the requirements of this Chapter, so that the conversion to recycled water use may be initiated when recycled water service becomes available. At the discretion of the Town Manager or his/her designee, the irrigation system may be connected to a separate potable water irrigation service with an approved backflow detector in the interim until the recycled water service is available.

e. The Town Manager or his/her designee shall establish and may vary conditions of pressure and delivery of recycled water. (Ord. No. 2001-150 § 1)

12-7-110 Rules and Regulations.

In addition to the Rules and Regulations set forth in this Code, as may be amended from time to time, the Town Council may by resolution establish and change rules and regulations relating to fees and charges, personnel matters and any other matter not regulated herein. (Ord. No. 2001-150 § 1)

12-7-115 Words and Phrases.

Words and phrases herein shall have the meanings ascribed above, or normally ascribed to them unless the context indicates otherwise. (Ord. No. 2001-150 § 1)

2. APPLICATION AND PERMITS

12-7-200 Application for Permit to Use Recycled Water.

a. The owner of each separate property located in a recycled water service area, or a duly authorized agent, required to or desiring to be provided with recycled water service shall make written application for a Permit to Use Recycled Water on a permit form provided by the Town. However, any Reclaimed Water User Agreement with the Town which is in effect at the time this Chapter is adopted shall remain in effect and the parties to such an agreement shall be exempt from this requirement to the extent that such agreement is

consistent with applicable regulatory requirements including, but not limited to, the Recycling Criteria.

b. The application shall include the following information:

- Site address and assessor's parcel number.
- 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.
- Description of the user's plan for on-site storage and pumping of reclaimed water.
- Total irrigated area, expressed in appropriate units (square feet, acres).
- Estimated monthly and annual flow in gallons and instantaneous peak flow in gallons per minute at point of connection, gallon per minute.
- Designation of user's recycled water supervisor, including address and twenty-four (24) hour 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 on-site water use, drinking water, food handling or public health issues.

c. The application shall be accompanied by a site plan of the property which shall include and/or show the following:

- All buildings on-site.
- Size and location of service connection.
- Location of meters and backflow devices relative to buildings, property lines and intersections.
- Location of outdoor drinking fountains, hose bibs, quick couplers and other points of ready access to recycled and potable water systems.
- Location of outdoor eating areas.
- Location of irrigation controllers.
- Location of ponds, storage tanks and/or other impoundments, and descriptions of their current and intended uses.
- Areas to be served with recycled water and areas to be excluded.
- Existing plumbing or irrigation systems to be retrofitted.
- A brief description of all special construction requirements, if applicable.
- Areas of public access.
- Degree of potential access by employees or the public.
- Surrounding land uses.
- Construction details and locations of wells in or near the use area, and a description of their use (i.e. domestic drinking water or irrigation).
- Designation of setback areas in accordance with use restriction guidelines.
- Natural and manmade drainage features including creeks, swales, culverts, drainage channels, structures, gates, containment facilities and other appurtenances. The site plan should also indicate routes and direction of drainage.
- Native oak trees.
- Known vernal pools and wetlands.

d. The application shall be signed by a principal owner or duly authorized representative of the owner stating, under penalty of perjury, that the information contained therein is true and correct.

e. The Town Manager or his/her designee may reject any application where the Town Manager or his/her designee determines that the applicant has failed to obtain any necessary prior approval of recycled water service from applicable federal, state or local office or agency. (Ord. No. 2001-150 §1)

12-7-205 Permit Approval and Fees.

After completion of the permit application and payment of the current application fees, the Department shall review said application. The Department may approve, conditionally approve or deny the application for a permit to use recycled water. After approval or conditional approval of the application, the Department shall inform the applicant of the required service connection fees, permit and meter charge as per current schedule of fees and charges, and the scope, including the estimated cost, of required on-site or off-site improvements, if any. In addition, the Department shall inform the applicant of any conditions of approval, including, but not limited to, the conditions set forth at Section 12-7-215. Except where a written agreement with the Town provides otherwise, upon payment of all fees, charges and improvement costs, receipt of a duty executed water main extension agreement and/or receipt of bonds or other security to cover the installation of improvements, the permit to use recycled water shall be issued and shall be valid until expired or revoked by the Town. The application may be renewed after revocation and/or expiration by re-application and payment of a new permit fee. (Ord. No. 2001-150 § 1)

12-7-215 Permit Conditions.

The following conditions shall apply to all permits to use recycled water issued by the Town:

a. Any approval or conditional approval of an application for recycled water service shall, unless otherwise specified, be deemed to be approval or conditional approval of recycled water service only for the recycled water use area; for the location, size and type of all recycled water service connections and on-site facilities; and for the proposed use of recycled water described in the application.

b. The use of recycled water service shall comply with all requirements of applicable federal, state and local statutes, ordinances, regulations including the Recycling Criteria, and other requirements including the payment of all fees required by the regulatory agencies.

c. The Department shall have control of and shall maintain and repair recycled water transmission mains, service lines and meters. The user shall maintain in good working condition and shall repair the recycled water service connection and on-site facilities.

d. The user shall not make any changes in or additions to the recycled water system or to on-site facilities without obtaining prior approval from the Town Manager or his/her designee pursuant to Section 12-7-315.

e. Neither a recycled water service connection nor a recycled water meter shall be used to provide recycled water service to any property or any portion of property which is not approved by the Town Manager or his/her designee for that service or meter.

f. When property provided with a recycled water service connection and recycled water meter is subdivided, such connection and meter shall thereafter serve only the lot or parcel of land on which the meter is located. Additional recycled water mains, service lines connections and/or meters will be required for additional new lots or parcels created by subdivision, in accordance with this chapter, Town Manager or his/her designee.

g. Each user shall restrict the use of recycled water to those uses set forth in the application for recycled water services which is approved or conditionally approved by the Town Manager or his/her designee.

h. The Town shall not be responsible or liable for any suspension in service of, or failure to supply, recycled water, or for any damage or injury to person or property relating to the provision of recycled water.

i. A user shall report any changed circumstances (permanent or temporary) on the property receiving recycled water service that significantly changes the volume or methods of recycled water use. A user shall report any change in the ownership of the property. Changes in use of recycled water are subject to approval by the Town Manager or his/her designee. (Ord. No. 2001-150 § 1)

12-7-220 Construction of Recycled Water Facilities.

Prior to commencement, construction of recycled water facilities must be authorized by either a valid permit, construction acquisition agreement, or recycled water main extension agreement, including plans approved by the Town Manager or his/her designee. (Ord. No. 2001-150 § 1)

12-7-225 Inspection.

a. Pursuant to the Recycling Criteria, prior to the initial operation of a dual-plumbed recycled water system and annually thereafter, the Town shall ensure that the dual-plumbed system within each facility and use area is inspected for possible cross-connections with the potable water system.

b. All connections from the Town's recycled water mains to the recycled water meter location must be inspected and approved by a Town of Windsor Inspector prior to covering or backfilling. All on-site facilities and recycled water mains located on a user's real property must be inspected and approved by a Town of Windsor Inspector prior to covering or backfilling. In both cases the Town Inspector must certify and record confirmation of compliance with this provision and all applicable regulatory requirements pertaining to recycled water plumbing, and file the certification record in the development project and/or property file maintained by the Town. The property owner or his/her agent must notify the Town of Windsor Inspector no less than five (5) working days prior to start of work to schedule the inspection. (Ord. No. 2001-150 § 1)

ARTICLE 3. - GENERAL REGULATIONS

12-7-300 Prohibited Uses.

Any use of recycled water which is not in compliance with the Recycling Criteria is prohibited. Any use of recycled water which is detrimental to public health is prohibited. Any use of recycled water that adversely affects downstream water rights is prohibited. Any use of recycled water which degrades water quality, or which is injurious to plant life, fish and wildlife is prohibited. Any use of

recycled water which results in a violation of any regional, state or federal health or water quality regulation is prohibited. (Ord. No. 2001-150 § 1)

12-7-305 Impermissible Recycled Water Connections.

No person shall make any connection to recycled water facilities of the Town unless Town Manager or his/her designee has approved recycled water service for that person and for the recycled water service area in accordance with this chapter. (Ord. No. 2001-150 § 1)

12-7-310 Installation of Markings.

Recycled water piping and fixtures shall be constructed of purple PVC specifically manufactured for recycled water use, or shall be painted, banded and/or marked to indicate use for recycled water. Main shutoff valves for recycled water shall be clearly identified as such. The Town Manager or his/her designee shall approve all painting, banding or marking prior to installation. (Ord. No. 2001-150 § 1)

12-7-315 Design and Construction of On-Site Facilities.

a. Unless otherwise provided by written agreement between the user and Town, the property owner shall provide and install at the owner's expense any on-site recycled water facilities required to provide recycled water service. All on-site recycled water facilities shall be designed, constructed, operated and maintained in conformance with all applicable local, state and federal laws, including, but not limited to, the Recycling Criteria, the Town of Windsor Design and Construct Standards, and the Uniform Plumbing Code, Appendix J, as may be amended from time to time. The property owner shall make at the owner's expense any modification to the potable water system on the subject property which is required by the Town Manager or his/her designee in order to permit recycled water service including but not limited to the installation of approved backflow preventers.

b. The property owner or authorized agent shall submit plans, specifications and record drawings for on-site recycled water facilities for approval by Town Manager or his/her designee. Such plans, specifications and record drawings must be approved by the Town Manager or his/her designee prior to commencement of construction of on-site recycled water facilities.

c. Proposed new construction may require design and installation of on-site recycled water facilities as a condition of approval where the Town Manager or his/her designee has determined that recycled water will be supplied in the future even if recycled water service is not immediately available at the time of construction.

d. All on-site facilities for recycled water must be serviced by a water meter designated exclusively for recycled water, and must be equipped with any and all other specific appurtenances for recycled water services required by the Town Manager or his/her designee.

e. Prior to making any modifications or additions to plumbing on property to which recycled water is delivered, the property owner or authorized agent must obtain a permit from the Town Building Department. Upon completion the modifications or additions must be inspected and approved in accordance with Section 12-7-225 of this Code, to ensure compliance with permit conditions and applicable local, state and federal regulations. (Ord. No. 2001-150 § 1)

12-7-320 Design and Construction of Off-Site Facilities.

a. When off-site recycled water facilities constructed by the Town are installed to serve more than one property, each property owner shall reimburse the Town for the pro rata cost of installation of off-site recycled water facilities in accordance with a fee schedule or charges determined by the Town Manager or his/her designee based upon costs of design, equipment, overhead, construction and inspection.

b. The Town shall operate and maintain the off-site recycled water facilities, including recycled water pipelines, reservoirs, manholes, valves, connections, supply interties, and other appurtenances and property up to and including the meter. No other persons, except authorized employees or agents of the Town or regulatory agencies with jurisdiction over the Town's off-site facilities, shall enter upon, inspect, operate, adjust, change, alter, move or relocate any portion of the off-site recycled water facilities. All off-site recycled water facilities shall be constructed, operated and maintained in conformance with all applicable local, state and federal laws and regulations including, but not limited to, the Recycling Criteria. (Ord. No. 2001-150 § 1)

12-7-325 User's Recycled Water Supervisor.

Any non-residential recycled water service user shall designate a "recycled water supervisor" and shall keep the Town Manager or his/her designee informed of his or her identity. Such recycled water supervisor shall be responsible for overseeing recycled water service, maintaining on-site facilities, and preventing cross-connections on the premises receiving recycled water service. Such recycled water supervisor shall promptly advise the Town Manager or his/her designee of any cross-connection, runoff, leakage, or other related problem on the serviced property. (Ord. No. 2001-150 § 1)

12-7-330 Conversion of Existing Facilities.

Where a property owner proposes or the Town requires the conversion of any existing potable water system to a recycled water system, a comprehensive investigation shall be performed by Town or its designated agent at the expense of the property owner. No potable water facilities shall be connected to or incorporated in the recycled water system where such facilities have not been approved for recycled water service by the Director of Public Works and by any controlling regulatory agencies. (Ord. No. 2001-150 § 1)

12-7-335 Connections to Potable Water System.

If, due to an emergency, recycled water is not available or there is a reduction in available recycled water, the Town Manager or his/her designee may approve a temporary connection for a user to the potable water system. Before such temporary connection is made, the portion of the system that does not have recycled water available shall be isolated by an air-gap separation from the

remainder of the recycled water system, either at individual service connections or on off-site facilities, as determined by the Town Manager or his/her designee, and an approved backflow preventer shall be installed on the potable water line or lines in accordance with any and all applicable state and local statutes, ordinances and regulations. The emergency connection or connections shall be removed before connection is reestablished to the remainder of the recycled water system. The costs of such an emergency connection shall be paid by the user. (Ord. No. 2001-150 § 1)

12-7-340 Installation of Backflow Preventers.

Approved backflow preventers shall be installed by the user at the user's expense and in accordance with Title 17 of the California Code of Regulations, section 7601 et seq. as may be amended from time to time, and any other applicable regulations or requirements of regulatory agencies including the California Department of Health Services. A record of the initial test and certification of the backflow preventer must be submitted to the Town by the user as a condition of the Town's acceptance of the device. After acceptance the Town will own the device and will be responsible for its ongoing annual testing, inspection and certification, as well as all other routine maintenance and repair. The administration of the ongoing maintenance and repair of the device shall be provided by the Town and funded through the monthly backflow maintenance charge imposed by the Town to the user in accordance with Town of Windsor Code Chapter 12, Article 4, unless provided by written agreement with the Town. (Ord. No. 2001-150 § 1)

12-7-345 Additional Restrictions.

a. Any irrigation runoff shall be confined to the recycled water use area designated in the Permit to Use Recycled Water, and shall not result in excessive ponding.

b. Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities.

c. No user or other party shall install or create cross-connections between a potable water system and recycled water system, other than as permitted by this chapter.

d. Drinking water fountains shall be protected against contact with recycled water spray, mist, or runoff.

e. All areas where recycled water is used that are accessible to the public shall be posted with signs that are visible to the public, in a size not less than 4 inches by 8 inches wide, that include the following wording: "RECYCLED WATER--DO NOT DRINK", in English and in Spanish." Each sign shall display the international symbol indicating that "Do Not Drink," as required by the Recycling Criteria.

f. No user or other party shall use or install hose bibs on any on-site recycled water facilities, regardless of the hose bib construction or identification.

g. No user or other party shall use or install fire hydrants as part of on-site facilities for use of recycled water.

h. Irrigation with recycled water within three (3) feet of the drip line of a native oak tree is prohibited.

i. Vernal pools shall not be irrigated by or subject to runoff from use of recycled water.

j. Irrigation with recycled water is prohibited within thirty (30) feet of any creek.

k. No person shall unlawfully connect or procure another to connect with any recycled water transmission main owned or operated by the Town without the knowledge and written consent of the Town Manager or his/her designee.

l. No person shall injure or alter or procure to be injured or altered any water meter designated for recycled water, or obstruct the working of the same with the intent to evade payment of charges for recycled water, nor shall any person maliciously tamper with or injure any such water meter. (Ord. No. 2001-150 § 1; Ord. No. 2003-166 § 2)

ARTICLE 4. - RECYCLED WATER SERVICE

12-7-400 Recycled Water Service Connection.

Before a recycled water service connection shall be supplied to or installed on the premises, the user shall pay to the Town a connection fee necessary to cover all costs of the recycled water service connection including, unless the Town agrees to other arrangements in writing. The Town Manager or his/her designee may, in his or her discretion, authorize a user to install recycled water service connections and meters, subject to, prior approval of all plans, equipment, and material, and to ongoing inspection and approval of installation by the Town Manager or his/her designee. (Ord. No. 2001-150 § 1)

12-7-405 Extension of Off-Site Facilities.

Before a recycled water service connection shall be supplied, the property owner shall pay to the Town the applicable fees and charges necessary to cover all costs incurred by the Town in extending existing off-site facilities, including but not limited to the recycled water service line, in order to provide recycled water service to the property unless the Town agrees to other arrangements in writing. Construction of recycled water transmission mains and water service extensions shall be subject to the provisions of this Chapter. All recycled water service provided prior to the installation of final street improvements shall be considered to be temporary, and the costs for all repairs or changes required to be made to the recycled water service line upon installation of final Street improvements shall be paid by the property owner. (Ord. No. 2001-150 § 1)

12-7-410 Reduction or Suspension of Service.

The Town Manager or his/her designee shall establish and may vary conditions of pressure and service. In addition, if necessary due to the unavailability of recycled water, the Town may, at the discretion of the Town Manager or his/her designee, reduce or suspend delivery of recycled water. (Ord. No. 2001-150 § 1)

ARTICLE 5. - RATES AND BILLING

12-7-500 Price of Recycled Water.

The price for recycled water sold, supplied, distributed or transported to Users shall be at a rate or charge equal to seventy-five percent (75%) of the rate or charge which the Town Council may establish from time to time as established by resolution. Such charge or rate shall be based upon relevant factors including the present and projected costs of supplying and delivering recycled water. (Ord. No. 2001-150 § 1) In July 2012, the Directors adopted a new rate structure which is contained in Resolution No. 2939-12.

(For recycled water service rates refer to Town Public Works Department and Town Council's current resolution adopting charges and rates for recycled water service.)

12-7-505 Fees and Charges.

All fees, charges, deposits or penalties provided for in this chapter, including recycled water charges, shall be established by resolution of the Town Council. (Ord No. 2001-150 § 1)

12-7-510 Billing Frequency and Computation.

The Town shall render bills for water services which shall include a charge for recycled water consumed during the billing period as specified in the bill and any charges unpaid at the time of the bill. (Ord. No. 2001-150 § 1)

12-7-515 Payment; Delinquent Notice.

Bills for recycled water service shall be due and payable fifteen (15) days after service at the Town office and if not paid fifteen (15) days thereafter, a notice may be sent to the user setting forth the amount due and the date on which service will be disconnected. (Ord. No. 2001-150 § 1)

12-7-520 Combined Billing.

The Town may bill water, sewer, recycled water and other charges on the same billing, together with any other charges for services rendered by the Town. All such charges shall be clearly and separately shown on the bill. (Ord. No. 2001-150 § 1)

12-7-525 Disconnection of Service for Nonpayment.

A user's recycled water service may be disconnected for the nonpayment of a bill for water service rendered if the bill is not paid by the fifteenth (15th) day after mailed notice of the amount due as provided in Section 12-7-605. (Ord. No. 2001-150 § 1)

12-7-530 Returned Check.

If payment for services rendered by the Town is made by a customer by check, which is later returned by Town's bank for any reason, a check return charge shall be made in accordance with State law. A returned check shall be considered nonpayment of bill, and shall subject the service to disconnection pursuant Section 12-7-600. (Ord. No. 2001-150 § 1)

12-7-535 Disputed Bills.

Requests for investigation of disputed bills shall be filed in writing with the Town for consideration by the Town Manager. A disputed account will not be accepted as justification for nonpayment of a bill, and a service will be subject to discontinuance unless payment in full is made pending a settlement of the dispute. (Ord. No. 2001-150 § 1)

12-7-540 Estimated Bills.

If a meter fails to register correctly or is obstructed and cannot be read, the bill will be based on an estimate of the amount of recycled water used, based on usage during the prior months. Due consideration will be given in such estimate to the. normal seasonal demand of such service and to any other factors that may assist in arriving at a charge for the recycled water service.

(Ord. No. 2001-150 § 1)

12-7-545 Multiple Meters.

Separate bills will be rendered for each meter except where the Town has for its own convenience installed two (2) or more meters in place of one (1) meter. Where such installations are made, the meter readings may be combined for billing purposes. (Ord. No. 2001-150 § 1)

ARTICLE 6. - DISCONNECTION AND TERMINATION

12-7-600 Disconnection and Termination.

Recycled water service may be suspended or terminated at any time by the Town Manager or his/her designee due to any one or more of the following:

a. Failure by a user to adhere to the provisions of this chapter;
b. For the protection of the public health, safety and welfare;
c. In order to protect recycled water facilities or make repairs;
d. Inability of the Town to obtain recycled water or otherwise provide recycled water service;
e. For failure of the user to pay for recycled water; or
f. For uncorrected violations of applicable recycled water regulations and use restrictions. (Ord. No. 2001-150 § 1)

12-7-605 Notice.

Where the Town determines that service should be terminated or disconnected, the written notice to the user shall be made at least fifteen (15) days prior to the date of proposed termination of service, setting forth the provisions of this chapter to which the user has failed to adhere, which require the termination or disconnection, and the factual basis for this determination. However, in cases of threat to the public health, safety or welfare, the Town Manager or his/her designee shall immediately disconnect the recycled water service and shall follow such disconnection with a written notice to such user as to the reasons for such disconnection and the requirements that must be met to reconnect the recycled water service. The aggrieved party may appeal the determination of the Town Manager or his/her designee. The decision of the Town Manager or his/her designee to suspend or terminate recycled water service shall be final. (Ord. No. 2001-150 § 1)

12-7-610 Delinquent and/or Reconnection Charge.

If recycled water service to any user is suspended or terminated because of failure by a User to adhere to the provisions of this chapter, including but not limited to, the failure by a user to pay for recycled water in accordance with this chapter, the User shall pay to the department in advance of resumption of recycled water service a delinquent and/or reconnection charge which shall be equal to that delinquent and/or reconnection charge for potable water established from time to time by resolution of the Town Council, in addition to any payment for recycled water service then due. (Ord. No. 2001-150 § 1)

APPENDIX I

Recycled Water Regulations and Guidance Documents

APPENDIX I. RECYCLED WATER REGULATIONS AND GUIDANCE DOCUMENTS

1. Town of Windsor Municipal Code —Various Town of Windsor ordinances and codes may apply to the installation and use of recycled water and for the protection of municipal water supplies, including specifically Municipal Code, Title XII, Chapter 7 "Recycled Water Service". The Town 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.
2. California Code of Regulations (CCR), Title 22, Division 4, Chapter 3, "Water Recycling Criteria"—These regulations are written by the DDW and specify the approved uses and use area requirements, such as hose bib restrictions, prohibition of irrigation near wells, etc. The regulations govern both distribution systems as well as the User's on-site system.
3. California Code of Regulations (CCR), Title 17, "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 recycled water Site Supervisor and cross-connection testing requirements.
4. California Code of Regulations (CCR), Title 24, Part 5 "California Plumbing Code"— the California Plumbing Code sets forth requirements when recycled water is used within buildings in a "Dual-plumbed" system, which uses recycled water for plumbing fixtures, such as toilets and urinals and potable water for other fixtures. This section of the Title 24 does not apply to irrigation sites where the recycled water system is located outside buildings or industrial sites where the recycled water is used for nondomestic industrial purposes.
5. Regional Water Quality Control Board—The North Coast Regional Water Quality Control Board (RWQCB) is the agency responsible for preserving the quality of California's water resources. The RWQCB is responsible for issuing National Pollutant Discharge Elimination System (NPDES) permits, for wastewater treatment and water reclamation.
6. Water Resources Control Board—The California Water Resources Control Board is the agency responsible for issuing permits under the state-wide General Order for Water Reclamation Requirements for Recycled Water Use. The NCRWQCB coordinates permit requirements through the Town's project-specific Monitoring and Reporting Program.
7. The California State Water Resources Control Board (SWRCB), Division of Drinking Water (DDW) is the agency responsible for protecting and promoting the safety of California's drinking water. DDW is responsible for developing recycled water use criteria and regulations, evaluating and approving recycled water systems, and for making public health recommendations to the RWQCB regarding recycled water use.
8. American Water Works Association (AWWA), California-Nevada Section, Guidelines for Distribution of Nonpotable Water, and Guidelines for the On-Site Retrofit of Facilities Using Disinfected Tertiary Recycled Water —These documents provide recommended guidelines for planning, designing, constructing and operating non-potable water systems, including recycled water systems. The guidelines themselves are not regulations but many agencies have adopted them as general requirements.
9. State Water Resources Control Board General Order WQ 2016-0068-DDW for Water Reclamation Requirements for Recycled Water Use - This general order establishes conditions for the permitting and use of recycled water for non-potable uses as described in this Recycled Water User's Guide.

APPENDIX J

Best Management Practices for Recycled Water Use

APPENDIX J. BEST MANAGEMENT PRACTICES FOR RECYCLED WATER USE

Introduction

Use of recycled water requires Best Management Practices (BMPs) specific for each application. The BMPs listed below provide guidance to some recycled water users. Other BMPs may be required depending on season, site conditions, and water use. All recycled water users must comply with applicable conditions included in their recycled water use permit. Users must adhere to rules and regulations in the Town's Municipal Code, provisions of the Town's North Coast Regional Water Quality Board issued NPDES Permit and State Water Resources Control Board recycled water use general permit, as well as site-specific or user group regulations.

These laws and regulations take precedence over information provided in this User's Guide and in the following list of BMP, where differences are noted. Since codes, laws, statutes and regulations can change, the Town does not assume any liability for errors or omissions in this Recycled Water User's Guide document. Within the Town's service area, various individual facilities may have site-specific requirements which differ from those discussed in this Guide, and which are usually set forth in the User's Recycled Water Use Permit or User Agreement. As regulations evolve BMP requirements for various user types may be amended or new requirements added. Refer to the Town's website: Recycled Water | Windsor, CA - Official Website (townofwindsor.com)for the most current BMP list for each user type.

Best Management Practices presented in this Appendix include:

1. Recycled Water Fill Station
2. Frost Protection
3. Industrial Facilities
4. Truck Haulers and Construction Site Use, including mixing pesticides
5. Street Sweeping
6. Sanitary Sewer Cleaning

TOWN OF WINDSOR
RECYCLED WATER FILL STATION PROGRAM
BEST MANAGEMENT PRACTICES

- Hand-watering methods may be used to distribute recycled water (hose, buckets, watering cans).
- Or, if recycled water is stored in a tank or other container, the tank must only be connected to dedicated above ground hoses or drip systems to eliminate the potential for potable water contamination.
- Tanks/containers must not be connected to any existing or future potable water piped irrigation systems, under any circumstance.
- Watering is not allowed before, during, or immediately following rain events.
- Watering is not allowed when soil is already saturated. Ponding is not permitted.
- Recycled water is not permitted to leave your property as runoff or overspray.
- Prevent recycled water from entering street gutters, storm drains or nearby creeks.
- Avoid or minimize use of fertilizers, as recycled water has a higher nitrogen content than potable water.
- Use stored recycled water within a week to avoid odors, bacteria and/or algae growth.
- Should a spill or improper use of recycled water be identified, immediate notification must be made to the Town at 707-217-8638.

TOWN OF WINDSOR
FROST PROTECTION PROGRAM
BEST MANAGEMENT PRACTICES

To ensure the proper use of recycled water for frost protection, agricultural users must adhere to the following BMPs and regulatory requirements.

- Conduct pre-season inspections and infrastructure testing to ensure proper operation and verify runoff capture systems are in place.
- Do not use domestic water as a backup supply for frost protection.
- Plant cover crop to prevent runoff, protect against erosion, and provide additional nitrogen removal.
- Check irrigation systems during spray events to minimize ponding and runoff.
- The application of recycled water for frost protection must not exceed the applicable nutrient agronomic rates of the vineyard and the cover crop.
- Protect potable water wells or connections from spray and runoff by covering, eliminating cross connections, and diverting flows from these areas.
- Any personnel who contact recycled water should wash their hands and shower as soon as possible.
- If not already in place, post signs indicating that recycled water is being used for irrigation and label any storage areas. Signs must meet requirements of Title 22 section 60310(g).
- Recycled water valves, outlets, quick couplers, and sprinklers shall be of a type, or secured in a manner that permits operation only by the User's authorized personnel.
- Restrict access to irrigated areas when recycled water is being used.
- Do not use recycled water for frost control within a minimum of 50 feet of any domestic (drinking water) well. Protect domestic wells from recycled water.
- Do not use recycled water within 25 feet of State waters containing standing or flowing water, or in a manner that could result in uncontrolled runoff into State waters.
- Do not store recycled water without Town approval.
- Prevent recycled water from entering street gutters, storm drains, or nearby creeks.
- Irrigation equipment should be inspected and tested prior the irrigation season and inspected frequently throughout the year during use to ensure that the equipment is functioning properly. Any maintenance needs should be promptly addressed to avoid ponding, runoff, etc.
- The Site Supervisor must attend the initial and annual refresher training required of all recycled water Users.

TOWN OF WINDSOR
INDUSTRIAL FACILITIES PROGRAM
BEST MANAGEMENT PRACTICES

The industrial facilities permitted to use recycled water will adhere to the following BMPs and regulatory requirements to prevent impacts to groundwater or surface waters.

- Recycled water must not be allowed to escape the recycled use area(s) in the form of surface runoff.
- Additional BMPs are required to prevent stormwater pollution: the facility must be graded to ensure runoff, recycled water must be contained or collected in sumps, and drainage channels must be inspected regularly to ensure they are free of debris and erosion.
- Exposed pipes, pumps, and valves must be marked with purple tape and tags to indicate recycled water use and secured to ensure operation only by the user.
- Recycled water infrastructure (pipelines, pumps, etc.) must be maintained to prevent and minimize breakage and leaks.
- Use areas that are sprayed to control dust must be sprayed during dry weather and for short durations.
- Direct or windblown spray, mist, or runoff from application areas must not enter dwellings, designated outdoor eating areas, or food handling facilities, roadways, or any other area where the public would be accidentally exposed to recycled water.
- Drinking water fountains (and other potable water sources) must be protected against contact with recycled water spray, mist, or runoff.
- Areas where recycled water is used must be restricted and/or clearly marked with appropriate signage, meeting the requirements of Title 22, section 60310(a).
- Hand washing stations and/or sanitizer must be made available to workers and all workers must be notified that recycled water is being used on site for cleaning, dust control, etc.
- Recycled water must not be stored onsite without Town approval.
- The Site Supervisor must attend the initial and annual refresher training required of all recycled water Users.

TOWN OF WINDSOR
TRUCK HAULERS AND CONSTRUCTION SITES PROGRAM
BEST MANAGEMENT PRACTICES

The following BMPs and regulatory requirements must be followed for truck haulers and construction uses of recycled water.

- Recycled water must not be applied in areas where the public would be inadvertently exposed to recycled water.
- Recycled water must not be sprayed onto drinking water fountains or faucets used for potable water.
- Recycled water must not be applied where it could contact or enter buildings, areas where food is handled or eaten, or storm drains.
- Recycled water users must take adequate measures to prevent overspray, ponding, or run off of recycled water from the authorized recycled water use area and at the filling station.
- Recycled water must not be applied on water-saturated or frozen ground or during periods of precipitation such that runoff is induced.
- Recycled water must not be applied on slopes if runoff cannot be controlled.
- Recycled water must not be applied within 50 feet of any domestic (drinking water) well.
- Recycled water must not be allowed to escape from the designated use area(s) as surface flow that would either pond and/or enter waters of the State.
- Recycled water must not be applied into State waters, within 25 feet of State waters containing standing or flowing water, nor in a manner that could result in uncontrolled runoff into State water.
- All potential cross-connections must be addressed by installing an air gap.
- Trucks potentially connecting to the water supply must have an air gap.
- Initial and annual refresher training must be implemented for construction workers using recycled water.

If a pesticide (herbicide, pesticide, fungicide) requires dilution prior to application, recycled water may be used for dilution. The application of pesticide within the construction area will be in accordance with the Town's Integrated Pest Management (IPM) Policy. Consistent with the IPM policy, organic and least toxic methods will be utilized first. The following BMPs are additional strategies to prevent spills and contaminated runoff.

- Do not mix or prepare more solution for application than needed.
- Do not prepare solution near storm drains or nearby creeks.
- Apply pesticide only when wind speeds are low (less than 5 miles per hour).
- Avoid excessive application.
- Pesticide application is not allowed before, during, or immediately following rain events.
- Pesticide application is not allowed when soil is already very wet (saturated).
- Prevent recycled water ponding (make sure recycled water "soaks in" to soil).
- Make sure pesticide solution does not leave the area as runoff or overspray.

TOWN OF WINDSOR
STREET SWEEPING PROGRAM
BEST MANAGEMENT PRACTICES

To mitigate any adverse health effects and water quality issues from street sweeping, operators will comply with the following BMPs. The BMPs will be described during staff training events.

- Any person working with recycled water must wash their hands with soap and potable water or use hand sanitizer after contact with recycled water.
- Personnel operating sweeping vehicles must notify workers and/or the public by having signage on the trucks.
- Vehicles used to transport recycled water must be watertight to prevent any leaks.
- Street sweeping vehicles must be equipped with an air gap for backflow protection.
- Recycled water must not be used for street sweeping during, or immediately before or after a rain storm.
- Recycled water must not be applied where spray, mist, or runoff comes into contact with external drinking fountains, pedestrians or designed eating areas.
- Recycled water must not enter storm drains.

TOWN OF WINDSOR
SANITARY SEWER CLEANING PROGRAM
BEST MANAGEMENT PRACTICES

The following BMPs are specific to sanitary sewer cleaning with recycled water. The BMPs will be explained during staff training events.

- Any person working with recycled water must wash their hands with soap and potable water or use hand sanitizer after contact with recycled water.
- Trucks must be equipped with signage stating that recycled water is used.
- Recycled water must not be applied where spray, mist, or runoff comes into contact with external drinking fountains or designed eating areas.
- If necessary, storm drains and creeks must be protected from spilled recycled water by covering and blocking drain inlets.
- The Town's Contingency Plan for Accidental Discharges must be followed if there is a suspected spill into the storm drains.
- Equipment must be cleaned over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage. Waste materials must be properly disposed.