CITY OF SAN CLEMENTE
RULES AND REGULATIONS
FOR
RECYCLED WATER

CITY OF SAN CLEMENTE
PUBLIC WORKS / ENGINEERING
910 CALLE NEGOCIO, SUITE 100
SAN CLEMENTE, CA 92673

Approved: Tom Bonigas Acting For: 4/5/2016

William E. Cameron, Public Works Director/City Engineer — Date

CITY OF SAN CLEMENTE
RULES AND REGULATIONS FOR
RECYCLED WATER USERS
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SECTION 1: GENERAL PROVISIONS

1.1 SPECIFIC AUTHORITY

The various regulations for recycled water use are promulgated by the City of San Clemente. These rules and regulations for recycled water use are required by the San Diego Regional Water Quality Control Board.

1.2 SEVERABILITY

If any section, subsection, clause or phrase of these City of San Clemente Rules and Regulations for Recycled Water (Regulations) is for any reason held to be invalid or unconstitutional, such decision shall not affect the remaining portions of these Regulations. The City Council hereby declares that it would have approved said Regulations by section, subsection, sentence, clause or phrase thereof irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases be declared invalid or unconstitutional.

1.3 ENFORCEMENT

The City shall enforce these Regulations in all matters concerning the use of any recycled water and/or recycled water service. Each and every condition and requirement with respect to the use, connection, disconnection, reconnection, and /or discontinuance of recycled water and/or recycled water service provided by and set forth in these Regulations shall apply with equal force and effect to any person, persons, or firm, public or private. There shall be no deviation from these Regulations except upon written authorization by the Public Works Director or his/her designee, who will act at all times within any and all applicable Regulatory Agency constraints.

1.4 AMENDMENTS

These Regulations may be amended by resolution at any regular or special meeting or by the Public Works Director for cause determined by the Council or City Staff and without the approval of any User or Owner. Moreover, any amendments so made are immediately incorporated by these Regulations and will be administered as such. Insofar as these Regulations support portions of the California Administration Code, Title 17 and Title 22, any amendments or new related State legislation that affects recycled water quality or use are also immediately incorporated by these Regulations.

1.5 PRECEDENCE

These Regulations shall take precedence when they require higher quality material, equipment, design and/or construction methods than are required by the local governing codes.

1.6 LOCAL AUTHORITY

Except as noted in Section 1.4 of these Regulations, all onsite facilities shall be designed to meet the standards of the local governing codes, rules and regulations.

1.7 SERVICE AREA

These Regulations set forth herein pertain to recycled water service to lands and/or improvements lying within the legal boundaries of the City of San Clemente Utilities service area unless otherwise stated.

1.8 DEFINITIONS

Whenever the following terms, or pronouns used in their place, occur in these Regulations, or in any documents that these Regulations govern, the intent and meaning shall be interpreted as follows:

Air-Gap Separation - *A* physical break between a supply pipe and a receiving vessel. The air gap 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. The air-gap has to comply with the latest California Department of Public Health requirements.

Applicant - An Owner or his authorized or his authorized representative who applies for recycled water service under the terms of these Regulations. An approved Applicant becomes a User.

Application Rate - The rate at which recycled water is applied to an irrigation or construction area, expressed in inches per hour.

Approved Backflow Preventer - A device installed to protect the potable water supply from contamination treated wastewater. This device shall be recognized as such by the State of California State Health Department.

Approved Use - An application of recycled water in a manner, and for a purpose, designated in a user permit issued by the City of San Clemente and in compliance with any and all applicable Regulatory Agency requirements.

Approved Use Area - A site, with well-defined boundaries, designated in a user permit issued by the City of San Clemente to receive recycled water for an approved use and acknowledged by any and all applicable Regulatory Agencies.

AWWA - The American Water Works Association.

AWWA Standards - American Water Works Association Standards for Construction Materials latest edition.

AWWA Guidelines – American Water Works Association Guidelines for Distribution of Nonpotable Water, California-Nevada Section, latest edition.

California Department of Public Health (CDPH) – references to CDPH also include the State Water Resources Control Board Division of Drinking Water in accordance with the transfer of CDPH to the State Water Resources Control Board.

City - The City of San Clemente, State of California.

City Engineer - The City Engineer of the City of San Clemente, State of California.

City Manager - The Manager of the City of San Clemente.

Construction Use - An approved use of recycled water to support construction activities such as soil compaction during grading.

Contractor - A person, persons, or firm entering into a legal agreement with the City or owner for the performance of work on all or any portion of facilities subject to these Regulations.

Cross Connection - Any unprotected 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 as safe, wholesome and potable for human consumption.

Cross Connection Testing – has the meaning set forth in Title 17, Div. 1, Chapter 5, Subchapter 1, Group 4 of the California Code of Regulations, as it currently exists or may be amended.

Designated Area - A site, with well-defined boundaries, proposed to receive recycled water for an approved use as delineated in an application for a user permit.

Dual-Plumb – A site using recycled water within interior plumbing fixtures in addition to separate domestic water uses (e.g. toilet flushing with recycled water).

Dual-Source – A site using recycled water for exterior non-potable water uses in addition to other domestic water uses onsite (e.g. park using recycled water for irrigation and potable water in bathrooms).

Effluent - Treated wastewater discharged from a water reclamation plant.

Engineer - The City Engineer of San Clemente or an authorized agent.

General Public - Any person or persons at large who may come in contact with facilities and/or areas where recycled water is approved for use.

Infiltration Rate - The rate at which the soil will accept water as applied during irrigation, expressed in inches per hour.

Inspector - Any person authorized by the City to perform inspection of either onsite or offsite facilities prior to construction, during construction after construction and during operation.

Irrigation Period - The time, from start of water flow to cessation, which a specific area receives recycled water by direct irrigation application, regardless of how often the specific area is irrigated - that is, the length of the duty cycle.

Irrigation Use - An approved use of recycled water for landscape irrigation as defined for recycled water under Title 22, Division 4, Article 4, of the California Administrative Code.

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

Nondomestic Water - That water that has not been treated for human consumption in conformance with the latest edition of the United States Public Health Service Drinking Water Standards, the California Safe Drinking Water Act, or any other applicable standards.

Offsite - Designates or relates to public recycled water facilities up to and including the water meter.

Onsite - Designates or relates to facilities owned and operated by a User, normally downstream of the water meter.

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

Operator - Any person, persons or firm, who by entering into an agreement with a User is responsible for operating onsite facilities.

Owner - Any holder of legal title, contract purchaser, or lessee under a lease with an unexpired term of more than one (1) year, of property for which recycled water service has been requested or established.

Pantone (purple) – A color standard system referenced in the American Water Works Association California-Nevada Section Guidelines for Distribution of Non-potable Water.

Peak Moisture Demand - The demand during those periods of maximum seasonal temperatures and plant growth and, hence, equal to the maximum seasonal net evapotranspiration requirements.

Plans - The plans, working drawings, detail drawings, profiles, typical cross section and supplemental drawings or reproductions thereof, approved by the Engineer, which show locations, character, dimensions or details of the work.

Ponding - Retention of recycled water on the surface of the ground or other natural or manmade surface for a period of time following the cessation of an approved recycled water use activity such that a hazard or potential hazard to the public health results.

Potable Water - That water which is pure and wholesome, does not endanger the lives or health of human beings, and conforms to the latest edition of the California Safe Drinking Water Act, or other applicable standards.

Rate and Fee Schedule - The schedule of all rates, charges, fees and assessments to be made in connection with the use of recycled water served by the City as approved or as amended by the City Council.

Record Drawings - Record drawings that show the completed facilities as constructed or modified.

Recycled Water – Wastewater that has been treated and disinfected by the City to comply with tertiary treated recycled water requirements established by the State of California Department of Health Services within Title 22, Division 4, Chapter 3 of the *California Code of Regulations*.

Recycled Water System - The City facilities that produce, convey, supply, and store recycled water.

Regulations - The "City of San Clemente Rules and Regulations for Recycled Water" prepared pursuant to the City's San Diego Regional Water Quality Control Board Master Reclamation Permit.

Regulatory Agencies - Those public agencies legally constituted to protect the public health and water quality, such as the California Department of Health Services, the California Water Resources Control Board, Regional Water Quality Control Boards and the California Department of Public Health.

Runoff - Flow of recycled water along the surface of the ground or other natural or man-made surface, including, but not limited to, pedestrian walkways, streets, playground surfaces and grassy slopes.

Service - The furnishing of recycled water to a User through a metered connection to the onsite facilities.

System Failure - Any malfunction of onsite facilities that could lead to a violation of these Regulations.

Terms - All terms relating to matters of opinion or judgment, such as in regards to approvals, requirements, directions or acceptances, denote the option or judgments of the City.

Treated Wastewater - Wastewater treated in accordance with the requirements of "Wastewater Reclamation Criteria," of the California Administrative code.

Unauthorized Discharge - Any release of recycled water that violates the rules and regulations of the City or any and all applicable Federal, State or local statues, regulations, ordinances, contracts or other requirements.

User - Any person, persons or firm (include any public utility, municipality or other public body or institution) issued a sewer permit by the City. The User and Owner may be one and the same.

User Permit - A permit issued by the City to a recycled water service Applicant after the

satisfactory completion of the service application procedures set forth in these Regulations. This permit constitutes a service agreement that legally binds the User to all conditions in these Regulations and to any and all applicable Regulatory Agency requirements.

Utilities Manager - The Utilities Manager of the City of San Clemente.

Violation - Noncompliance with any condition or conditions of these Regulations and/or a user permit by any person, action or occurrence, whether willfully or by accident.

Water Reclamation - The planned renovation of wastewater to produce an effluent that is approved for specific beneficial uses by the appropriate Regulatory Agency.

Website - http://san-clemente.org/departments-services/recycled-water

Windblown Spray - Dispersed, airborne particles of recycled water capable of being transmitted through the air to locations other than that for which the direct application of recycled water is approved.

Work - The entire improvement proposed to be constructed pursuant to a legal agreement and consistent with these Regulations.

1.9 SYSTEM RESPONSIBILITY

All offsite facilities are the property of the City and shall be under the management and control of the City. Only authorized employees of the City shall have any right to operate said system and/or property in any manner. The Offsite Supervisor, designated by the City shall be responsible for the operation of the offsite distribution systems, for the surveillance of all Users, and for the assessment of water quality as it relates to compliance with requirements of governing Regulatory Agencies.

1.10 PROTECTION OF PUBLIC HEALTH

The City of San Clemente shall enforce these Regulations in all matters concerning the use of any Recycled Water Service. Each and every condition and requirement with respect to the production, and use of recycled water provided by set forth in these Regulations shall apply with equal force and effect to any and all Persons. There shall be no deviation from these Regulations except upon written authorization by the City of San Clemente Director of Public Works, who will act at all times within any and all applicable Regulatory Agency constraints.

1.11 AUTHORIZED USES

These Regulations limit the application of recycled water to irrigation, commercial use, habitat development and maintenance, recreational use, groundwater recharge, impoundments, and construction use for which Title 22, Division 4, Chapter 3, Wastewater Reclamation Criteria, of the California Code of Regulations, or other specific State legislation provides requirements. Any of the

aforementioned uses or other uses for which explicit specifications are not provided in these Regulations can be considered, but must be approved on a case-by-case basis by the City of San Clemente Director of Public Works after the appropriate Regulatory Agencies have granted such approvals, as may be required.

1.12 APPROVED USE AREAS

Recycled water may only be used in areas approved by the City. Approval may be obtained only through the service application procedure contained in these Regulations. In all cases, approval of a use area by the City will be contingent upon complete satisfaction of the requirements of the applicable Regulatory Agencies.

1.13 DESIGN APPROVAL

Prior to the construction of onsite facilities that will use or receive recycled water, the design of such facilities must be reviewed and approved by the City. Approval shall be obtained only through the procedure contained in these Regulations. Approval shall be contingent upon evidence that all applicable design requirements, including those contained within these Regulations are satisfied.

1.14 CONSTRUCTION INSPECTION

The City or its authorized agents shall inspect the construction of onsite facilities that will use or receive recycled water to verify that they are constructed in conformance with the approved plans and these Regulations.

1.15 FINAL INSPECTION

Before the City approves service startup of any facilities using recycled water, the installed system shall be tested under design operating conditions to establish that the operation is in accordance with all applicable requirements, including those contained within these Regulations. Assuming all other requirements are satisfied, service startup will be contingent upon successful operational testing.

1.16 SERVICE CONDITIONS

The City reserves the right to control and schedule the use of recycled water, if in the opinion of the Utilities Manager or his designated representative control and scheduling are necessary to maintain acceptable working conditions in the recycled water distribution system. These and other service conditions contained in the Regulations will be administered by the City at its discretion.

1.17 RATE AND FEE SCHEDULE

All rates and fees regarding recycled water service and their respective administrative provisions shall be fixed and established by the City. The most current rate and fee schedule so established is hereby incorporated into these Regulations by reference.

1.18 LIABILITY

California Regional Water Quality Control Board and the City assume no responsibility for the maintenance and operation of any onsite recycled water system beyond that which it retains with respect to violations of the governing Regulatory Agency requirements. The Owner assumes all liability and responsibility of every other kind to the end that the City and California Regional Water Quality Control Board shall be kept whole and blameless at all times in any claim resulting from matters involving quantities, quality, time or occasion of delivery, or any other phase of the maintenance, operation and service of the Owner's onsite facilities.

1.19 SURVEILLANCE

It is the responsibility of the User to provide surveillance and supervision of his onsite facilities in a manner that assures compliance at all times with these Regulations. An Onsite Supervisor shall be designated by the User or Operator and approved by the City. It is the responsibility of the City to provide surveillance and supervision of the offsite facilities in a manner that assures compliance at all times with these Regulations. Moreover, as a control check for onsite surveillance, the City reserves the rights to regularly inspect the onsite systems and their operation for conformance with these Regulations. The City shall report any and all violations to the appropriate Regulatory Agencies in accordance with applicable procedures that have been established by law, code, permit or practice.

1.20 CONTINGENCY RESERVATIONS

If at any time during the construction or operation of facilities designed to use recycled water real or potential hazards are evidences, the City reserves the right and has the authority to terminate recycled water service in the interest of protecting the public health or other elements of the recycled system. In the event that recycled water service is so terminated, the City may supply water to the affected onsite facilities either temporarily or permanently from the potable water system at City’s discretion.

1.21 SPECIFIC PROHIBITIONS

1.21.1 Runoff Conditions

Conditions that directly or indirectly cause a runoff outside of the approved use area, whether by design, construction practice, or system operation, are strictly prohibited.

1.21.2 Ponding Conditions

Conditions that directly or indirectly cause a ponding outside of or within the approved use area, whether by design, construction practice, or system operation, are strictly prohibited.

1.21.3 Windblown Spray Conditions

Conditions that directly or indirectly permit windblown spray to pass outside of the approved use area, whether by design, construction practice, or system operation, are strictly prohibited.

1.21.4 Unapproved Uses

Use of recycled water for any purposes other than those explicitly approved in the currently effective user permit issued by the City and without the prior knowledge and approval of the appropriate governing Regulatory Agencies is strictly prohibited.

1.21.5 Disposal in Unapproved Areas

Disposal of recycled water for any purposes, including approved uses, in areas other than those explicitly approved in the currently effective user permit issued by the City and without the prior knowledge and approval of the appropriate governing Regulatory Agencies, is strictly prohibited.

1.21.6 Cross Connections

Cross connections, as defined by the most recent version of the California Administrative Code Title 17, resulting from the use of recycled water or from the physical presence of a recycled water service, whether by design, construction practice, or system operation, are strictly prohibited.

Except as allowed under Section 7604 of Title 17, California Code of Regulations, no physical connection shall be made or allowed to exist between any recycled water system and any separate system conveying potable water unless the connection between the two systems is protected by an air gap separation that complies with the requirements of Sections 7602(a) and 7603(a) of Title 17 and the approval of the public water system has been obtained. If a "Swivel-ell" type connection is used

it must be implemented in accordance with the provisions of the Department of Health Services Policy Memo 95-004.

1.21.7 Cross Connection Testing

All recycled water use sites must undergo a cross connection test conducted by the City of San Clemente, an AWWA certified cross connection control specialist and customer representative prior to the use of recycled water at the site and at intervals required by law or regulation.

1.21.8 Unprotected Drinking Fountains

Any and all drinking fountains located within the approved use area designated by the user permit shall be protected by placement and/or covered by a structure from contact with recycled water, whether by windblown spray or by direct application through irrigation or other approved use. Lack of such protection, whether by design, construction practice, or system operation, is strictly prohibited.

1.21.9 Unprotected Public Facilities

Facilities that may be used by the General Public; including, but not limited to, eating surfaces and playground equipment, and located within the approved use area designated by the user permit, shall be protected by siting and/or structure from contact with recycled water, whether by windblown spray or by direct application through irrigation or other approved use. Lack of such protection, whether by design, construction practice, or system operation, is strictly prohibited.

1.21.9.1 Hose Bibs

Use or installation of hose bibs on any onsite system that presently operates or is designed to operate with recycled water, regardless of the hose bib construction or identification, is strictly prohibited.

1.21.9.2 Fire Hydrants

Use or installation of fire hydrants on any onsite system that presently operates or is designed to operate with recycled water, regardless of the fire hydrant construction or identification, is strictly prohibited.

1.21.10 Well Head Protection

Well Heads, of potable and nondomestic water wells located in a recycled water use area shall be protected. Well Head protection shall be in strict compliance with the California Department of Public Health, Office of Drinking Water -"Drinking Water Requirements".

Irrigation with disinfected tertiary recycled water shall not take place within 50 feet of any domestic water supply well unless all of the following conditions have been met:

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

Impoundment of disinfected tertiary recycled water shall not occur within 100 feet of any domestic water supply well.

1.21.11 Nuisance Prohibition

The use of recycled water shall not cause pollution, contamination, or nuisance, as defined by Section 13050 of the California Water Code.

1.21.12 Delivery of Recycled Water

No person other than the Recycled Water Agency shall deliver recycled water to a facility. Connection to the irrigation system by an individual residence is prohibited. All connections to the recycled water system shall be metered.

SECTION 2: REQUIREMENTS FOR DESIGN AND OPERATION

2.1 DESIGN REQUIREMENTS

2.1.1 Onsite Irrigation Systems

2.1.1.1 Design Responsibility

The design of an onsite irrigation system that will use recycled water, and the preparation of plans and construction specifications, shall be under the responsibility of a landscape architect or engineer, registered within the State of California.

2.1.1.2 Provision For Recycled water

In those areas where recycled water is not immediately available for use when the design area is ready for construction, the onsite irrigation system shall nevertheless be designed to use recycled water as determined by the City Engineer or his/her designee. Provisions shall be made and these Regulations followed to allow for connection to the recycled water distribution when it becomes available. In the interim, potable water will be supplied to the onsite irrigation system through an approved temporary potable water connection. As part of the offsite system, the configuration for such an interim connection is found in the City's current construction standards and specifications.

The public water supply shall not be used as a backup or supplemental source of water for a recycled water system unless the connection between the two systems is protected by an air gap separation which complies with the requirements of Sections 7602(a) and 7603(a) of Title 17 and the approval of the public water system has been obtained. If a "Swivel-ell" type connection is used it must be used in accordance with the provisions of the Department of Health Services Policy Memo 95-004. Approved backflow prevention devices shall be provided, installed, tested, and maintained by the recycled water user in accordance with the applicable provisions of Title 17, Division 1, Chapter 5, Group 4, Article 2.

An approved backflow preventer shall be required as long as the onsite system is using or is capable of using potable water. Any backflow prevention device installed to protect the public water system shall be inspected and maintained in accordance with Section 7605 of Title 17. This device shall be provided and installed by the Owner. All maintenance, necessary testing and related costs of the backflow prevention device shall be the responsibility of the Owner. Only the City shall remove said backflow preventer and make the connection to the recycled water distribution system when recycled water becomes available. At such time the City shall return the device to the Owner. All points of connection to the City's offsite facilities shall be determined by the City. Backflow prevention devices shall not be required on irrigation systems using recycled water.

Notification of all action taken with backflow prevention devices shall be made by the City to the California Department of Public Health.

2.1.1.3 Design Capacity

The onsite irrigation system shall be designed to meet the peak moisture demand of all plant materials used within the design area. The onsite system shall be sized to accommodate a maximum supply from the offsite recycled system of 15 gpm per acre, however, the City reserves the right to adjust this flow rate application criteria on a case by case basis. Whenever possible the City operates the recycled water system at a lower pressure than the adjacent potable water system. This convention helps prevent the contamination of the potable water system through cross connection.

2.1.1.4 Design Application Rates

The onsite irrigation system shall be designed to apply irrigation water in a manner compatible with the infiltration rates of the soil types within the approved use area. Evidence that infiltration rates have been assessed shall be included with the design. Where varying soil types are present to the extent that they cannot be adequately addressed by separate parts of the system, the design of the irrigation system shall be compatible with the lowest infiltration rate present.

2.1.1.5 System Layout

The irrigation system shall be designed to prevent discharge onto areas that are not approved for use. Part-circle sprinklers shall be used adjacent to roadways and boundary lines to confine the discharge from the irrigation system to the design area.

The system design shall avoid spray patterns that include obstructions that tend to concentrate recycled water to produce ponding and/or runoff, such as spraying against bridge abutments and outlet structures. System owners shall maintain and make adjustments appropriately to the system in a manner to conform to aforementioned.

2.1.1.6 System Control Devices

The system design shall include automatic system control devices that can be programmed to prevent the ponding and/or runoff of recycled water. These devices shall be designed so that, if the current application program is producing any runoff, they can be readily reprogrammed onsite to prevent such occurrences.

2.1.2 Construction Water Facilities

2.1.2.1 Service Connections

Service connections for the construction use of recycled water may be provided by the City at locations as convenient as practicable to the User but at the discretion of the City. The service shall include a valved connection to a recycled water distribution main and water meter whose capacity

shall be determined by the City from information supplied by the User in his user permit application. The user may make the connection to the main or contract with the City to do so. The City will install the meter. The Contractor shall abide by the latest edition of the California Department of Public Health "Guidelines For The Use Of Recycled Water For Construction Purposes" and the provisions contained in this document. The City reserves the right to install the service connections as part of an expansion to its system.

2.1.2.2 Transmission Facilities

Transmission lines for conveying recycled water from the metered service connection to a storage container or water distribution vehicle shall be of adequate size and structural integrity to ensure that leaks or ruptures will not occur in the course of normal construction activity. These lines shall be provided by the User. Lines crossing construction roadways or other areas receiving regular vehicular traffic must be buried to a depth of at least 24 inches. Rigid pipe able to withstand the planed vehicular loads shall be employed for such installations.

2.1.2.3 Storage Facilities

Storage tanks for the holding of recycled water and the supply to distribution vehicles shall be of adequate design and structural integrity to ensure that leaks or ruptures will not occur in the course of normal use. These tanks or ponds shall be provided by the User. All storage ponds and any storage tanks not supported more than six feet above ground-level shall be contained within a fence or other enclosure that will restrict access by the General Public to these facilities at all times when Operations Personnel are not present. Outlet control with positive shut-off shall be provided at each storage facility. All storage facilities shall be reviewed, approved and permitted by the City. All storage facilities shall be identified as recycled water to the satisfaction of the City.

2.1.2.4 Distribution Vehicles

Vehicles used for distributing recycled water for soil compaction and dust control shall be provided with adequate tanks and plumbing systems to ensure that leaks and ruptures will not occur in the course of normal use. Control valves shall be provided such that the recycled water can be applied in a controlled fashion on the approved use area and completely retained during transit in all other areas. Spray heads or nozzles shall be provided and configured such that the discharge is uniformly distributed and runoff, ponding or windblown spray conditions prevented. All distribution vehicles shall be identified as recycled water to the satisfaction of the City.

2.2 OPERATIONAL REQUIREMENTS

Refer to the City's website <http://san-clemente.org/departments-services/recycled-water> for additional information.

2.2.1 Onsite Irrigation Systems

2.2.1.1 Supervision

The operation and surveillance of onsite irrigation systems shall be under the management of the Onsite Supervisor designated by the User or the Operator and approved by the City. This Supervisor or his representative shall be available during normal working hours at an address listed with the City for the purpose of hosting an inspection tour or for discussing operational aspects of the system. The Onsite Supervisor or his representative shall be available via telephone at a number listed with the City for emergency off-hours contact.

2.2.1.2 Personnel Training

It shall be the responsibility of the Operator to ensure that all Operations Personnel are trained in and familiarized with the use of recycled water, and are familiar with all pertinent information contained in these Regulations and those applicable portions of the California Administrative Code. This information shall be supplied by the City upon request of the Operator. The training that will be provided shall be attested by the Operator in the Use Permit form for recycled water service.

2.2.1.3 Onsite Information

The Operator shall be responsible for furnishing the Operations Personnel system operating instructions, maintenance instructions, controller charts and record drawings to ensure proper operation in accordance with the irrigation system design and these Regulations. At least one complete set of this information shall be kept onsite or in the nearest field office or maintenance building established by the Operator. The Operator retains the responsibility of properly disseminating this information to all appropriate Operations Personnel.

2.2.1.4 Onsite Inspection

The City, Regional Board, California Department of Public Health, County Department of Environmental Health, or an authorized representative of these parties, upon presentation of proper credentials, shall have the right to enter upon the recycled water use site during reasonable hours, to verify that the user is complying with the recycled water governance Agency's rules and regulations. Inspection of the onsite irrigation system and the approved use area being served may be made at any time by the City or representatives of the various Regulatory Agencies. The User, the Operator and any Operations Personnel, are obligated to cooperate with those making the inspection and to assist in the performance of operational tests as requested.

2.2.1.5 Irrigation Application Rates

Recycled water shall be applied at a rate that does not exceed the infiltration rate of the soil. When the application rate exceeds the infiltration rate of the soil, automatic system control devices shall be utilized and programmed to prevent the ponding and/or runoff of irrigation water. The irrigation

system shall not be allowed to operate for a time longer than the landscape's requirement. If runoff or ponding occurs before the landscape's water requirements are met, the automatic controls shall be reprogrammed with additional watering cycles to meet the requirements and prevent runoff.

2.2.1.6 Confinement of Irrigation

Any use of recycled water shall comply with the following:

a. Any irrigation runoff shall be confined to the recycled water use area.
b. Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities.
c. Drinking water fountains shall be protected against contact with recycled water spray, mist, or runoff.

Recycled water facilities shall be operated in accordance with best management practices (BMP's) to prevent public contact with, and prevent direct human consumption of recycled water. All windblown spray of recycled water applied for irrigation onto property not owned or controlled by the discharger or recycled water user shall be prevented by the implementation of BMP's.

Facilities that may be used by the public shall be protected to the maximum extent possible by siting and/or structure from contact by irrigation with recycled water spray, mist, or runoff. Protection shall be by design, construction practice or system operation.

The onsite irrigation system shall be operated to prevent discharge onto areas that are not approved for use. Overspray resulting from attempts to reach remote portions of the approved use area shall not be practiced. This situation shall be rectified by appropriate design corrections to the system layout.

2.2.1.7 Periods of Operation

The operation of the irrigation system shall be during periods of minimal use of the approved use area by the General Public. Consideration shall be given to allow an adequate dry-out time before the irrigated area will be used by the public. Such periods of operation shall remain within any general period of recycled water irrigation operation specified by the City. The City reserves the right to have a user adjust their irrigation start times based on Offsite system hydraulics. Refer to the City's website <http://san-clemente.org/departments-services/recycled-water> for additional information.

2.2.1.8 Maintenance

A preventative maintenance program designed to ensure the continued operation of all system elements within the requirements of these Regulations shall be evidenced by the Operator and open to inspection by the City.

2.2.2 Construction Water Facilities

2.2.2.1 Supervision

The operation and surveillance of the construction water facility shall be under the management of an Onsite Supervisor designated by the User or the Operator and approved by the City. The Onsite Supervisor or his representative shall be available via telephone at a number listed with the City for contact during working hours.

2.2.2.2 Personnel Training

It shall be the responsibility of the Operator to make sure that all Operations Personnel are trained in and familiarized with the use of recycled water, and are familiar with all pertinent information contained in these Regulations and those applicable portions of the California Administrative Code. This information shall be supplied by the City upon request of the Operator. The training that will be provided shall be attested by the Operator in the Service Agreement form for recycled water service.

2.2.2.3 Onsite Information

The Operator shall be responsible for furnishing the Operations Personnel system operating and maintenance instructions to ensure proper operation in accordance with the facility layout and these Regulations. At least one complete set of this information shall be kept onsite or in the nearest field office or maintenance building established by the Operator. The Operator retains the responsibility of properly disseminating this information to all appropriate Operations Personnel.

2.2.2.4 Onsite Inspection

Inspection of the construction water facilities and the approved use area being served may be made at any time by the City or by representatives of the various Regulatory Agencies. The User, the Operator and any Operations Personnel are obligated to cooperate with those making the inspection and to assist in the performance of operational tests as requested.

2.2.2.5 Application Control

Recycled water used for the purpose of soil compaction and dust control shall not be stored or applied in a manner that causes runoff, ponding or windblown spray conditions. If such conditions occur, the method of application shall be altered to correct them and prevent any and all further ponding or runoff. Control valves on the water distribution vehicles and other controlling devices shall be properly employed to prevent the application of recycled water outside the approved use area onto surfaces including, but not limited to, street pavements, sidewalks and drainage courses.

2.2.2.6 Periods of Operation

The periods of operation of the construction water facilities, insofar as they depend on the supply of recycled water from the offsite system, shall be subject to regulation by the City in accordance with the needs of the entire recycled water distribution system.

2.2.2.7 Maintenance

A preventive maintenance program designed to ensure the continued operation of all system elements within the requirements of these Regulations shall be evidenced by the User and open to inspection by the City.

2.2.2.8 Reuse of Equipment

Any equipment that has been used with recycled water, such as tanks, temporary piping or valves and portable pumps, shall be cleaned and disinfected before removal from the approved use area to another job site. This disinfection and cleaning shall ensure the protection of the public health in the event of any reuse of such equipment with higher quality water. Methods of disinfection shall be approved by the Offsite Supervisor or Inspector, and the disinfection process shall be performed in his presence. When storage tanks or distribution vehicle tanks are provided with an inlet air gap whose configuration is approved by the California Department of Public Health, such onsite disinfection shall not be required. FLOW METERS USED FOR RECYCLED WATER ARE NON-TRANSFERABLE TO THE POTABLE WATER SYSTEM.

2.3 SUBMITTALS AND RECORDS

2.3.1 Onsite Irrigation Systems

2.3.1.1 Preliminary Investigation

The Applicant shall meet with the City at the earliest possible date to determine the availability of existing recycled water distribution lines. It shall be the responsibility of the Applicant to determine how the City can serve the proposed area. This determination shall be submitted to the City at least 10 working days prior to the date on which feasibility acceptance is desired. Feasibility acceptance must be obtained prior to making formal application for recycled water service.

See recycled water customer retrofit flowchart located on the City's website: http://san-clemente.org/departments-services/recycled-water for additional information.

2.3.1.2 System Design Documents – New Construction

The following information shall be submitted and approved by the City prior to commencing any construction:

Plans and Specification- Two copies of the plans and specifications, signed and stamped by the design engineer or landscape architect, registered in the State of California, for the construction of the onsite irrigation system, shall be submitted to the City for review and approval. Only that section of the specifications dealing with the materials for the irrigation system need be submitted. Plans and specifications shall be submitted at least 15 working days prior to the date on which action by the City is desired. As part of this submittal, a construction cost estimate for the subject facilities shall be provided. A fee for review and inspection shall be paid prior to the City's approval of the plans. This fee shall be in accordance with the current rate and fee schedule adopted by the City.

Meter Criteria - The following information shall be provided, either on the plans or as a separate submittal, for every irrigation system meter desired:

(a) Meter size (inches)
(b) Gross area served through the irrigation meter (square feet or acres)
(c) Peak flow through the meter (gpm)
(d) Estimate of the yearly water requirement through the meter (acre feet)
(e) Design pressure at the meter (psi)

Irrigation Criteria - A legend showing the pertinent data for the materials used in the system shall be recorded on the plans. The legend shall include a pipe schedule listing pipe sizes and materials of construction, valve types, and the following information for each type of sprinkler head:

(a) Manufacturer and model number
(b) Sprinkler radius (feet)
(c) Operating pressure (psi)
(d) Flow (gpm)
(e) Sprinkler pattern

Soils Evaluation – Plan shall include a statement that lists major soil types and their respective average infiltration rates, and relates the location of these soil types to the irrigation system layout. If applicable, boring locations should be shown on plan views and boring logs should be included on the plans.

Call-Outs - Backflow prevention devices, all domestic water lines, exterior drinking fountains and other public facilities shall be shown and called out on the plans. If no backflow prevention devices, domestic water lines, exterior drinking fountains or other public facilities are present in the design area, then it shall be specifically stated on the plans that none exists.

Standard Notes - Standard notes that are to be listed on the plans are as follows:

(a) The design and installation of the onsite recycled irrigation system shall conform to "City of San Clemente Rules and Regulations for Recycled water".
(b) Systems have been designed with pressure and flows as noted on plans.
(c) Water meter and meter box as shown on the plan are existing.

(d) The City of San Clemente, City Engineer's office shall be notified 48 hours prior to the start of any construction at (949) 366-1553.
(e) All onsite irrigation piping installed under this design shall be identified as nondomestic water piping in accordance with "Regulations for Recycled Water Facilities" of the City of San Clemente.
(f) Soil infiltration rate tests have been performed for this project and the irrigation system has been designed to be compatible with the lowest infiltration rate present.
(g) Any quick coupling valves on the recycled irrigation mainline shall be removed at the end of the maintenance period (90 days) and before permanent recycled water meters are installed. The manner of removal will be subject to approval of the City.
(h) See specifications for reference to alternative material and special identification required.
(i) Record Drawings shall be submitted and approved by the City Engineer or his/her designee before regular service is started.
(j) Control charts shall be prepared by the Design Engineer or Landscape Architect and submitted with the Record Drawings. One chart shall be supplied for each controller showing the area covered. Each station shall be color coded with a different color. The chart shall be sized for storage in the controller door. After approval by the City, each chart shall be hermetically sealed in 10 mil plastic.
(k) All remote control valves, gate valves and pressure relief valves shall be installed in suitable valve boxes complete with locking and hinged covers. Each shall be marked with "RW" to indicate the use of recycled water. The station number for control valves shall be stenciled in yellow on the purple background valve cover.
(l) San Clemente recycled water regulations shall prevail in any discrepancies concerning recycled water system and/or application.

One copy of the plans and specifications as approved by the City shall be forwarded to the Orange County Health Department by the City for their review and recordation.

2.3.1.3 Submittals

Record drawings shall be submitted by the design engineer or landscape architect and approved by the City before a request for regular service start-up is made. The following shall apply:

Recording Changes - All changes in the work constituting departures from the original design drawings, including changes in both pressure and nonpressure lines, shall be accurately recorded on one set of drawings. Upon completion of each increment of work, all such information and dimensions shall be transferred to the drawings. The changes and dimensions shall be recorded in a legible and workmanlike manner to the satisfaction of the City. After the drawings are approved by the City, all information shall be transferred to a set of reproducible drawings. All changes to reproducible drawings shall be made in ink (no ballpoint pen). Eradicating fluid shall be used when redoing drawings.

Dimensioning - All dimensions shall be taken from two permanent points of reference such as buildings, monuments, sidewalks, curbs or pavements. Locations shown on as-built drawings shall be kept day by day as the project is being installed.

Specific Call-Outs - The locations and depths of the following items shall be shown:

(a) Points of connection
(b) Routing of sprinkler pressure lines.
(c) Gate Valves
(d) Sprinkler control valves (buried only)
(e) Quick coupling valves
(f) Routing of control wires
(g) Control Stations

Control charts shall be prepared by the design engineer or landscape architect, submitted with the record drawings, and approved by the City before formal request for service start-up is made. The chart submittals shall include the following:

Chart Requirement- One controller chart shall be provided for each automatic controller supplies showing the system area covered by the controller. The chart shall be sized as large as the controller will allow.

Chart Scale - Each chart shall be a reduced drawing of the as-built system. The controller sequence shall be clearly legible at the reduction chosen.

Chart Coloring - Each chart shall be black-line print with a different color used to show the area of coverage for each station.

Chart Packaging - After approval by the City, all charts shall be hermetically sealed between two pieces of plastic, each piece being a minimum of 10 mils thick.

Record Drawings- For reference purposes, record drawings shall be maintained onsite at all times.

2.3.2 Construction Water Facilities and Commercial Fill Stations

2.3.2.1 Preliminary Investigation

The applicant shall meet with the City at the earliest possible date to determine the availability of existing recycled water distribution lines. It shall be the responsibility of the Applicant to determine how the City can serve the proposed area. This determination shall be made prior to the date on which feasibility acceptance is desired. Feasibility acceptance must be obtained prior to making formal application for recycled water service.

2.3.2.2 System Layout Documents

A location drawing shall be submitted by the User to the City and approved by the City prior to commencing any installation of facilities. This drawing shall indicate the exact boundaries of the site of the proposed recycled water use at a scale that includes the site and the nearest paved surface street containing a recycled water distribution main.

A materials list shall be submitted by the Operator to the City and approved by the City prior to commencing any installation of facilities. This list shall include the following:

Transmission Facilities - The diameter, approximate length and construction material of all onsite recycled water lines, whether flexible hose or rigid pipe.

Storage Facilities - The estimated number of fixed storage tanks or ponds and the approximate volume of each.

Distribution Vehicles - The estimated number of distribution vehicles and the approximate recycled water-carrying capacity of each.

2.3.2.3 General Requirements for Hauling and Transportation of Recycled Water

Refer to Exhibit 5 for the City's Commercial Recycled Water Truck Program Guidelines and User Permit.

2.3.2.3.1 Recycled Water User Permit Required.

(a) Haulers interested in participating in this program must apply for and receive a Recycled Water Use Permit issued by the City. See http://san-clemente.org/departments-services/recycled-water for additional information.

(b) Recycled Water Use Permits shall be valid for one year after the date of issuance.

(c) Prior to receiving a Recycled Water Use Permit and at least one time annually thereafter, a hauler's truck, containers and use site must meet all requirements set forth in these regulations, including but not limited to the requirements in Section 4.3.3 and that recycled water is being used in compliance with the requirements of all applicable laws.

(d) Prior to filling a trucks or containers for the first time, annually thereafter and prior to renewing a Recycled Water Use Permit, each hauler must attend a brief on-site orientation or training in order to learn about using the filling station and the proper handling and safe use of recycled water. Each hauler shall maintain a record of completing the training.

(e) The Recycled Water Use Permit must be available for inspection at all times. The hauler must carry a copy in the vehicle at all times while hauling recycled water.

(f) A hauler shall not use recycled water for a use not approved by the City

(g) Residential hauling programs are not permitted at this time.

(h) Failure to follow program requirements, including adhering to applicable State, County, City or local codes, will result in suspension of the hauler's permit. Violations of such codes may also result in agencies levying fines and applicable administrative fees.

2.3.2.3.2 Use Area

(a) All use areas receiving hauled recycled water must comply with the same requirements of titles 17 and 22, Cal. Code Regs. as a similar use area receiving traditionally piped

recycled water.

(b) A hauler must demonstrate to the City that a use area that uses any plumbed potable or recycled water distribution systems and which seeks to receive hauled recycled water, must comply with all applicable requirements of titles 17 and 22, Cal. Code Regs., including cross connection control testing and backflow prevention device installation prior to a hauler picking up recycled water.

(c) The City may conduct use area visits to ensure proper use of recycled water according to all applicable requirements of titles 17 and 22, Cal. Code of Regs., and Recycled Water Use Permit conditions. This may include follow up phone calls or surveys of end users about completion of the hauling process and recycled water application.

(d) The hauler shall take precautions to avoid food coming in contact with recycled water while the use site is wet. The hauler shall take adequate measures to prevent overspray, pending, or run off of recycled water from the authorized recycled water use area. No irrigation or impoundment of recycled water is allowed within a minimum of 50 feet of any domestic drinking water well. Recycled water shall not be applied where it could spray on external drinking water fountains, passing vehicles, buildings, or areas where food is handled or eaten.

(e) No connection shall be made between a tank or container of recycled water and any part of a potable water system.

2.3.2.3.3 Hauler Requirements

(a) Recycled water must not be introduced into any potable water piping system and no connection shall be made between the tank and any part of a potable water system

(b) The hauler must keep a log book for each vehicle, tank, or container used to transport recycled water. The log book must be available for inspection at all times. The hauler must carry a copy in the vehicle at all times while hauling recycled water. The log book should include:

(i) Date of delivery and use,
(ii) Volume of water delivered and used,
(iii) Intended use of water, and
(iv) Name and address of the recipient/customer.

(c) The hauler must notify workers and the public when recycled water is used at a use site and inform workers and the public not to drink recycled water or use it for food preparation.

(d) Tank trucks, containers, and appurtenances must be clearly identified as "non-potable," equipped with a legally sized air gap, and must not be used to provide potable water. Containers and hoses associated with hauling recycled water must not be used for potable water. Commercial hauling trucks that may be filled with potable water for non-potable uses must have two separate filling systems, one dedicated to potable water and one dedicated to recycled water. When the truck is filled from a potable water source, there must be a water agency or municipality provided meter and backflow device between the

truck fill line and the potable source.

(e) Vehicles, tanks, and containers must have water-tight valves and fittings, must not leak or spill contents during transport, and must be cleaned of contaminants. This must be checked by the hauler before each use. Water-containing vessels that are open to the atmosphere during hauling are not acceptable for use.

(f) Haulers must not overfill containers or trucks.

(g) Hoses used for the application of recycled water shall be removable and shall be stored in a disconnected condition during transport. Hoses must be inspected prior to filling to ensure that they are in serviceable condition and free from leaks.

(h) In the event of an emergency concerning the recycled water hydrant, meter, fill pipe or hose (spillage, leaks, etc.), the hauler must call the emergency contact number listed on the filling station sign for further instructions.

2.3.2.3.4 Right of Entry

The City, San Diego Water Board, DOW, and OCHCA have the right to enter any recycled water use site during reasonable hours to ensure the user is complying with these requirements and the City's Rules and Regulations for Recycled Water Use.

SECTION 3: SPECIFICATIONS FOR CONSTRUCTION

3.1 GENERAL CONDITIONS

All construction work for onsite recycled water facilities shall be in conformance with these Regulations and City's provisions for construction of sewerage facilities as provided in the "Standard Provisions and Standard Drawings for the Construction of Water and Sewerage Facilities", latest edition, as applicable, hereinafter referred to as "City's Standard Specifications".

3.1.1 Trade Names or Equals

The Contractor shall be permitted to supply any of the specified materials or to offer, for City's approval, equivalent materials in accordance with the City's Standard Specifications.

3.1.2 Interpretation of Specifications and Detail Drawings

Interpretation of specifications shall be in accordance with the City's Standard Specifications.

3.1.3 Permits and Licenses

Except as otherwise provided, the Contractor shall procure all permits and licenses, pay all charges and fees, and give all notices necessary and incidental to the due and lawful prosecution of the work.

3.1.4 Connections to Existing City Facilities

The Contractor shall not make a connection to existing City facilities or interrupt recycled water service in any portion of the City unless it has been approved by the City. If it becomes necessary to interrupt service to an existing system, this interruption shall be done at a time determined by the City.

3.1.5 Personal Liability

Neither the members of the City Council, the City Engineer, nor any other officer, employee or authorized agent of the City shall be personally responsible for any liability arising out of the work performed.

3.1.6 Loss and Damage

Neither the City Council, the Engineer, nor the City shall be answerable or accountable in any manner for any loss or damage that may happen to the work or any part thereof; or for any material or equipment used in performing the work; or for injury or damage to any person or persons, either workmen or the public; or for damage to adjoining property from any cause whatsoever during the progress of the work at any time before final acceptance.

3.1.7 Legal Responsibility

The Contractor shall keep himself/herself fully informed of all laws, ordinances and regulations that in any manner affect those engaged or employed in the work or the materials used in the work, or that in any way affect the conduct of the work, and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same. If any discrepancy or inconsistency is discovered in the plans, drawings, specifications or other documents in relation to any such law, ordinance, regulations, order or decree, the Contractor shall forthwith report the same to the City in writing.

The Contractor shall observe and comply with and shall cause all of his agents and employees to observe and comply with all such existing and future laws, ordinances, resolutions, regulations, orders and decrees, and shall protect and indemnify the City, the Engineer, and all of its officers and agents against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order or decree, whether by himself or his employees.

The Contractor shall also indemnify and save the City, its officers, its employees or authorized agents harmless from all costs, losses, the City, its officers, its employees or authorized agents harmless from all costs, losses, expenses, damages, attorneys' fees, and other costs of defense that the City may incur with respect to or on account of the work, and with respect to the failure, neglect or refusal of Contractor to faithfully perform the work and all of Contractor's obligations under the contract. Such costs, expenses and damages shall include all costs incurred by the City to defend against any claims, stop notices or lawsuits based thereon in which the City is made a party.

The Contractor shall observe the rules and regulations of the State of California, Department of Industrial Relations, Division of Industrial Safety and, in particular, rules and regulations relating to shoring of trenches and excavations. All work shall be done in accordance with all directives, provisions and requirements pertaining to the method and manner of performing the work, in accordance with CAL-OSHA latest amendment or revision.

3.1.8 Inspection Authority

The City shall at all times have access to the work during construction and shall be furnished with such information as it may desire regarding the progress, workmanship and character of materials used in the work.

The City and appropriate Regulatory Agency shall have the authority to suspend the work wholly or in part for such time as it may deem necessary due to the failure on the part of the Contractor to carry

out orders given or to perform any provisions of the plans or specifications. The Contractor shall immediately comply with the written order of the City to suspend the work wholly or in part. The work shall be resumed when methods or defective work are corrected as ordered and approved in writing by the City. Failure to comply with requests of the City may prevent the release of the entire project.

3.2 MATERIALS OF CONSTRUCTION (applicable for onsite & offsite construction)

3.2.1 Offsite Construction – Distribution System

The following apply to offsite construction activities up through the recycled water meter.

3.2.1.1 Piping

Recycled Ductile Iron Pipe (D.I.P.) Water Mains:

(a) Piping and piping materials shall conform in all respects to the requirements in the City's Standard Specifications, and as a minimum shall conform to the latest requirements of the AWWA Standards for the type, size, and class of pipe being used.
(b) All D.I.P shall be encased in two (2) layers of purple 8 mil polyethylene, per AWWAC-105.
(c) Pipe class shall be shown on the plans and is subject to the approval of Water Utilities Department.
(d) 3-inch minimum width purple color coded detector tape marked "RECYCLED WATER in 1-inch black letters shall be placed on the compacted and graded sand bedding one foot above and centered over the recycled water main prior to backfilling the trench.
(e) Cathodic protection shall be required via impressed current method or sacrificial anodes.

Recycled Polyvinyl Chloride Pipe (PVC) Water Mains:

(a) Piping and piping materials shall conform in all respects to the requirements in the City's Standard Specifications, and as a minimum shall conform to the latest requirements of the AWWA Standards for the type, size, and class of pipe being used.
(b) Shall conform to the AWWA C-900 and C-905 pipe with rubber ring bell end, or plain end with rubber ring coupling, Solvent welded joints are not permitted.
(c) Provide pipe with ductile iron equivalent outside diameter (D) and class 150, minimum, or pressure rating as required.
(d) Pipe shall be purple in color and installed with the "Recycled Water" and manufacturer's data stenciling orientated toward the top of the trench.
(e) 3-inch minimum width coded detector tape marked "RECYCLED WATER" in 1-inch

black letters shall be placed on the compacted and graded sand bedding one foot above and centered over the recycled water main prior to backfilling the trench.

3.2.1.2 Recycled Water Irrigation Services

(a) 1 inch: Type "K" seamless soft copper tubing with no joints from corporation stop to curb stop per San Clemente Standard Drawing RW-1. ¾ inch is the minimum size for recycled irrigation service.

(b) 1½ inch through 2 inch: Type "K" rigid copper pipe with all joints silver soldered per San Clemente Standard Drawing RW-2.

(c) 3 inch and larger per San Clemente Standard Drawing RW-3.

(d) Silver solder shall be type 1/8 inch x 36 inches, Engle Hard Silver "0".

(e) All buried copper pipes shall be encased in an 8-mil purple polyethylene (PE) sleeve.

(f) All recycled water services will be encased in 6" of neutral sand.

(g) One separate recycled irrigation service shall be installed to each approved lot and a "RW' will be stamped on the curb face at the service location.

(h) No service shall be installed in a driveway and no meter boxes shall be set in concrete.

(i) Where site improvements or building pad orientation for a lot are not known at the time of street construction, a service shall be installed to the back of the curb for a meter connection. Location of the service should be located 5 feet off the lot line to preclude conflict with future driveways.

(j) Minimum separation between potable water services and recycled services shall be 10 feet and shall be located below the invert elevation of a potable water service, unless otherwise approved by the Water Utilities Manager.

(k) Unless otherwise approved, all services shall be perpendicular to the main.

3.2.1.3 Valves & Appurtenances

Valves - General

(a) Maximum valve spacing:

1) 500 feet in residential areas and high valve areas.

2) 1,000 feet on arteries and secondary feeders, supply lines, and combination arteries and supply lines.

(b) Valve locations: as required and directed by the Water Utilities Representative.

(c) All rubber materials in valves shall be resistant to high Chlorine content flows.

(d) Butterfly Valves shall conform to the "Standard for Rubber Seated Butterfly Valves", per AWWA C-504, as last revised and shall be tested and certified with the valve actuator installed on the valve. All valves over 12 inches in diameter are to be butterfly

valves.

(e) Gate Valves sizes 3 inches through 12 inches shall conform to the "Standard for Resilient Wedge Gate Valves for Water and Sewerage Systems", per AWWA C-500, C-550 Epoxy, C-515 Ductile Iron 250 PSI, as last revised.

(f) All tee intersections and cross intersections shall have a valve at each branch. Valve locations shall be designed so that no more than three valves have to be operated to shut down a line.

Blow-off Assemblies

All dead ends and stub outs shall be equipped with blow-off assembly 4 inches in diameter (Per San Clemente Standard Drawing RW-4)

3.2.1.4 Storage Tanks

All storage tanks used for recycled water, whether fixed or mounted on distribution vehicles, shall be structurally sound, free from leaks and shall be properly labeled in accordance with the requirements of Section 3.6.2.4.

3.2.2 Onsite Construction – Irrigation System

The following apply to onsite construction activities downstream of the recycled water meter.

3.2.2.1 Piping

Onsite Recycled Polyvinyl Chloride Pipe (PVC) Water Lines:

(a) Piping and piping materials shall conform in all respects to requirements of the AWWA Standards for the type, size, and class of pipe being used. Pipe class onsite shall be determined by the Engineer based on pressure rating required.
(b) Buried onsite pipe shall be purple in color and installed with the "Recycled Water" and manufacturer's data stenciling orientated toward the top of the trench.
(c) Exposed onsite piping shall be Ultra-Violet (U.V.) tolerant and labeled with stickers indicating recycled water use accordingly.

Onsite *Potable Water Lines:*

(a) Piping shall be copper, Type K, or equivalent to domestic water uses on dual-source sites. Piping shall be directly affixed with blue identification tape indicating “POTABLE WATER”. Deviations must be approved by the City Engineer.

3.2.2.2 Service Point of Connection

Protection of Public Potable Water Systems- Backflow Prevention

Although not normally a part of *onsite* recycled *water* irrigation *systems,* it must be noted that backflow prevention devices are a required and important part of potable water *service* connections to sites where recycled water is used. At premises where both recycled *water* and potable water are present in separate piping systems with no interconnection, a reduced pressure (RP) principal backflow prevention device must be located as close as practicable to the downstream side of every potable water meter. All RP devices must be inspected quarterly and tested at least annually. The customer is responsible for coordinating *the* testing. An AWWA-certified backflow prevention device *tester* must do the device testing. Test reports must be provided to the City of San Clemente. *The* customer, California Department of Public Health, and the City of San Clemente's Water Utilities Department must maintain records for a minimum of three (3) years.

Required Wye Strainer and Pressure Regulator

Unless otherwise directed by the Program, all recycled water services must be equipped with a wye-strainer (20-mesh or finer screen) installed as close as practicable to the meter box, and a pressure regulating valve installed immediately downstream of the strainer. Both of these devices must be installed in an underground box or boxes. Prior to determining available pressure, designers should take into account the pressure losses incurred by these facilities.

3.2.2.3 Valve Boxes

All remote control valves, gate valves and pressure relief valves shall be installed below grade in suitable valve boxes, complete with locking and hinged cover. All shall be Ametek, Brooks, Fraser, Christy or approved equal. Each shall be marked with "RW" to indicate the use of recycled water and with "PRV", "GV", "BV" or "RCV" to indicate type. Valve boxes and covers shall be purple in color. Station numbers for control valves shall be stenciled on lids.

3.2.2.4 Quick Coupling Valves

All new quick coupler valves used for recycled water shall be of a design that prevents the quick coupler (spike) from being used in potable water quick couplers. Quick coupling valves shall conform to the following:

Rating - Quick Coupling Valves shall be 3/4-inch or one-inch nominal size with brass construction, *acme* thread body and key and a normal working pressure of 150 psi.

Cover - The cover shall be permanently attached to the quick coupling valve. It shall be purple in color and made of rubber or vinyl with the following information stamped or molded on the cover or other approved equal:

a) "Recycled Water" in English and Spanish
b) "Do Not Drink" in English and Spanish
c) The international "Do Not Drink" symbol (A glass of water in a circle with a

slash through it)

d) Locking cover

Other valves shall be of the type and manufacture shown on the plans or approved equal. All underground gate valves three inches and smaller may be furnished with either operating nuts or handwheels.

3.2.2.5 Irrigation Heads

For retrofitted sites, irrigation heads and risers do not need to be replaced. As heads or materials are replaced, new equipment shall be suitable for recycled water use.

For new construction, irrigation heads and risers shall be installed with purple non-potable caps or stickers indicating recycled water use. All onsite irrigation (sprinkler) heads shall conform to the following:

Rating - Sprinkler heads shall be the types and sizes with the radius of throw, pressure, discharge and any other designations, as indicated on the plans.

Manufacture- All heads of a particular type of function in the system shall be of the same manufacture and shall be marked with the manufacturer's name and identification in such a position that they can be identified without being removed from the system

Risers - All sprinkler risers shall be as shown on the plans.

Substitutions - Any substitutions for items specified on the plans must be submitted to the design engineer for approval.

3.2.2.6 System Control Devices

All onsite irrigation controllers and appurtenances shall conform to the following:

Type - Automatic controllers shall be of the type and manufacturer shown on the plans or approved equal. Each controller shall be capable of three repeats daily.

Wiring - All control and supply wiring shall conform to local electrical codes.

3.3 METHODS OF CONSTRUCTION

3.3.1 Onsite Irrigation Systems

Methods of construction for onsite irrigation systems shall be in accordance with the requirements of the City's Standard Specifications, except as herein modified.

3.3.1.1 Valve Installations

All onsite valves shall be installed in accordance with the following specifications:

Location - Piping systems shall be supplied with valves at all points shown on the drawings or specified herein, arranged to give complete regulating control throughout.

Size - Valves shall be the full size of the line in which they are installed unless otherwise indicated.

Adjustment - Remote control valves shall be adjusted so that the most remote sprinkler heads operate at the pressure recommended by the head manufacturer. Remote control valves shall be adjusted so a uniform distribution of water is applied by the sprinkler heads to the planting areas for each individual valve system.

Clearance - Quick coupling valves shall be set approximately 12 inches from walks, curbs, headerboards or paved areas, where applicable. Vertical positioning of quick coupling valves shall be such that the sleeve tops will be flush with settled finished grade as determined after the turf is established.

Method - All valves shall be installed as shown in details and in accordance with manufacturer's recommendations.

Valve Boxes - Valve boxes shall be set 1/2 inch above the designated finished grade in lawn areas and two inches above finished grade in ground cover areas. Valve boxes installed near walks, curbs, headerboards and paving shall abut those items. The top surfaces shall be flush with items listed above. Pea gravel shall be installed in the base of each valve box.

Markers - Valve markers shall be used in play field areas, with two-inch PVC pipe leading to each underground valve box. Valve markers shall be as manufactured by Rainbird or equivalent with locking top. Control station numbers shall be placed on the underside of each control valve marker.

3.3.1.2 System Control Device Installations

All onsite irrigation controllers and electrical appurtenances shall be installed in accordance with the following specifications:

Location - Each automatic controller shall be installed at the approximate location shown on the plans. All pedestal mounted controllers shall be mounted on a suitable concrete base.

Power Supply - All local and applicable codes shall take precedence in the furnishing and/or connecting of 110-volt electrical service to the controller.

Control Wiring - The installation of all electrical equipment and control wiring shall comply with local and state codes and be performed by those skilled and licensed in the trade. Unless the governing code specifies otherwise, low voltage control wire may be installed by the sprinkler irrigation contractor when code allows. A minimum of 18-inch coverage shall be provided over low voltage leads.

Connections and Splicing - Connecting and splicing of wire at valves shall be made using connectors, Scotchpact, or equal.

3.3.1.3 Separation From Other Utilities

Separation between onsite recycled water lines and sanitary sewers and potable water lines shall be established upon installation in accordance with the latest requirements set forth by the California Department of Public Health.

3.3.2 Construction Water Facilities

3.3.2.1 Laying Pipe

Recycled water service laterals laid below grade as required by design shall be buried to a depth of at least 18 inches. Pipe trenches shall be backfilled with clean material containing no rocks and debris that can damage the pipe.

Recycled water lines laid above grade shall be protected from thrust motion if such protection is determined to be required by the Engineer or Inspector. To achieve such protection, metal stakes with wire lashes shall be installed at all bends in the pipeline of 45 degrees or greater. Alternative methods of protection from thrust motion may be approved by the Engineer or Inspector.

3.3.2.2 Valve Installations

All valves installed along the recycled water transmission pipeline and not attached to a rigid structure shall be protected from thrust motion if such protection is determined to be required by the Engineer or Inspector. To achieve such protection, metal stakes with wire lashes shall be installed at all such valves. Alternative methods of protection from thrust motion may be approved by the Engineer or Inspector.

3.3.2.3 Storage Tank Installations

All recycled water storage tanks shall be erected only on level ground. Provisions shall be made to prevent differential settling of the tank supporting structure either because of moisture accumulation or poor underlying soil conditions. All storage facilities shall be identified as recycled water to the satisfaction of the City.

3.4 INSPECTION

3.4.1 Onsite Irrigation Systems

3.4.1.1 Obligations

The inspection of the work shall not relieve the Contractor of any of his obligations to complete the work as prescribed by the applicable specifications. Defective work shall be made good and

unsuitable materials may be rejected notwithstanding the fact that such defective work and unsuitable materials have been previously overlooked by the Inspector and accepted. The installation and inspection of unsuitable materials shall not be construed as acceptance, and modification to these specifications shall only be made by the City in writing.

3.4.1.2 Construction Schedule

The Contractor shall submit a schedule to the City outlining his proposed construction operation. Reception of this submittal shall be acknowledged by the City and shall initiate the construction inspection process. The Contractor shall give the City at least 48 hours notice before the desired time of starting work.

Whenever the Contractor varies the period during which work is carried on each day or deviates from the schedule, he/she shall give due notice to the Inspector so that proper inspection may be provided. Any work done in the absence of the Inspector shall be subject to rejection.

3.4.1.3 Notification and Approvals

All work, onsite and offsite, shall be subject to inspection by the City and shall be left open and uncovered until the installation is approved by the Inspector. If needed at the discretion of the City, City will notify any other Agencies for inspection. No pipe, valves, fittings or other materials shall be installed until inspected and approved by the Inspector. All installations that are to be backfilled shall be inspected and approved by the Inspector prior to backfilling; and the Contractor shall give due notice to the Inspector in advance of backfilling so that proper inspection may be provided. Unless the City expressly states otherwise, 48 hours notice shall be given by the Contractor in advance of any and all inspection requirements, whether for materials or construction work.

3.4.1.4 Inspection Intervals

The Contractor shall not proceed with any subsequent phase of work until the previous phase has been inspected and approved by the Inspector. Inspection shall be made on a continuous basis and shall specifically include, but not be limited to, the following intervals of work:

(a) Reception of all materials to work site prior to any installations.
(b) Trench excavation and bedding prior to placement of the pipe fittings or structures.
(c) Placing of pipe, fittings and structures.
(d) Placing of backfill and compaction and/or consolidation of backfill within the pipe zone.
(e) Placing the remainder of backfill and performing necessary backfill, compaction and testing as required herein.
(f) Testing and inspection after all compaction and backfill requirements are achieved and prior to paving.

3.4.1.5 Final Inspection

Following the completion of all construction work and the submittal and approval of record

documents, the Contractor shall request final inspection of the work with a 48-hour notice. This request shall include the scheduling of the operational testing.

3.4.2 Construction Water Facilities

3.4.2.1 Obligation

The inspection of the work shall not relieve the Operator of any of this obligations to install the facilities as prescribed by the applicable specifications. Defective work shall be made good, and unsuitable materials may be rejected notwithstanding the fact that such defective work and unsuitable materials have been previously overlooked by the Inspector and accepted. The installation and inspection of unsuitable materials shall not be construed as acceptance, and modification to these Regulations shall only be made by the City in writing.

3.4.2.2 Construction Schedule

The Operator shall give the City at least 48 hours notice before the desired time of starting installation work.

3.4.2.3 Notification and Approvals

All work shall be subject to inspection by the City. No pipe, valves, fittings or other materials shall be placed into operation until inspected and approved by the Inspector. If needed at the discretion of the City, City will notify any other Agencies for inspection. Unless the City expressly states otherwise, 48 hours notice shall be given by the Operator in advance of any and all inspection requirements, whether for materials or installation work.

3.4.2.4 Final Inspection

The Operator shall request final inspection of the work. Final inspection shall include a visual examination by the Inspector and an operational leak test of all onsite facilities in the Inspector's presence.

3.5 REVIEW AND TESTING

3.5.1 Onsite Irrigation Systems

3.5.1.1 Materials

The Contractor shall furnish the City information regarding the character and quality of materials used. When requested by the City, the Contractor shall submit a certification that the product meets

the requirements of these Regulations.

All pipe and accessories shall be carefully inspected by the Contractor for damage in transit. Any damaged pipe or fittings delivered and unloaded at trench side shall be rejected and removed by the Contractor from the site of the work.

3.5.1.2 Installed Piping Systems

New piping systems shall be subjected to a hydrostatic pressure that is administered by the Inspector with the cooperation of the Contractor. Before testing, the pipe shall be backfilled or center-loaded to hold the pipe in place while testing. The water necessary to maintain this pressure shall be measured through a meter or other means satisfactory to the Inspector. The leakage shall be considered as the amount of water entering the pipe during the test, less the measured leakage through valves and bulkheads. Any noticeable leaks shall be stopped and any defective pipe shall be replaced with new sections. The City shall establish the criteria by which the leakage is determined to be excessive and unacceptable.

The test shall be made prior to connecting the new piping system with existing systems or a service connection. The test shall be conducted with valves open and the open ends of pipes, valves and fittings suitably plugged. Valves shall be operated during the test period.

All concrete anchor blocks shall be allowed to cure a sufficient time to develop design strength prior to testing. All labor, materials, tools and equipment for the testing shall be furnished by the Contractor.

3.5.1.3 Operational Testing

Prior to final acceptance by the City, all onsite irrigation systems shall be required to successfully pass an operational test as administered by the Engineer or Inspector. The operational test shall be requested of the City by the Owner only after all other construction requirements are satisfied and other inspection procedures completed. The test shall be conducted in the presence of representatives from the City, the Owner or User, the Engineer and the Contractor. The scheduling of these tests shall be the responsibility of the Owner within a 48-hour notice.

The system or portions of the system in turn shall be placed into operation and the following items examined:

(a) Cycling of the program for the automatic controllers.
(b) General coverage of the irrigation pattern.
(c) All aspects of the irrigation conditions, including tendencies toward windblown spray, runoff and ponding.
(d) Required protection of all public facilities present in the approved use area.

Any required corrections shall be noted in the form of a punch list and submitted to the Owner by the City for correction by the Contractor. Regular service startup shall not be authorized until all corrections are made to the satisfaction of the City.

3.5.2 Construction Water Facilities

3.5.2.1 Materials

The Contractor shall furnish the City information regarding the character or quality of materials used.

3.5.2.2 Installed Piping Systems

Installed piping systems shall be subjected to a leak test administered by the Inspector with the cooperation of the Contractor. Before testing, the pipe and valves shall be staked if such protection from thrust motion has been determined to be required by the Engineer or Inspector. Any noticeable leaks shall be stopped and defective materials shall be replaced. Valves shall be operated during the test period.

3.5.2.3 Operational Testing

Prior to final acceptance by the City, all construction facilities shall be required to successfully pass an operational test as administered by the Utilities Manager or Designee. The leak test for installed piping systems in conjunction with a leak test of all storage tank installations shall constitute the operational test.

Any required corrections shall be noted in the form of a punch list and submitted to the Contractor by the City for correction. Service startup shall not be authorized until all corrections are made to the satisfaction of the City.

3.6 IDENTIFICATION

3.6.1 Onsite Irrigation Systems

3.6.1.1 Posting Approved Use Areas

All use areas where recycled water is used and that are accessible to the public shall be posted with conspicuous signs, in a size no less than 4 inches by 8 inches, that include the following wording and picture symbol: "RECYCLED WATER - DO NOT DRINK". See Exhibit 3 for the acceptable symbol. The sign(s) shall be of a size easily readable by the public. The prescribed wording should also be translated into Spanish and other appropriate languages and included in the required signs.

3.6.1.2 Identification Guidelines for Nondomestic and/or Recycled Pipelines

Identification of Existing Buried Recycled Water Lines - Existing buried piping which will be converted to recycled water use need not be marked unless the piping becomes exposed, such as during installation of new pipeline or maintenance of existing pipe. The exposed section must be

marked as indicated above for new piping.

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 ten-foot 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. Special permission is required from both the City Engineer and California Department of Public Health if above-grade piping is not to be labeled.

3.6.1.3 Identification Guidelines for Nondomestic and/or Recycled Appurtenances

Identification tags and stickers must be weatherproof and durable, such as plastic or plastic coated. Recycled water identification tags and stickers must have a purple background with permanent black lettering stating "RECYCLED WATER-DO NOT DRINK" and "AVISO, AGUA IMPURA-NO TOMAR". Potable water identification tags and labels must have a blue background with "POTABLE WATER" and "AGUA PARA TOMAR" in permanent black lettering.

3.6.1.4 Valve Tags

All recycled water sprinkler control valves, strainers, pressure regulator, quick couplers, isolation valves shall be tagged with identification tags.

(1) Tags shall be weatherproof plastic, 3" x 4", purple in color with the words "WARNING - RECYCLED WATER - DO NOT DRINK" imprinted on one side, and "AVISA - AGUA IMPURA - NO TOMAR" on the other side. Imprinting shall be permanent and black in color. Use tags as manufactured by T. Christy Enterprises or approved equal.

(2) One tag shall be attached to each appurtenance as follows:

a) Attach to valve stem directly or with plastic tie wrap or
b) Attach to solenoid wire directly or with plastic tie wrap or
c) Attach to valve cover with existing valve cover bolt.
d) Attach to the body of the relative appurtenance with a plastic tie-wrap.

Isolation Valves - New and existing isolation valves 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.

Remote Control Valves - New and existing remote control valves must be installed in a marked valve box indicating recycled water with a recycled water identification tag on the valve.

Pressure Regulating Valves and Strainers - New and existing pressure regulating valves and strainers must be installed in a marked valve box with a recycled water identification tag on the valve/strainer.

Water Meters, Pumps, Pump Control Valves, Air Vacuum Relief Valves - All of these recycled water devices must be tagged with a recycled water identification tag.

Recycled Water Backflow Prevention Devices - If applicable, these devices must be tagged with a recycled water identification tag.

Potable Water System Devices - At recycled water use sites where potable water is used, all potable water meters and above grade water devices, such as backflow prevention devices and hose bibs, must be tagged or labeled. For example:

- **Backflow Prevention Devices** – colored BLUE indicating potable water use
- **Hose Bibs** – use an anti-siphon nozzle and be affixed with a BLUE identification tag indicating potable water.
- **Quick Coupling Valves** – use a slotted style body with different size from recycled water quick coupling valves onsite and use a yellow cap in a green valve box. Potable water quick coupling valves shall also be tagged with a BLUE identification tag indicating potable water.

3.6.1.5 Pipe Identification

All recycled water piping and appurtenances in new installations and appurtenances in retrofit installations shall be colored purple or distinctively wrapped with purple tape in accordance with Chapter 7.9, Section 4049.54 of the California Health and Safety Code.

All potable water piping installed within the same project limits as the onsite recycled water irrigation piping shall be installed in accordance with the uniform plumbing code and all other local governing codes, rules and regulations. Potable water piping shall be copper with BLUE identification tape affixed directly to the pipe. Pipe and identification must be inspected by the City before being backfilled. Variance from this requirement requires approval from both the City Engineer and California Department of Public Health.

3.6.1.6 Control Device Identification

Each automatic controller and its associated equipment shall be identified with a sign bearing the words **"RECYCLED WATER USED"** in English and Spanish, with white letters at least one inch high on a purple background. The sign shall be placed so it can be readily seen by all Operations Personnel utilizing the equipment.

3.6.2 Construction Water Facilities

Use of recycled water for construction requires a Use Permit from the City.

3.6.2.1 Posting Approved Use Area

Posting the use recycled water shall be required and shall be accomplished at the main entrance to the site or at the onsite field office or maintenance building. The required posting shall consist of at least

one sign bearing the words "DO NOT DRINK -RECYCLED WATER USED FOR CONSTRUCTION" in English and Spanish, with white letters two inches high on a purple background. The sign shall be so placed that it can be readily seen by all Operations Personnel utilizing the facilities.

3.6.2.2 Pipe Identification

All recycled water piping and appurtenances in new installations and appurtenances in retrofit installations shall be colored purple or distinctively wrapped with purple tape in accordance with Section 116815 of the California Health and Safety Code.

3.6.2.3 Valve Identification

All valves shall be installed above grade and shall have their handles, operators and/or bodies painted green.

3.6.2.4 Storage Tank Identification

Each and every storage tank using recycled water shall be identified by a painted label. The label shall contain the words "DO NOT DRINK - RECYCLED WATER USED FOR CONSTRUCTION" in English and Spanish, with white letters two inches high on a purple background. In addition, at least one sign shall be posted on the fence surrounding each storage tank. The label and sign shall be so placed that they can be readily seen by all Operations Personnel utilizing the facilities.

3.6.2.5 Vehicle Identification

Each and every distribution vehicle shall be identified by painted labels or signs as using recycled water. The label shall contain the words "DO NOT DRINK - RECYCLED WATER USED FOR CONSTRUCTION" in English and Spanish, with white letters two inches high on a purple background. One label shall be placed on the driver's side of the vehicle on the tank at a spot close to the cab. One label or sign shall be placed on the rear surface of the tank. The labels or signs shall be so placed that they can be readily seen by all Operations Personnel utilizing the vehicles.

3.7 RECYCLED RETROFIT GUIDELINES

3.7.1 Guidelines and Regulations

In general, as provided for herein the City of San Clemente Rules and Regulations, all irrigation facilities converting from a potable to a recycled water supply shall conform to the City's Standard Specifications. City of San Clemente will notify California Department of Public Health agencies of the intent to convert and solicit their involvement through out the process. The facilities to be converted shall be investigated in detail including review of any record

drawings, preparation of required reports, and determinations by the City of San Clemente of measures necessary to bring the system into full compliance with these standard specifications. The applicant, owner, or customer shall pay all costs to convert the system to use recycled water.

3.7.2 Plan Check Retrofit Guidelines

No piping system used for conveying recycled water shall be converted without the written approval from the California Department of Public Health, and the City of San Clemente Water Utilities Department.

The following recycled water plan check-off list must be strictly adhered to in addition to the guidelines stated below:

1. A preliminary site inspection should be conducted to address problem areas before beginning design of site plans. On complex or questionable sites, California Department of Public Health should participate. This notification will be up to the City.

2. Before a potable service will be converted to recycled water a site plan must be submitted to the City for approval. The City will review and submit in-kind to California Department of Public Health (CDPH) for approval. The title sheet must include the following information at a minimum:
    a. Project Name
    b. Vicinity/location map with north arrow shown
    c. Property boundary
    d. Date plans were prepared and revisions, if any were made
    e. Declaration of responsibility signed and dated
    f. Index of Sheets
    g. Mailing address, email address and telephone number of the onsite supervisor
    h. Mailing address, email address and telephone number of the site owner (if different)
    i. Recycled water standard notes in their entirety as included in these guidelines

2. Other items must be included within the plan set, preferably on the site plan sheet (which is required) and shall include at a minimum the following items:

    a. Recycled water mains (pressure pipe)
    b. Potable water mains
    c. Locations of recycled water use signage (minimum 2 per site)
    d. Point of connection(s)
    e. Location of meters (recycled and potable)
    f. Location of wells (if applicable)
    g. Fire laterals and fire hydrants
    h. Location of water courses and major catch basins (if applicable)
    i. Indicate on the plans any designated outdoor eating areas or drinking fountains. Verify these areas are protected against contact with recycled water over spray,

mist, or run-off

j. Typical cross section of recycled water and potable line crossings (if applicable)
k. Quick coupler detail with quick coupler valves shall be of a type approved for recycled water use
l. Irrigation legend
m. Recycled water note on separation. A physical separation shall be provided between adjacent areas irrigated with recycled water and potable water. Separation shall be provided by distance, physical barrier such as a concrete mow strips or other approved methods
n.
o. Use of an aerial background if required by City.

Once approval is granted by the City, plans shall be submitted through the City to the CDPH for approval. If a large number of sites will be retrofitted at one time then the sites can be packaged under one title page for signature.

4. Before a potable water service is actually converted to recycled water, a cross connection test shall take place. The test must be conducted as closely as possible to the time of actual recycled water service delivery. If service can not be delivered within the business week, the City and/or CDPH representative has the option to retake the cross connection test at the Contractor's/Landscaper's cost. See City's website for the Cross connection test procedures < http://san-clemente.org/departments-services/recycled-water>.

SECTION 4: PROCEDURES FOR ADMINISTRATION

4.1 OBTAINING SERVICE

Interactions between the City and the Owner/User, or representatives, are indicated in the sections of these Regulations concerning the design and construction phases of a recycled water service or system. Additional interactions may be required by the City for the administration of a recycled water service. Please visit http://san-clemente.org/departments-services/recycled-water for additional information.

4.1.1 Application Submittal

An application for recycled water service shall be submitted to the City only after the City has accepted the feasibility of the proposed service. Approval for service shall be indicated by the City's issuing a User Permit (see Exhibit 2) to the Applicant. The User Permit shall come into force only after construction of the subject project has been completed, final acceptance has been granted by the City, and approval for service startup has been given by the City.

The application for recycled water service shall be made in writing and signed by the Applicant, who may be the Owner or authorized representative. The application form (see Exhibit 1) shall be furnished by the City and shall request information concerning the Applicant's company, the Applicant's relationship to the subject property as legal owner, tenant, or lessee, they type of recycled water use, a bounds description of the property to be served, the purpose for which the property is to be used, the total area to be served per this applications, and any special conditions for service pursuant to these Regulations. Certain technical information, derived from the design and peculiar to the type of recycled water use, may also be requested.

The application form shall be accompanied by a service exhibit measuring 8-1/2 inches by 11 inches. This exhibit shall be a scaled drawing delineating the subject service area, identifying location and size of all service connections, delineating areas in which recycled water service is to be specifically excluded, and showing the nearest major arterial highway(s).

4.1.2 City Evaluation

Upon receipt of an application, the City Engineer or his/her designee shall review the application and make such investigation relating thereto as he deems necessary. The City Engineer or his/her designee may prescribe specific requirements in writing to the Applicant as to the design of the facilities, the manner of construction, the method of operation, and the conditions of service. An evaluation shall be performed which will establish that all information obtained on the form is consistent with these Regulations and the applicable requirements of the Regulatory Agencies. Upon successful

completion of its evaluation, the City shall submit the application form and the required exhibit to the State Department of Health Services and California Department of Public Health for their review.

4.1.3 City Determination

The City reserves the right to determine the size of the recycled water service line, the service connection, the meter and any and all other appurtenances to the service. The recycled water service line shall be installed to a curb line or property line of the approved use area, abutting upon a public street, highway, alley, easement, lane or road (other than a freeway) in which is installed a recycled water distribution main of the City.

4.1.4 Issuing of User Permit

A User Permit issued by the City to the Applicant shall constitute a legally binding service agreement between the two parties. In its administration, a User Permit hereby incorporates these Regulations and any additional requirements prescribed by the Utilities Manager or by the City Engineer, or both, to ensure continued operation of the recycled water system and to protect the public health. The City shall assign an accounting number to each permit issued.

4.1.5 Establishing Service Connection

Following the City's approval of onsite facility design or layout, and prior to onsite facility installation, the User or Operator shall request the City to install the meter(s). The City shall make the installation, including all required appurtenances, within five working days from receipt of the request.

Prior to regular service startup, the service connection may be used to supply water to onsite facilities to permit the testing of all or a portion of the facilities during installation. The Inspector shall be notified at least 48 hours in advance of such intended use of recycled water. This interim service shall be accomplished by a jumper supplied and installed by the City. The Inspector shall be advised of all use of recycled water through the jumper. Customer is responsible for installation of proper backflow prevention and coordinating inspections with the City.

The request for the meter(s) shall be accompanied by all requisite fees for installation and connection as indicated in the current rate and fee schedule and as appropriate for the size and type of service.

4.1.6 Certification Submittal

Once the Operator of an onsite recycled water system has been selected by the User, the certification of the recycled water service Operator must be initiated. The operation certification by the Operator

shall be submitted to the City as part of the request for service startup. The City shall evaluate this submittal and advise the Operator of the need for any additional information or action.

Following receipt of operation certification and after granting final inspection approval of the onsite facilities, the City shall approve certification accordingly. The completed recycled water service certification shall be processed with the User's request for service startup by the City.

If the User selects a new Operator during the course of service, a new operation certification shall be submitted by the new Operator to the City. The City shall then review and process the new operation certification for approval.

4.1.7 Service Startup

Following final inspection of the project by the City, the User shall request regular service startup. To provide regular service startup, the City shall first remove any jumper that may have been employed for interim service during installation and testing of the onsite facilities. The City shall then set the water meter, which is purchased by the Owner/User, and complete the startup installation.

4.1.8 Confirmation of Service Startup

Within ten working days of service startup, the City shall confirm such startup with the San Diego RWQCB and the California Department of Public Health.

4.2 CONDITIONS OF SERVICE

The City reserves the right, at its own discretion, to revoke a user permit if all or any of the service conditions contained herein are not satisfied at all times.

4.2.1 Regulatory Conditions

Service to a User may be terminated at any time if the quality of the recycled water does not comply with the requirements of Regulatory Agencies or at any time the User's operations do not conform to these Regulations.

4.2.2 Financial Conditions

All rates and fees regarding non-domestic and/or recycled water service and their respective administrative provisions shall be fixed and established by the City. The most current rate and fee schedule so established is hereby incorporated into these Regulations by reference.

4.2.3 Operational Conditions

4.2.3.1 Liability

The City shall not be liable for any damage by water or otherwise resulting from defective plumbing, broken or faulty service or recycled water mains. The City shall not be liable for any damage caused by any onsite facilities.

4.2.3.2 Service Pressure

When a reasonable service pressure would not be available to onsite facilities not previously served from the domestic (potable) water system, the User shall be responsible for correcting this situation. If the available service pressure would be too high, the User shall provide a pressure-reducing valve downstream of the meter to obtain a reasonable working pressure. If the available service pressure would be too low, the User shall provide booster pumping to correct the deficiency.

When a reasonable service pressure would not be available to onsite facilities previously served from the domestic water system, correcting this situation upon conversion to the recycled system shall be handled as follows:

(a) If User-provided booster pumping or pressure-reducing valve was required for onsite facilities when service was provided from the domestic water system, then User-provided booster pumping or pressure-reducing valve shall be required for recycled water service.

(b) If reasonable service pressure was available for the onsite facilities when service was provided from the domestic water system, then the correction of this situation shall be handled on a case-by-case basis in conjunction with the City.

4.2.3.3 Service Scheduling

In order to maintain acceptable working conditions throughout the recycled water distribution system, the City may schedule the use of recycled water. Such scheduling may involve programming deliveries to different Users and/or to various portions of a single User's onsite system. Any scheduling shall take into account applicable constraints of Regulatory Agencies, the requirements of these Regulations, and the operating constraints of affected Users.

4.2.3.4 Relation of Property to Service

A service connection shall not be used to supply adjoining property of a different Owner, or to supply property of the same Owner across a street or alley. When property provided with a service connection is subdivided, such service connection shall be considered as belonging to the lot or parcel of land that it directly enters.

4.2.3.5 Metering

All recycled water used on any premises where a meter is installed shall pass through the meter. Users shall be held responsible and charged for all water passing through their meters.

4.2.3.6 Other Conditions

Conditions relating to meter reading and testing, turn-offs and turn-ons, shall be the same as established for the domestic (potable) water system.

4.3 SYSTEM SUPERVISION

4.3.1 Onsite Irrigation Systems

The City shall receive in the certification of recycled water service from the Operator the following information: the individual designated as Onsite Supervisor- his name, the address and telephone number of his location during normal working hours, and the telephone number at which he or his designated representative can receive messages during off hours. The City shall evaluate the designated individual and approve or reject the designation for just cause. Specific responsibilities of the Onsite Supervisor include the proper installation, operation, and maintenance of the irrigation system; compliance of the project with these Regulations, prevention of potential hazards and preservation of the recycled water distribution system plans in "as built" form. It shall be the responsibility of the Operator to notify the City of a change in the designation of the Onsite Supervisor. Following such notification, the City shall again perform its evaluation.

The Onsite Supervisor shall be thoroughly familiar with the entire system within his responsibility and with all applicable conditions of recycled water use. He shall be the contact person for the Operator in all matters between the Operator and the City concerning the operation of the onsite system and the use of recycled water.

A copy of the recycled water rules and regulations, irrigation system layout map, and a recycled water system operations manual shall be maintained at the use area. These documents shall be available to operating personnel at all times.

For more information visit http://san-clemente.org/departments-services/recycled-water.

4.3.2 Construction Water Facilities

The City shall receive in the certification of recycled water service from the Operator the following information regarding the individual designated as Onsite Supervisor: his name and the address and telephone number of his location during normal working hours. Specific responsibilities of the Onsite

Supervisor include the proper installation, operation, and maintenance of the irrigation system; compliance of the project with the City's rules and regulations, prevention of potential hazards and preservation of the recycled water distribution system plans in "as built" form. The City shall evaluate the designated individual and approve or reject the designation for just cause. It shall be the responsibility of the Operator to notify the City of a change in the designation of the Onsite Supervisor. Following such notification, the City shall again perform its evaluation.

The Onsite Supervisor shall be thoroughly familiar with the entire system within his responsibility and with all applicable conditions of recycled water use. He shall be the contact person for the Operator in all matters between the Operator and the City concerning the operation of the construction water facility and the use of recycled water.

A copy of the City of San Clemente Rules and Regulations for Recycled water, irrigation system layout map, and a recycled water system operations manual shall be maintained at the use area. These documents shall be available to operating personnel at all times.

4.3.3 Rules and Regulations for Hauling or Transportation of Recycled Water From Commercial Vehicle Fill Stations

Refer to Exhibit 5 for the City's Commercial Recycled Water Truck Program Guidelines and User Permit.

4.3.3.1 Permit required. Haulers interested in participating in this program must apply for a Recycled Water Use Permit issued by the City. See Section 2.3.2.3 and http://san-clemente.org/departments-services/recycled-water for additional information.

4.3.3.2 Requirements for Trucks

(a) Trucks hauling recycled water that may also be filled with potable supplies for non-potable purposes shall have a dedicated potable use fill line through an air gap separation. The fill lines shall be properly labeled as potable or recycled water. As an alternative, the water supplier may install a reduced pressure principle backflow device on the potable system for filling trucks with potable water. Vehicles used exclusively to transport recycled water shall not be used to carry water for potable purposes.

(b) The risers, hoses, and fittings for each supply shall be color coded or painted blue for potable and purple for recycled water.

(c) The hoses, hydrants, and risers for each supply shall have separate and unique fittings (e.g., 2-1/2 inch diameter on the potable system and 2 inch diameter on the recycled water system) such that the potable system cannot accidentally be used on the recycled system and vice versa.

(d) All vehicles used in transporting recycled water must be clearly marked with typical signage that reads: "CAUTION: RECYCLED WATER- DO NOT DRINK" in English and Spanish.

(e) A truck or tank that has contained material from a septic tank or cesspool shall not be used to distribute recycled water.
(f) Vehicles used for transportation or distribution of recycled water, or for street sweeping must be equipped with an air gap to ensure backflow protection.

4.3.3.3 Use requirements.

(a) The use of recycled water for street sweeping or construction shall comply with the City's permit for discharges from the municipal separate storm sewer system, San Diego Regional Water Quality Control Board Order No. R9-2013-0001, NPDES Order No. CAS0109266, as it exists or may hereafter be amended or reissued.
(b) Haulers must enter the date and amount collected on the fill station log sheet during each visit and specify the locations the recycled water will be used and approximate amounts.
(c) For Hydrant Meter Filling Stations, haulers must ensure the meter is shut off before disconnecting the fill line and make sure no water is leaking from the meter or hydrant.
(d) For Gate Access Filling Stations, haulers must ensure no water is leaking from the fill pipe or hose and securely re-lock the gate after leaving the filling station.

4.3.4 Rules and Regulations for Use of Recycled Water for Fire Fighting

The City and user must comply with the following requirements if recycled water is used for firefighting:

1. Unused recycled water must not be released into streams, rivers, or waterways.

2. Fire hydrants supplied with recycled water must be clearly identified by purple paints, signs, tags, stencils or other such labeling, in order to notify firefighters that the fire hydrants are supplied with recycled water.

3. Fire truck tanks must be disinfected following the use of recycled water for firefighting, since fire trucks could be used to distribute drinking water during civil emergencies.

4. Firefighting personnel must be adequately trained in safe use of recycled water. New and current firefighting personnel must receive periodic refresher courses regarding proper handling and use of recycled water.

4.3.5 Offsite Distribution Systems

The City shall designate a recycled water Offsite Supervisor who shall be responsible for the operation of offsite distribution systems, for the surveillance of all Users, and for the assessment of water quality as it relates to compliance with requirements of Regulatory Agencies. The name of this individual and his designated function shall be listed by the City in the certification of recycled water service and thereby incorporated within the user permit.

The Offsite Supervisor shall be thoroughly familiar with the entire system within his responsibility and with all applicable conditions of recycled water use. He shall be the contact person for the City in all matters between the User/Operator and the City and between the City and the Regulatory Agencies concerning the operation of recycled water systems and the use of recycled water. The Offsite Supervisor shall regularly inspect onsite systems and their operation for conformance with these Regulations.

4.4 REPORTING

As delineated in these Regulations, certain reporting or notification between the parties involved with the use of recycled water may be conducted in person or by telephone. The following reporting shall be made in writing and relates to ongoing recycled water service.

4.4.1 To the User

The following reporting shall be made by the City to the User:

(a) The quantity of recycled water utilized by the User during the billing period, to be submitted as part of the City's billing for recycled water service and based on the User's meter reading.

(b) The quality of recycled water delivered to the User, to be submitted only at the specific request of the User and based on analytical work performed by the City, a bacteriological analysis generally being performed daily and a chemical analysis generally being performed once a month.

(c) Any other information required by a Regulatory Agency.

4.4.2 To the Regulatory Agencies

Most reporting by the City to Regulatory Agency has to do with reclamation plant performance and quality of plant effluent and is beyond the scope of these Regulations which deal with the distribution of the recycled water after treatment of interception. Monitoring and Reporting of recycled water discharges will continue to be documented and submitted to the RWQCB by February 1st each year. With respect to distribution of the recycled water, the City shall report on an annual basis the following types of information to the appropriate Regulatory Agency:

(a) Names of User and identification of lands that are irrigated with recycled water or that receive application of recycled water for construction purposes.

(b) Quantities of recycled water used by each User.

(c) Type of use made by each User.

(d) Any failure of pipeline or facilities that causes water to be discharged into unauthorized areas.

(e) Any violation of the City's Regulations that causes a violation of the Regulatory Agency requirements.

(f) Commercial Fill Stations reporting:

i. A list of all approved recycled water haulers. The City's annual list must also indicate any new recycled water haulers that were approved during the calendar year.

ii. A list of users receiving or proposing to receive recycled water from the fill stations (including a list of uses of recycled water for each user).

iii. A list of recycled water end use sites outside the City's recycled water service area.

iv. A summary of the volume of recycled water used (in acre feet) from the fill stations each quarter during the calendar year.

v. A summary table listing all inspections conducted of recycled water use sites which received recycled water from the fill stations during the calendar year, and enforcement and corrective actions initiated by the City during the calendar year. Include a discussion on compliance and any corrective action taken, as well as any planned or proposed actions needed to bring the discharge into compliance with the NOA and General Order. Copies of any enforcement actions taken by the City shall be provided to the DOW, San Diego Water Board, and OCHCA.

(g) An evaluation of the performance of the recycled water treatment facility, including discussion of capacity issues, system problems, and a forecast of the flows ·anticipated in the next year.

(h) Results of priority pollutant monitoring from a sample of the final effluent from the San Clemente WRP pursuant to Attachment B (Monitoring and Reporting Program) of the General Order. The final effluent from the San Clemente WRP shall be analyzed annually for priority pollutants.

(i) The name and contact information for the recycled water operator or City staff member responsible for overseeing operation, maintenance, and system monitoring of the fill stations.

Customer complaints concerning recycled water use that may involve public illness shall be reported to the California Department of Public Health and the Department of Homeland Security, and the City shall maintain a log of all customer complaints regarding recycled water.

4.4.3 To the City

The User shall provide written notification to the City of any proposed material change in the character of the use of recycled water. The User shall not implement any such material change in the use of recycled water until and unless such change is approved in writing by the City.
The User shall notify the City of any customer complaints concerning recycled water use that may involve public illness.

4.5 VIOLATIONS

4.5.1 Determination

The City reserves the right, at its discretion, to determine whether a violation of the Regulations has resulted from any action or occurrence that is the responsibility of the User. Insofar as the violation of these Regulations constitutes a violation of any Regulatory Agency requirement, the City makes its determination on behalf of the concerned agency.

4.5.2 Specific Violations

Specific violations shall include those that directly cause noncompliance with any one of the specific prohibitions as listed in these Regulations: runoff conditions, ponding conditions, windblown spray conditions, unapproved uses, disposal in unapproved areas, cross connections, unprotected drinking fountains, unprotected public facilities, hose bibs and fire hydrants. However, by definition, noncompliance with any condition or conditions of these Regulations, whether willfully or by accident, shall constitute a violation.

4.5.3 Corrective Action

If the Offsite Supervisor's investigation results in the determination that a violation has occurred, then he shall immediately notify the Operator. It shall be the responsibility of the Operator to initiate action that will correct the conditions having caused the violation. If, in the opinion of the Offsite Supervisor, the violation constitutes an immediate danger to the public health, then service shall be terminated immediately by shutting off the meter and locking it. Service shall be resumed only after the violation has been corrected to the satisfaction of the Offsite Supervisor.

If the violation is determined to be of lesser degree, then a timetable for completing the corrections shall be negotiated with the Offsite Supervisor by the Operator, with the final approval by the City. Corrections not being made in accordance with the timetable shall also result in the termination of service by shutting off the meter and locking it.

Regardless of the extent of the violation, the User shall incur a service startup fee in accordance with City’s fee schedule for the resumption of a service that has been locked off.

4.5.4 Appeal

If the User feels that he has just cause, he may appeal, in writing, the determination of the Offsite Supervisor to the City Public Works Director. If the City Public Works Director does not resolve the issue, the City Public Works Director will present the appeal before the City Manager. The appeal

shall state the conditions that the Offsite Supervisor has determined to be in violation and the User's opinion to the contrary. The action of the City Manager shall be final.

4.5.5 Regulatory Agency Enforcement

The City may initiate enforcement action against any recycled water user or hauler, including but not limited to the termination of the recycled water supply, who:

a) Discharges recycled water in violation of any applicable discharge requirement prescribed by the Regional Board or in a manner, which creates or threatens to create conditions of pollution, contamination, or nuisance, as defined in the California Water Code Section 13050.
b) Uses, transports, or stores such water in violation of the rules and regulations governing the design, construction and use of recycled water distribution and disposal systems issued by the recycled water agency in accordance with this attachment; or in a manner which creates or threatens to create conditions of pollution, contamination, or nuisance, as defined in the California Water Code Section 13050.

EXHIBIT 1

Application Form for Recycled Water Service

EXHIBIT 2

User Permit

EXHIBIT 3

Required “Do Not Drink” Symbol

EXHIBIT 4

Ordinance No. 1531, Mandatory Recycled Water Use

EXHIBIT 5

Recycled Water Truck Program Guidelines and Use Permit

Summary report: Litéra® Change-Pro 7.5.0.135 Document comparison done on 3/14/2016 4:22:20 PM	
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Embedded Excel	0
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